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| <b>Document No</b>      | S-BRA-001-00 | <b>HEALTH, SAFETY, ENVIRONMENTAL &amp;<br/>QUALITY MANAGEMENT</b> |  |
| <b>Revision</b>         | 01           |                                                                   |                                                                                    |
| <b>Appointment date</b> | 11-Aug-26    |                                                                   |                                                                                    |

**Draft Baseline Risk Assessment**

**AS PER CONSTRUCTION REGULATION 5(1)(a), 2014**  
**OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993 (Latest Edition)**

## ANNEXURE B

### RFP130/2026: APPOINTMENT OF A PROFESSIONAL SERVICE PROVIDER FOR THE PROVISION OF PROFESSIONAL SERVICES TO PLAN, DESIGN, MONITOR AND COMPLETE [AS PER FIDPM STAGES 2 – 7] NOBANTU PS IN THE EASTERN CAPE

(DETAILS)

This document is prepared in terms of Construction Regulation 5(1)(a). The Baseline Risk Assessment is conducted to obtain a benchmark of type and size of potential hazards pertaining to the project.  
The aim is to identify all major and significant risks.

**SUPERVISION BY THE CLIENT**  
**DBSA – DEVELOPMENT BANK OF SOUTHERN AFRICA**

**SUPERVISION BY THE PROFESSIONAL SERVICE PROVIDER**  
**(TBA)**

|                                                                                                                                                                                |              |                                                                   |                                                                                    |
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## 1. OBJECTIVE

The objective of this baseline risk assessment is to identify and categorize the significant health, safety, environmental and quality hazards and risks associated with the planning, procurement and construction activities of the project.

This Baseline Risk Assessment is developed in accordance with the requirements of Construction Regulation 5(1)(a) of the Construction Regulations, 2014 issued under the Occupational Health and Safety Act 85 of 1993.

The evaluation of results will assist management to eliminate, minimize or control risks to workers associated with the tasks performed or exposure to the working environment.

The assessment further aims to identify hazards that may arise throughout the lifecycle of the project, including the design, construction, operation, maintenance and decommissioning phases of the infrastructure.

This risk assessment was also conducted to assist management in identifying training needs in order to concentrate efforts where they are mostly needed.

The Baseline Risk Assessment will provide input into the preparation of the project Health and Safety Specification and will inform designers, Professional Service Providers, and the Principal Contractor of the significant risks associated with the project.

The assessment also supports the implementation of the “Safety in Design” principles as required in terms of Construction Regulation 6 to ensure that hazards are eliminated or reduced during the design stage as far as reasonably practicable.

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## 2. SCOPE

This Baseline Risk Assessment considers the full project lifecycle including project initiation, concept and feasibility, design development, procurement, construction, commissioning and project close-out phases.

The purpose of this assessment is to identify and evaluate potential health, safety, environmental and operational risks that may arise during the planning, design and construction of the infrastructure project.

The Baseline Risk Assessment is prepared in accordance with the requirements of Construction Regulation 5(1)(a) of the Construction Regulations, 2014 promulgated under the Occupational Health and Safety Act 85 of 1993.

The Baseline Risk Assessment shall assist in:

- Identifying hazards associated with the project.
- Evaluating the potential risks to workers, the public, property and the environment.
- Determining appropriate control measures to eliminate or reduce risks to an acceptable level.

The findings of this Baseline Risk Assessment will inform the preparation of the project Health and Safety Specification and must be communicated to designers, Professional Service Providers and the Principal Contractor to ensure that the identified risks are addressed throughout the project lifecycle.

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## 2.1 PROJECT SPECIFIC SCOPE OF WORKS

This Baseline Risk Assessment is pertaining to the ***appointment of a professional service provider for the provision of professional services to plan, design, monitor and complete [as per FIDPM stages 2 – 7] Nobantu PS in the Eastern Cape (Project details)***

The Scope of works will include the following.

- (The Professional Services Provider (PSP) is expected to assist the Employer to implement the Project.*
- Nobantu Primary School*

| PROPOSED GENERAL SCOPE OF WORK FOR NOBANTU PRIMARY SCHOOL (Client has done some cost estimate and designs. Hence PSP will be required to review existing designs (all disciplines and complete the designs)) |                            |                      |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WORK PARKAGE                                                                                                                                                                                                 | LOCATION                   | BUILDING USE         | UNIT SIZE        | SCOPE DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Assessments and Designs Finalization                                                                                                                                                                         | All Infrastructure         | N/A                  | N/A              | <ul style="list-style-type: none"> <li>✓ Due diligence and assessment reports review</li> <li>✓ Quantification and costing of the works</li> <li>✓ Detailed Designs review and finalization</li> <li>✓ Detailed Specifications review and finalization</li> <li>✓ Working Drawings review and finalization</li> <li>✓ Finishing Schedules</li> <li>✓ Construction Works</li> <li>✓ Construction Supervision and Project Close Out</li> </ul> |
|                                                                                                                                                                                                              | BLOCK A<br>(3 rooms block) | Administration block | 40m <sup>2</sup> | <ul style="list-style-type: none"> <li>✓ Replace all roof sheeting with IBR sheeting and new trusses were deemed necessary.</li> </ul>                                                                                                                                                                                                                                                                                                       |

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|                     |                                       |                                                 |                         |                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|---------------------------------------|-------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Refurbishments      | BLOCK B<br>(4 classrooms block)       | Grade 7 & multipurpose classroom                | 285m <sup>2</sup>       | <ul style="list-style-type: none"> <li>✓ Replace all wooden floors with concrete floors and PVC tiles/sheeting</li> <li>✓ Replace all old Vinyl sheeting with new</li> </ul>                                                                                                                                                                                   |
|                     | BLOCK C<br>(4 classrooms block)       | Grades 3, 4, 5, and 6 block                     | 285m <sup>2</sup>       | <ul style="list-style-type: none"> <li>✓ Fix broken windows</li> <li>✓ Paint all walls – interior and exterior</li> <li>✓ Install new ceilings</li> </ul>                                                                                                                                                                                                      |
|                     | BLOCK D<br>(5 classroom block)        | Grades 1, 2, R, Project room and community room | 350m <sup>2</sup>       | <ul style="list-style-type: none"> <li>✓ Install new electrical connections and fittings in all classrooms.</li> <li>✓ Convert community room to Grade R (add sick bay, storeroom and teacher's corner)</li> <li>✓ New balustrades and safety measures along verandas.</li> <li>✓ New fire extinguishers</li> <li>✓ General repairs and maintenance</li> </ul> |
|                     | BLOCK E                               | Existing ablution block                         | 70m <sup>2</sup>        | <ul style="list-style-type: none"> <li>✓ Clean up and convert use to workshops and storage facility</li> </ul>                                                                                                                                                                                                                                                 |
| New Works /Upgrades | New ablution for learners             | Ablution block                                  | As per drawing (8 x WC) | <ul style="list-style-type: none"> <li>✓ Design review and construction of new ablution at new position</li> </ul>                                                                                                                                                                                                                                             |
|                     | New ablution for staff                | Ablution block                                  | As per drawing (3 x WC) | <ul style="list-style-type: none"> <li>✓ Design review and construction of new ablution at new position</li> </ul>                                                                                                                                                                                                                                             |
|                     | New ablution for disabled             | Ablution block                                  | As per drawing (2 x WC) | <ul style="list-style-type: none"> <li>✓ Design review and construction of new ablution at new position</li> </ul>                                                                                                                                                                                                                                             |
|                     | New ablution for Grade R and Grade RR | Ablution block                                  | As per drawing (5 x WC) | <ul style="list-style-type: none"> <li>✓ Design review and construction of new ablution</li> </ul>                                                                                                                                                                                                                                                             |

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|                             |                                   |           |     |                                                                                                                                                                                                                                                                                                                                       |
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| Refurbishment and New Works |                                   |           |     | <ul style="list-style-type: none"> <li>✓ Carports and parking area</li> <li>✓ Water harvesting, stands and tanks</li> <li>✓ Convert one brick and mortar classroom to computer laboratory with a strong room.</li> <li>✓ Eskom upgrade since there will be additional classrooms (some prefabs we still use by the school)</li> </ul> |
| Modular Structures          | Kitchen and dining hall Container | Kitchen   | TBC | <ul style="list-style-type: none"> <li>✓ Detail to be supplied by supplier</li> <li>✓ Outdoor paved eating area (approx.. 620m2)</li> </ul>                                                                                                                                                                                           |
|                             | Prefabricated block               | Classroom | TBC | <ul style="list-style-type: none"> <li>✓ Supply and install 3 x classrooms</li> </ul>                                                                                                                                                                                                                                                 |

*The Baseline Risk Assessment will be reviewed and updated when all assessments are done by the (PSP) and should significant changes occur in the project scope, design or construction methodology.*

### 3. ABBREVIATIONS & DEFINITIONS

| DEFINITIONS               |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purpose of the Act</b> | - to provide for the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith |
| <b>the Act</b>            | - means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)                                                                                                                                                                                                                                                                                                                                                               |
| <b>Agent</b>              | - means a competent person who acts as a representative for a client                                                                                                                                                                                                                                                                                                                                                                    |
| <b>AIA</b>                | - means an Inspection Authority approved by the chief inspector: Provided that an inspection authority approved by the chief inspector with respect to any service shall be an Approved Inspection Authority with respect to that service only                                                                                                                                                                                          |
| <b>Asbestos</b>           | - means the following fibrous silicates: <ul style="list-style-type: none"> <li>➤ Asbestos actinolite</li> </ul>                                                                                                                                                                                                                                                                                                                        |

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|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | <ul style="list-style-type: none"> <li>➤ Asbestos grunerite (amosite)</li> <li>➤ Asbestos anthophyllite</li> <li>➤ Chrysotile</li> <li>➤ Crocidolite</li> <li>➤ Asbestos tremolite</li> <li>➤ Any mixture containing these fibrous silicates</li> </ul>                                                                                                                                                                                                                                                                                                            |
| <b>Asbestos-containing material</b> | - means asbestos as well as any material that contains asbestos and includes asbestos cement products, asbestos coating, asbestos insulation board, asbestos insulation, asbestos textured decorative coatings, asbestos contaminated soil and other asbestos-containing material                                                                                                                                                                                                                                                                                  |
| <b>Asbestos Demolition Work</b>     | - means demolition, alteration, stripping, removing, repair, gleaning of any spilt asbestos, or high-pressure water jetting of any structure containing asbestos lagging or insulation, but does not include work performed on asbestos cement sheeting and related products and asbestos cement products that form part of the structure of a workplace, building, plant or premises.                                                                                                                                                                             |
| <b>Asbestos dust</b>                | - means airborne or settled dust, which contains or is likely to contain regulated asbestos fibers                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Asbestos Waste</b>               | <ul style="list-style-type: none"> <li>- means an undesirable or superfluous asbestos-containing by-product, emission or residue of any process or activity that has been – <ul style="list-style-type: none"> <li>➤ discarded by any person</li> <li>➤ accumulated and stored by any person with the purpose of eventually discarding it with or without prior treatment connected with the discarding thereof; or</li> <li>➤ stored by any person with the purpose of recycling, re-using or extracting a usable product from such matter</li> </ul> </li> </ul> |
| <b>Asbestos Work</b>                | - means work that exposes or is likely to expose any person to asbestos dust.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Client</b>                       | - means any person for whom construction work is performed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Competent Person</b>             | - means any person having the knowledge, training, experience and qualifications specific to the work or task being performed.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Construction manager</b>         | - means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Construction site</b>            | - means a workplace where construction work is being performed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Construction supervisor</b>      | - means a competent person responsible for supervising construction activities on a construction site                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Construction work</b>         | <ul style="list-style-type: none"> <li>- means any work in connection with - <ul style="list-style-type: none"> <li>➤ the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or</li> <li>➤ the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work.</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                        |
| <b>Contractor</b>                | <ul style="list-style-type: none"> <li>- means an employer who performs construction work</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Designer</b>                  | <ul style="list-style-type: none"> <li>- means <ul style="list-style-type: none"> <li>➤ a competent person who- <ul style="list-style-type: none"> <li>○ prepares a design.</li> <li>○ checks and approves a design.</li> <li>○ arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or</li> <li>○ designs temporary work, including its components.</li> </ul> </li> <li>➤ an architect or engineer contributing to, or having overall responsibility for a design</li> <li>➤ a building services engineer designing details for fixed plant</li> <li>➤ a surveyor specifying articles or drawing up specifications</li> <li>➤ a contractor carrying out design work as part of a design and building project; or an interior designer, shopfitter or landscape architect.</li> </ul> </li> </ul> |
| <b>DBSA</b>                      | <ul style="list-style-type: none"> <li>- Development Bank of Southern Africa</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>DSTI</b>                      | <ul style="list-style-type: none"> <li>- Daily Safety Task Instruction</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Excavation work</b>           | <ul style="list-style-type: none"> <li>- means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Fall protection plan</b>      | <ul style="list-style-type: none"> <li>- means a documented plan, which includes and provides for <ul style="list-style-type: none"> <li>➤ all risks relating to working from a fall risk position, considering the nature of work undertaken</li> <li>➤ the procedures and methods to be applied to eliminate the risk of falling; and</li> <li>➤ a rescue plan and procedures.</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Fall arrest equipment</b>     | <ul style="list-style-type: none"> <li>- means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration device, lifelines or similar equipment</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Fall prevention equipment</b> | <ul style="list-style-type: none"> <li>- means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines, or physical equipment such as guardrails, screens, barricades, anchorages or similar equipment</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fall risk</b>                       | - means any potential exposure to falling either from, off or into                                                                                                                                                                                                                                                              |
| <b>Health and Safety File</b>          | - means a file, or other record containing the information in writing required by the Construction Regulations 2014                                                                                                                                                                                                             |
| <b>Health and Safety Plan</b>          | - means a site, activity or project specific documented plan in accordance with the client's health and safety specification                                                                                                                                                                                                    |
| <b>Health and Safety Specification</b> | - means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work                                                                                                                                                                      |
| <b>HCS</b>                             | - Hazardous Chemical Substances                                                                                                                                                                                                                                                                                                 |
| <b>HBA</b>                             | - Hazardous Biological Agents                                                                                                                                                                                                                                                                                                   |
| <b>HIRA</b>                            | - Hazard Identification Risk Assessment                                                                                                                                                                                                                                                                                         |
| <b>Method Statement</b>                | - means a document detailing the key activities to be performed to reduce as reasonably as practicable the hazards identified in any risk assessment                                                                                                                                                                            |
| <b>MSDS/SDS</b>                        | - means material safety data sheet / safety data sheet for hazardous chemicals                                                                                                                                                                                                                                                  |
| <b>National Building Regulations</b>   | - means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008 |
| <b>PSP</b>                             | - Professional Service Provider                                                                                                                                                                                                                                                                                                 |
| <b>PPE</b>                             | - Personal Protective Equipment                                                                                                                                                                                                                                                                                                 |
| <b>PTO</b>                             | - Planned Task Observation                                                                                                                                                                                                                                                                                                      |
| <b>Risk Assessment</b>                 | - means a program to determine any risk associated with any hazard at a construction site, to identify the steps needed to be taken to remove, reduce or control such hazard.                                                                                                                                                   |
| <b>Shoring</b>                         | - means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation or trench                                                                                                                                                                |

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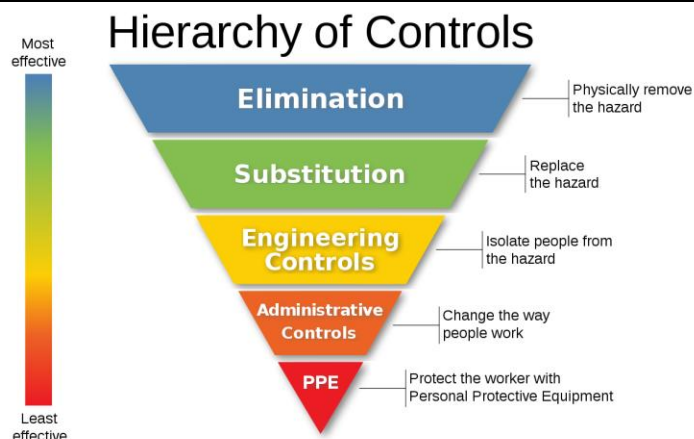
|                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Structure</b>                                        | <ul style="list-style-type: none"> <li>- means <ul style="list-style-type: none"> <li>➤ any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure</li> <li>➤ any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or</li> <li>➤ any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling</li> </ul> </li> </ul> |
| <b>Service Provider</b>                                 | - means an employer appointed by the client to perform construction work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>SACPCMP</b>                                          | - means the South African Council for the Project and Construction Management Professions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SOP / SWP</b>                                        | - Standard Operating Procedure / Safe Working Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Temporary works</b>                                  | means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Definitions to understand under Control Measures</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Elimination</b>                                      | The Most satisfactory method of dealing with hazards is to remove it in complete (get rid of it). Once a hazard is eliminated the potential for harm is removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Substitution</b>                                     | This involves substituting a dangerous process or substance with one that is not as dangerous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Isolation</b>                                        | Separate or Isolate the Hazards from making contact with people                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Engineering</b>                                      | Implement Engineering controls to eliminate or reduce the risk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Administrative</b>                                   | Administrative control usually involves modification of the likelihood of an accident happening. This is done by reducing the number of people exposed to the hazard and ensuring those that remain exposed to a hazard understand the hazard and the best way to manage the hazard.<br>Administrative controls include – Procedures, Signages, Permits etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>PPE</b>                                              | Provision of Personal Protective Equipment should only be considered if all the other control measures are impractical.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                         |              |                                                                   |                                                                                    |
|-------------------------|--------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <b>Document No</b>      | S-BRA-001-00 | <b>HEALTH, SAFETY, ENVIRONMENTAL &amp;<br/>QUALITY MANAGEMENT</b> |  |
| <b>Revision</b>         | 01           |                                                                   |                                                                                    |
| <b>Appointment date</b> | 11-Aug-26    |                                                                   |                                                                                    |

**Draft Baseline Risk Assessment**

**AS PER CONSTRUCTION REGULATION 5(1)(a), 2014**

**OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993 (Latest Edition)**



#### 4. RISK METHODOLOGY

This risk assessment methodology is used to systematically identify hazards, evaluate associated risks and determine appropriate control measures to eliminate or reduce the risks to an acceptable level.

The methodology follows the principles of hazard identification and risk assessment in accordance with the Occupational Health and Safety Act 85 of 1993 and the Construction Regulations, 2014.

The purpose of this methodology is to:

- Identify hazards associated with project activities
- Determine the potential consequences of these hazards
- Evaluate the likelihood of the risk occurring
- Determine the risk rating
- Implement appropriate control measures

The risk assessment process also supports the application of the hierarchy of controls to eliminate or reduce hazards at source where reasonably practicable.

#### 4. RISK METHODOLOGY

| ASSESSMENT |                                                       |   |                                     | RISK MATRIX     |    |    |                                                                                                                                                                    |    |                                                                                                                | RISK CALCULATION | PRIORITY OF ACTION                          |         |                  |
|------------|-------------------------------------------------------|---|-------------------------------------|-----------------|----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------|---------|------------------|
| I          | INJURY SEVERITY                                       | C | FINANCIAL IMPLICATIONS              | 26              | 27 | 28 | 29                                                                                                                                                                 | 30 | SUM OF: INCIDENT /<br>FINANCIAL / DAMAGE /<br>ENVIRONMENTAL /<br>FREQUENCY /<br>PROBABILITY<br>=<br>RISK VALUE | RISK VALUE       |                                             | 25 - 30 | Immediate        |
| 1          | No injury                                             | 1 | No [Zero] financial implications    | 21              | 22 | 23 | 24                                                                                                                                                                 | 25 |                                                                                                                |                  |                                             | 24 - 21 | Within 1 week    |
| 2          | Minor laceration, contusion or wound (first aid case) | 2 | R1000 - R9999                       | 16              | 17 | 18 | 19                                                                                                                                                                 | 20 |                                                                                                                |                  |                                             | 20 - 17 | Within 1 month   |
| 3          | Injury requiring medical assistance <14 Days recover  | 3 | R10 000 - R99 999                   | 11              | 12 | 13 | 14                                                                                                                                                                 | 15 |                                                                                                                |                  |                                             | 16 - 09 | Within 6 months  |
| 4          | Serious injuries, trauma >14 Days recovery            | 4 | R100 000 - R499 999                 | 6               | 7  | 8  | 9                                                                                                                                                                  | 10 |                                                                                                                |                  |                                             | 08 - 05 | Within 12 months |
| 5          | Loss of life [Fatality]                               | 5 | >R500 000                           | 1               | 2  | 3  | 4                                                                                                                                                                  | 5  |                                                                                                                |                  |                                             | 01 - 04 | As reasonable    |
| D          | POTENTIAL DAMAGE / LOSS                               | E | ENVIRONMENTAL IMPACT                | ACTION REQUIRED |    |    |                                                                                                                                                                    |    |                                                                                                                |                  | CONSIDER                                    |         |                  |
| 1          | No damage                                             | 1 | No effect                           | Critical        |    |    | Terminate operation / Competent Supervision / Specialist training / Method Statement / Risk assessments / Safe work procedures / Permits                           |    |                                                                                                                |                  | Intolerable: Change method / Terminate Risk |         |                  |
| 2          | Minor damage                                          | 2 | Minor effect                        |                 |    |    |                                                                                                                                                                    |    |                                                                                                                |                  |                                             |         |                  |
| 3          | Med. damage/loss, short stoppage (repaired on site)   | 3 | Serious effect (Short Term)         | High            |    |    | Competent Supervision Training / Certification Method Statement / Risk assessments / Safe work procedures Planned task observations / Toolbox talks                |    |                                                                                                                |                  | Change method Transfer Risk Mitigate        |         |                  |
| 4          | More serious damage/loss & delay                      | 4 | Very serious effect (Long Term)     |                 |    |    |                                                                                                                                                                    |    |                                                                                                                |                  |                                             |         |                  |
| 5          | Severe damage/loss & long-term delay                  | 5 | Catastrophic effect                 |                 |    |    |                                                                                                                                                                    |    |                                                                                                                |                  |                                             |         |                  |
| P          | PROBABILITY                                           | F | FREQUENCY OF OCCURRENCE             | Medium          |    |    | Competent Supervision / Training / Certification / Method Statement / Risk assessments / Safe work procedures / Planned task observations / Toolbox / Safety talks |    |                                                                                                                |                  | Change method Mitigate                      |         |                  |
| 1          | Event has never occurred probability of <1%           | 1 | No occurrence                       |                 |    |    |                                                                                                                                                                    |    |                                                                                                                |                  |                                             |         |                  |
| 2          | Events have probability of between 1% and <25%        | 2 | Occurs very seldom [5 Years]        |                 |    |    |                                                                                                                                                                    |    |                                                                                                                |                  |                                             |         |                  |
| 3          | Event has probability of between 25% and <50%         | 3 | Occurs occasionally [1 Year]        | Low             |    |    | Supervision / Training / Certification / Method Statement / Risk assessments / Safe work procedures / Training / Toolbox / Safety talks                            |    |                                                                                                                |                  | Written Instructions                        |         |                  |
| 4          | Event has probability of between 50% and <90%         | 4 | Occurs often [Monthly]              |                 |    |    |                                                                                                                                                                    |    |                                                                                                                |                  |                                             |         |                  |
| 5          | Event occurs frequently & >90% of re-occurring        | 5 | Could / Has Happened [Weekly/Daily] |                 |    |    |                                                                                                                                                                    |    |                                                                                                                |                  |                                             |         |                  |

S34-BRA-0001-00  
Baseline Risk Assessment

## 6. BASELINE RISK ASSESSMENT

| ACTIVITY<br>(Work to be performed)        | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                  | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                       | RISK EVALUATION                                                                                                                                                                                                                                                                                                                                                                                                  |   |   |   |   |   |   | PREVENTATIVE MEASURES | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                                                                                                                                                                                                                                                      | RESIDUAL RISK                                                                                                                                                                                                                                                                                                      |   |   |   |   |   |    |    |
|-------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|----|----|
|                                           |                                                                                               |                                                                                                                                     | I                                                                                                                                                                                                                                                                                                                                                                                                                | C | D | E | P | F | R |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | I                                                                                                                                                                                                                                                                                                                  | C | D | E | P | F | RR |    |
| Stage 1 – Project Initiation and Briefing |                                                                                               |                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                  |   |   |   |   |   |   |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                    |   |   |   |   |   |    |    |
| S1-01                                     | Appointment of competent Pr. Construction Health and Safety Agent                             | Unable to identify Health and Safety Risks or challenges during the design phase.<br><br>Contravention of Legislative requirements. | Project disruption due to risks not identified during stage 1-3 of the project<br><br>Financial implications if the required OHS requirements were not budgeted for<br><br>Not appointing a Health and Safety Agent Construction would lead to contravention of Section 18(1)(c) of Project and Construction Management Professions Act, 2000<br><br>Time restrictions to commence with the next stage / project | 1 | 4 | 3 | 1 | 3 | 4 | 16                    | Appointment of competent Pr. Construction Health and Safety Agent as per Legislative and SACPCMP requirements.<br><br>Implementation of all safety-related functions into manageable systems, subsystems, processes, and procedures.<br><br>Competency verification to be done through the SACPCMP registered Professionals platform<br><br>DBSA tender process to ensure the correct OHS professional is appointed based on the specific project    | <ul style="list-style-type: none"><li>DBSA Procurement process</li><li>Construction Regulations</li><li>Appointment letter</li><li>SACPCMP Certificate</li><li>Construction Regulations 2014 (CR5 – Client Duties) and Section 18(1)(c) of the Project and Construction Management Professions Act, 2000</li></ul> | 1 | 4 | 2 | 1 | 2 | 3  | 13 |
|                                           | Appointment of Health and Safety Consultant Registered Construction Health and Safety Manager | Unable to identify Health and Safety Risks or challenges during the design phase.<br><br>Contravention of Legislative requirements. | Project disruption due to risks not identified during stage 1-3 of the project<br><br>Financial implications if the required OHS requirements were not budgeted for<br><br>Not appointing a Construction Health and Safety Manager as Health and Safety Consultant would lead to contravention of Section 18(1)(c) of Project and Construction Management                                                        | 1 | 4 | 3 | 1 | 3 | 4 | 16                    | Appointment of competent Health and Safety Consultant (SACPCMP CHSM) as per Legislative and SACPCMP requirements.<br><br>Implementation of all safety-related functions into manageable systems, subsystems, processes, and procedures.<br><br>Competency verification to be done through the SACPCMP registered Professionals platform<br><br>DBSA tender process to ensure the correct OHS professional is appointed based on the specific project | <ul style="list-style-type: none"><li>DBSA Procurement process</li><li>Construction Regulations</li><li>Appointment letter</li><li>SACPCMP Certificate</li><li>Construction Regulations 2014 (CR5 – Client Duties) and Section 18(1)(c) of the Project and Construction Management Professions Act, 2000</li></ul> | 1 | 4 | 2 | 1 | 2 | 3  | 13 |

| ACTIVITY<br>(Work to be performed) |                                                                     | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                                                | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                          | RISK EVALUATION                                                                                                                                                   |   |   |   |   |   |   | PREVENTATIVE MEASURES | CONTROLS<br>(Registers, Policies,<br>Procedure) | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|-----------------------|-------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                                     |                                                                                                                                                                                                                             |                                                                                                                                                                        | I                                                                                                                                                                 | C | D | E | P | F | R |                       |                                                 | I             | C | D | E | P | F | RR |
| S1-02                              |                                                                     |                                                                                                                                                                                                                             | Professions Act, 2000                                                                                                                                                  |                                                                                                                                                                   |   |   |   |   |   |   |                       |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                                                                                                                                             | Time restrictions to<br>commence with the next<br>stage / project                                                                                                      |                                                                                                                                                                   |   |   |   |   |   |   |                       |                                                 |               |   |   |   |   |   |    |
|                                    | Client project brief,<br>scope, contracts, and<br>related documents |                                                                                                                                                                                                                             | Project Disruptions due<br>to poor communication<br>and decision making                                                                                                |                                                                                                                                                                   |   |   |   |   |   |   |                       |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                                                                                                                                             | Financial impact due to<br>non-compliance with<br>legal requirements that<br>might be taken to court                                                                   |                                                                                                                                                                   |   |   |   |   |   |   |                       |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                                                                                                                                             | Insufficient information<br>concerning the agreed-upon<br>scope of the construction<br>project, deliverables from key<br>stakeholders, and contractual<br>obligations. | Environmental impact<br>due to not being able to<br>identify the impact of the<br>project on to the<br>environment such as<br>Fauna and Flora in the<br>community |   |   |   |   |   |   |                       |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                                                                                                                                             | Inadequate practices for<br>managing project<br>requirements.                                                                                                          | Undefined roles and<br>responsibilities could<br>lead to                                                                                                          | 1 | 4 | 4 | 1 | 4 | 3 | 17                    |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                                                                                                                                             | Changes in project scope and<br>other requirements                                                                                                                     | miscommunication,<br>delays in decision<br>making, increased costs<br>due to “reworks”, legal<br>and contractual issues                                           |   |   |   |   |   |   |                       |                                                 |               |   |   |   |   |   |    |
|                                    | No clear statement of intent                                        | and stakeholder<br>disengagement                                                                                                                                                                                            |                                                                                                                                                                        |                                                                                                                                                                   |   |   |   |   |   |   |                       |                                                 |               |   |   |   |   |   |    |
|                                    | Roles and Responsibilities not<br>defined                           | No clear statement of<br>intent addressed in the<br>project brief could cause<br>lack of direction for the<br>project, misaligned<br>stakeholder<br>expectations, poor<br>decision making and<br>inefficiency allocation of |                                                                                                                                                                        |                                                                                                                                                                   |   |   |   |   |   |   |                       |                                                 |               |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                                                                      | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                        | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                            | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                                                                                                                | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                      | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                | I             | C | D | E | P | F | RR |
|                                    |                                                                                                                                                                                                                                                   | resources                                                                                                                                                                                                                                            |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                |               |   |   |   |   |   |    |
| S1-03                              | The process, validation and approval of works by DBSA, regulatory bodies and interested parties.                                                                                                                                                  | Exclusion criteria (legal requirements) for current and future DBSA infrastructure causing changes in technical and operational requirements                                                                                                         | 1               | 5 | 4 | 1 | 2 | 3 | 16 | The exclusion criteria for DBSA infrastructure should be properly defined and agreed with interested parties before any final decision and approvals.<br><br>Agreements must be signed and approved by all interested parties                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>Signed agreement</li> <li>Project Plan</li> <li>Construction Regulations 2014 (CR5 – Client Duties) and Section 18(1)(c) of the Project and Construction Management Professions Act, 2000</li> </ul>                                                                    | 1             | 5 | 3 | 1 | 2 | 2 | 14 |
| S1-04                              | Appointment of the necessary and appropriately qualified consultants, designers, and other specialists who possess the required competency, statutory registrations, and adequate resources to fulfil their respective roles and responsibilities | No adequate technical safety knowledge, experience, skills, and resources for addressing occupational hazard and risk, technical/structural failures, human factor limitations/behavior and foreseeable misuse during the design/redesign processes. | 1               | 5 | 4 | 1 | 3 | 3 | 17 | DBSA must consider competency requirements and verification of designers, engineers and other appropriate specialists as required in legislation. Registrations to be verified with certain bodies.<br><br>Design risk management training for designers if required.<br><br>Records of other professionals must be submitted and recorded to ensure competent professionals are appointed for the project       | <ul style="list-style-type: none"> <li>Appointment letter</li> <li>Competency / Registration / Qualifications</li> <li>Construction Regulations 2014 (CR5 – Client Duties) and Section 18(1)(c) of the Project and Construction Management Professions Act, 2000</li> </ul>                                    | 1             | 5 | 2 | 1 | 2 | 2 | 13 |
| S1-05                              | Legal and regulatory compliance.                                                                                                                                                                                                                  | Non-compliance with Legal and Regulatory requirements range from penalties and fines to imprisonment, withdrawal of licenses, lawsuits and reputational risk, impact on the project objectives and organizational sustainability.                    | 1               | 5 | 4 | 1 | 2 | 3 | 16 | Compile and maintain a legal register for the project.<br><br>Identifies all the legal obligations impacting directly or indirectly on the infrastructure facility.<br><br>Comply/evaluate compliance with the requirements contained in legislation and national standards applicable to the project.<br><br>Monitors changes in legislation and national standards and communicate with relevant stakeholders. | <ul style="list-style-type: none"> <li>Legal Register</li> <li>OHS ACT and its Regulations</li> <li>Building Regulations</li> <li>SANS Standards</li> <li>Construction Regulations 2014 (CR5 – Client Duties) and Section 18(1)(c) of the Project and Construction Management Professions Act, 2000</li> </ul> | 1             | 5 | 2 | 1 | 2 | 2 | 13 |
|                                    |                                                                                                                                                                                                                                                   | Project Disruptions/delays<br><br>Financial Impact                                                                                                                                                                                                   |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                |               |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) |                                                          | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                  | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                          | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                 | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                               | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                          |                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                        | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                       |                                                                                                                                                                                                                               | I             | C | D | E | P | F | RR |
|                                    |                                                          |                                                                                               | Reputational Damages                                                                                                                                                                                                                                                                                                                                                                                   |                 |   |   |   |   |   |    |                                                                                                                                                                                                                       |                                                                                                                                                                                                                               |               |   |   |   |   |   |    |
| S1-06                              | Unknown site and environmental restrictions/ conditions. | Inadequate site health, safety, environmental restrictions/ conditions information available. | <p>Unable to identify conditions where the project is planned to commence could lead to Project Disruptions/delays</p> <p>Financial Implications if funds are made available but due to conditions, environment of the project to project does not get approved</p> <p>Environmental Impact concerns if the correct planning is not considered before the approval of the project</p>                  | 1               | 5 | 3 | 3 | 2 | 2 | 16 | Professional team to identify required site surveys, site tests, analyses of reports, and other investigations where such information will be required in the interest of health and safety and/or legal compliance.  | <ul style="list-style-type: none"> <li>Surveys Scheduled report</li> <li>Construction Regulations 2014 (CR5 – Client Duties) and Section 18(1)(c) of the Project and Construction Management Professions Act, 2000</li> </ul> | 1             | 5 | 2 | 2 | 2 | 2 | 14 |
| S1-07                              | Preparation of draft risk profile                        | Unable to identify high level risks during this stage                                         | <p>Unable to identify risks during this stage could cause cancellation of project at a later stage resulting in financial losses and reputation damage.</p> <p>Unable to identify risk could result in poor or no resource allocation, it would result in inadequate planning leading to no confidence by stakeholders. This could then result in reputational damages and increased project costs</p> | 1               | 5 | 4 | 2 | 3 | 3 | 18 | Draft risk profile to be drafted by Professional Registered Construction Health and Safety Agent with consultation with all appointed professionals identify risk that might be associated with the potential project | <ul style="list-style-type: none"> <li>Draft Risk Profile</li> <li>Construction Regulations 2014 (CR5 – Client Duties) and Section 18(1)(c) of the Project and Construction Management Professions Act, 2000</li> </ul>       | 1             | 5 | 2 | 2 | 2 | 2 | 14 |
| S1-08                              | Needs and expectations of local                          | Inadequate lines of communication between local                                               | Communities not in agreement with the                                                                                                                                                                                                                                                                                                                                                                  | 1               | 3 | 3 | 1 | 3 | 3 | 14 | Social Facilitator to identify and managing community needs and expectations, and to                                                                                                                                  | <ul style="list-style-type: none"> <li>Appointment of Social Facilitator as part of the</li> </ul>                                                                                                                            | 1             | 3 | 2 | 1 | 2 | 3 | 12 |

| ACTIVITY<br>(Work to be performed)                         | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                      | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                 | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                        | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                                            |                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                        | I             | C | D | E | P | F | RR |
| community/public and road users.                           | community and project activities/construction can lead to civil unrest and other legal and social factors/issues. | Project could cause disruptions or delays                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |   |   |   |   |   |    | ensure engagements are held with local communities to understand specific needs and expectations of the certain communities.                                                                                                                          | professional team<br>• Stakeholder engagement meetings                                                                                                                                                                 |               |   |   |   |   |   |    |
| <b>Stage 2 – Concept and Feasibility</b>                   |                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                        |               |   |   |   |   |   |    |
| S2-01 Feasibility                                          | No feasibility studies conducted                                                                                  | <p>Unable to identify the Financial Impact of the project would lead to inaccurate cost estimations, technical and operational challenges and a lack of stakeholder buy in</p> <p>No Studies done or approved scope of works/project plan that defines the goals and objectives, and how the project will be managed in terms of financial requirements could result in the cancelation of the project. This could result in loss of confidence by stakeholders and reputational damages</p> | 1               | 5 | 3 | 1 | 3 | 3 | 16 | DBSA and Professional team appointed should prepare a detailed infrastructure business/project plan that addresses current financial condition, capital, project and operating budget, and cash flow projections for the DBSA infrastructure project. | <ul style="list-style-type: none"> <li>Feasibility Study</li> <li>Construction Regulations 2014 (CR5 – Client Duties) and Section 18(1)(c) of the Project and Construction Management Professions Act, 2000</li> </ul> | 1             | 5 | 2 | 1 | 2 | 2 | 13 |
| S2-02 Demand and capacity analysis of DBSA infrastructure. | Failure to study and address higher volumes and operational activities in and around DBSA infrastructure.         | <p>Non approval of the concept could cause delays as the project cannot move to stage 3 of the project life cycle.</p> <p>The revising or reworking of a non-approved concept could cause increased costs as professionals would claim more during this stage</p>                                                                                                                                                                                                                            | 1               | 5 | 3 | 1 | 3 | 3 | 16 | Conduct a study and simulation to address and evaluate DBSA infrastructure capacity to address operations and service quality issues.                                                                                                                 | <ul style="list-style-type: none"> <li>Feasibility Study</li> <li>Concept approval</li> </ul>                                                                                                                          | 1             | 5 | 2 | 1 | 2 | 2 | 13 |
| S2-03                                                      | Reasonably foreseeable                                                                                            | The misuse of DBSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1               | 5 | 3 | 3 | 2 | 2 | 16 | Exploitation by formal/informal                                                                                                                                                                                                                       | • Feasibility Study                                                                                                                                                                                                    | 1             | 5 | 2 | 2 | 2 | 2 | 14 |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                    | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                        | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                         | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                                                                                                                                                                                                                                   | RESIDUAL RISK                                                                                                                                                                                                                                                                              |   |   |   |   |   |    |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|----|
|                                    |                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                   | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | I                                                                                                                                                                                                                                                                                          | C | D | E | P | F | RR |
| S2-04                              | Commercial/residential activities in and around DBSA infrastructure                                                                                                                             | misuse of DBSA infrastructure in a way not intended in the original design for example, uncontrolled formal/informal facilities in and around the infrastructure precinct, etc.                                                                                                                                   |                 |   |   |   |   |   |    | facilities/needs to be regulated and controlled to prevent their unrestricted/uncontrolled expansion within and around the DBSA infrastructure.                                                                                                                                                                               | • Concept approval                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                            |   |   |   |   |   |    |
|                                    | The process, validation and approval in principle for DBSA infrastructure after final approvals.                                                                                                | No mandate and accountability to accomplish required levels of functionality, performance and exclusion criteria for DBSA infrastructure throughout its life cycle, changes in user requirements, etc.<br><br>changes in technical requirements                                                                   |                 |   |   |   |   |   |    | Project delays/disruptions<br><br>Non approval or approved/signed mandate of infrastructure will result in unnecessary funding from clients and stakeholders                                                                                                                                                                  | Establish procedures for acceptance, validation and approvals in principle for all mandatory, site specific and generic specifications of all interested parties to address any uncertainty in the DBSA infrastructure design, construction and functioning as confirmation that any alterations, additions, modification, etc. is appropriate for its intended use.                                                                                           | • Feasibility Study<br>• Concept approval<br>• Signed Mandate                                                                                                                                                                                                                              | 1 | 5 | 2 | 2 | 2 | 14 |
| S2-05                              | Feasibility and concept assessment for DBSA planning and design from inception to completion, evaluating its practical viability in light of the environmental realities of its implementation. | Insufficient or nonexistent information to support decision-making processes regarding the financial implications for the DBSA, including a lack of legal and technical requirements, market research, assessments of current infrastructure constraints and conditions, as well as environmental impact studies. |                 |   |   |   |   |   |    | Unable to review information to support any decisions regarding the feasibility could result in financial implications if concept is not approved<br><br>Resource Mismanagement could also result in loss of production on costs (Wasteful expenditure)<br><br>Scope creep could result in increased project costs and delays | Conduct a comprehensive feasibility study that includes a historical background of the DBSA infrastructure project, a description of the required infrastructure and services, operational and management details, market research, financial data, and legal, technical, and environmental requirements.<br><br>Obtain required environmental approvals and authorizations in accordance with applicable environmental legislation prior to project approval. | • Feasibility and Concept Report<br>• Construction Regulations 2014 (CR5 – Client Duties) and Section 18(1)(c) of the Project and Construction Management Professions Act, 2000<br>• National Environmental Management Act (NEMA) / National Environmental Management: Protected areas Act | 1 | 5 | 2 | 2 | 2 | 14 |
| S2-06                              | Planning must ensure Access to water resources onsite is                                                                                                                                        | Economic impact<br><br>High costs to source Water and                                                                                                                                                                                                                                                             | 3               | 5 | 4 | 4 | 2 | 2 | 20 | Provide the relevant authorities and interested parties with all required information, including drawings,                                                                                                                                                                                                                    | • Water Sample tests / yield tests<br>• Hydrogeological Survey                                                                                                                                                                                                                                                                                                                                                                                                 | 2                                                                                                                                                                                                                                                                                          | 4 | 2 | 2 | 2 | 2 | 14 |

| ACTIVITY<br>(Work to be performed) |                                        | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                           | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CONTROLS<br>(Registers, Policies,<br>Procedure) | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                                    | available and electricity is available | electricity<br><br>Water tanks structural failures.<br><br>Waterborne diseases.<br><br>Damage to infrastructure.<br><br>No Drinking water available in area | surrounding members of the area could cause health risks such as cholera, hepatitis, typhoid and polio.<br><br>Unavailability of water and electricity to the area where infrastructure is to be constructed could result in Project Disruptions/delays to source these resources<br><br>Unavailability of water and electricity to the area would result in financial losses to source these resources |                 |   |   |   |   |   |   | specifications, design assumptions, calculations, documents, and test results (e.g., structural data, biological agent assessments) as mandated by applicable legislation.<br><br>Water resource assessment to be conducted.<br><br>Hydrogeological assessments to consider the availability of water<br><br>Consult with Eskom regarding the availability of electricity in the area and if not currently available determine if Eskom would have electricity available in the specific area in the future.<br><br>Assessment of temporary construction services requirements to ensure adequate provision of water and electricity during the construction phase. |                                                 |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                              | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                 | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                     | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                     | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                                           |                                                                                                                                                                                                            | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                  | I             | C | D | E | P | F | RR |
|                                    |                                                                           |                                                                                                                                                                                                            |                 |   |   |   |   |   |    | Design Specifications must be reviewed against all standards by all relevant parties with approval if requirements are met.                                                                                                                                                                                                                                                               |                                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    |                                                                           |                                                                                                                                                                                                            |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    |                                                                           |                                                                                                                                                                                                            |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    |                                                                           |                                                                                                                                                                                                            |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    |                                                                           |                                                                                                                                                                                                            |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                  |               |   |   |   |   |   |    |
| S3-03                              | Process Specifications                                                    | Poor design risk management, health, safety and environmental and quality systems                                                                                                                          | 4               | 4 | 4 | 3 | 2 | 2 | 19 | <p>Implement controls to manage transparency, accountability, etc. between project development and the construction phase delivery process.</p> <p>Ensure that applicable human factors in design/safety in design", "physical environmental factors" and "organizational and psychological factors" are address in the product specifications.</p>                                       | <ul style="list-style-type: none"> <li>Approved process specifications</li> <li>Health and Safety Specifications</li> </ul>                                      | 1             | 3 | 3 | 3 | 2 | 2 | 14 |
| S3-04                              | Signed-off technical specifications and drawings for DBSA infrastructure. | <p>Lack of oversight to acknowledge and agree accountability for the proposed DBSA infrastructure.</p> <p>Drawings not approved</p> <p>Drawings done by incompetent person</p> <p>Drawing not approved</p> | 5               | 5 | 4 | 4 | 2 | 2 | 22 | <p>Ensure that the correct structures and appointments are in place to assign accountability, authority, responsibility and roles.</p> <p>Ensure traceability, responsibility and accountability are clearly defined and documented.</p> <p>Design team not to deviate from concept design baseline without written approvals from DBSA.</p> <p>Implement change management procedure</p> | <ul style="list-style-type: none"> <li>Signed off / approved Drawings</li> <li>Approved technical specifications</li> <li>Change Management Procedure</li> </ul> | 1             | 3 | 3 | 3 | 2 | 2 | 14 |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                              | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                          | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                                                                                                                                                                           |                                                                                                                                                                                           | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                       | I             | C | D | E | P | F | RR |
|                                    |                                                                                                                                                                                                           |                                                                                                                                                                                           |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                       |               |   |   |   |   |   |    |
| S3-05                              | Documented evidence for the mitigation and control of occupational health, safety, environmental and regulatory risks in the design, redesign and construction processes.                                 | No documented evidence provided during the design process of compliance with regulatory and technical requirements impact negatively on project delivery, commissioning and functionality |                 |   |   |   |   |   |    | could result in financial losses / Cost variations to redo the drawings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                       |               |   |   |   |   |   |    |
|                                    |                                                                                                                                                                                                           |                                                                                                                                                                                           |                 |   |   |   |   |   |    | Not taking into consideration the occupational, health, safety and environmental risks during design could cause project disruptions or delays if works have to be stopped due to not complying with requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                       |               |   |   |   |   |   |    |
|                                    |                                                                                                                                                                                                           |                                                                                                                                                                                           |                 |   |   |   |   |   |    | The delays or stoppage of the project will lead to financial losses when paying service providers and contractors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                       |               |   |   |   |   |   |    |
|                                    |                                                                                                                                                                                                           |                                                                                                                                                                                           |                 |   |   |   |   |   |    | No considering the environmental Impact or Fauna and Flora requirements for the area could result in major fines and work stoppages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                       |               |   |   |   |   |   |    |
|                                    |                                                                                                                                                                                                           |                                                                                                                                                                                           | 1               | 5 | 3 | 3 | 2 | 2 | 16 | Addressing and documented occupational safety, health and environmental obligations in the design and redesign process to prevent or reduce risks associated with the total life cycle of the DBSA infrastructure.<br><br>Provide schedules of surveys, tests, analyses, site and other investigations conducted during stage 2<br><br>Develop and provide preliminary construction project risk profile.<br><br>Health and Safety Specification to be updated by appointed Pr. CHSA for the project<br><br>Final Baseline Risk Assessment to be prepared or updated by Pr. CHSA for the project<br><br>Pr. CHSA to review and approve design risk information and ensure incorporation into the Health and Safety Specification. | <ul style="list-style-type: none"> <li>Records of Surveys conducted</li> <li>Final Health and Safety Risk Profile</li> <li>Updated Health and Safety Specification</li> <li>Final Baseline Risk Assessment</li> </ul> | 1             | 5 | 2 | 2 | 2 | 2 | 14 |
| S3-06                              | External and internal Stakeholder involvement to take part in the opportunity to identify safety, security and technical related issues during the design process of new or modified DBSA infrastructure. | Failure to be transparent and inclusive in the design process.<br><br>Not considering internal and external stakeholders' input                                                           |                 |   |   |   |   |   |    | Failing to consider input from internal and external stakeholders could lead to project disruptions during construction with associated cost implications<br><br>Community disruptions<br><br>Failing or stopping of project could result in damages to stakeholders, client and DBSA reputations                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                       |               |   |   |   |   |   |    |
|                                    |                                                                                                                                                                                                           |                                                                                                                                                                                           | 1               | 5 | 2 | 2 | 2 | 2 | 14 | Ensure that the knowledge, skills, experience, insight, and creativity of people (Internal/External) close to the risks are utilized in the design and risk assessment process.<br><br>Keep record of all engagements with internal and external stakeholders and design risk management processes.<br><br>Ensure that the inclusion of referenced related standards and requirements of designers be included in the health and safety specifications for project/contractors.                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>Stakeholder engagements (minutes of meetings)</li> <li>Design and Consultants meeting minutes</li> <li>Design risk management procedure</li> </ul>                             | 1             | 5 | 2 | 2 | 1 | 1 | 12 |

| ACTIVITY<br>(Work to be performed)             |                                                                                                                                                                            | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                    | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                       | RISK EVALUATION                                                                                                                                 |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                             | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                                  | RESIDUAL RISK                                                                                                                                                                   |   |   |   |   |   |    |
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|                                                |                                                                                                                                                                            |                                                                                                                 |                                                                                                                                                                                                                  | I                                                                                                                                               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                               | I                                                                                                                                                                               | C | D | E | P | F | RR |
| S3-07                                          | Design Risk Assessment and Safety in Design Review                                                                                                                         | Failure to identify and eliminate hazards during the design phase                                               | Design-related hazards not addressed may result in unsafe construction methods, increased risk of incidents during construction, maintenance and operation, project delays and increased costs                   | 5                                                                                                                                               | 5 | 4 | 3 | 3 | 3 | 23 | Conduct formal design risk assessments and safety in design reviews in consultation with designers, engineers and the Pr. CHSA to identify, eliminate or mitigate risks as far as reasonably practicable                                                                                                          | <ul style="list-style-type: none"><li>Design Risk Register</li><li>Design Review Meeting Minutes</li><li>Updated Health and Safety Specification</li><li>Approved Design Documentation</li></ul>                                                              | 4                                                                                                                                                                               | 4 | 3 | 2 | 2 | 3 | 18 |
|                                                | Temporary works design considerations                                                                                                                                      | Failure to consider temporary works requirements during design                                                  | Collapse of temporary structures such as scaffolding, formwork or excavations leading to serious injuries, fatalities, project delays and financial losses                                                       | 5                                                                                                                                               | 5 | 4 | 2 | 3 | 3 | 22 | Ensure temporary works requirements are considered during design and that designs accommodate safe construction methods, sequencing and support systems for all temporary structures                                                                                                                              | <ul style="list-style-type: none"><li>Temporary Works Design Documentation</li><li>Design Specifications</li><li>Approved Drawings</li><li>Method Statements (to be developed by Contractor)</li></ul>                                                        | 4                                                                                                                                                                               | 4 | 3 | 2 | 2 | 3 | 18 |
|                                                | S3-09                                                                                                                                                                      | Design for safe maintenance and access                                                                          | Design does not consider safe access for maintenance activities                                                                                                                                                  | Unsafe access during maintenance may result in falls from height, injuries or fatalities during operation and maintenance of the infrastructure | 4 | 4 | 3 | 2 | 3 | 3  | 19                                                                                                                                                                                                                                                                                                                | Incorporate safe access provisions such as walkways, platforms, ladders, edge protection and safe working areas into the design to ensure maintenance can be performed safely                                                                                 | <ul style="list-style-type: none"><li>Approved Design Drawings</li><li>Design Specifications</li><li>Maintenance Access Plans</li><li>Health and Safety Specification</li></ul> | 3 | 3 | 2 | 2 | 2 | 2  |
| Stage 4 – Tender Documentation and Procurement |                                                                                                                                                                            |                                                                                                                 |                                                                                                                                                                                                                  |                                                                                                                                                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                               |                                                                                                                                                                                 |   |   |   |   |   |    |
| S4-01                                          | Detailed documentary evidence to demonstrate that the key safety and environmental constraints or issues are addressed at DBSA infrastructure procurement and tender stage | No methods and procedures to indicate that the key safety issues are addressed at DBSA infrastructure projects. | Unable to identify health, safety and environmental risks during bidding stage could result in financial implications when contractors submit variation orders as they did not price to attend to certain risks. | 1                                                                                                                                               | 5 | 3 | 2 | 2 | 2 | 15 | Designers must ensure that designs are accompanied by a report as required in terms of the construction regulations (6. (1)(c)) for inclusion in the Health and Safety Specification/Safety Plan/Budget. Designers must have record that they have considered the Health and Safety Specifications when designing | <ul style="list-style-type: none"><li>Design Report</li><li>Final health and safety specifications</li><li>Final baseline risk assessment</li><li>BSC approved tender documents</li><li>Final Construction project health and safety cost estimates</li></ul> | 1                                                                                                                                                                               | 5 | 2 | 2 | 2 | 2 | 14 |
|                                                |                                                                                                                                                                            | Unclear Procurement plan / process                                                                              | Not addressing key risks could result in project delays/disruptions when bidders did not budget for certain requirements to be met                                                                               |                                                                                                                                                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                               |                                                                                                                                                                                 |   |   |   |   |   |    |
|                                                |                                                                                                                                                                            | Final Health and Safety specification and final Baseline Risk Assessment not integrated with tender documents   |                                                                                                                                                                                                                  |                                                                                                                                                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                               |                                                                                                                                                                                 |   |   |   |   |   |    |
|                                                |                                                                                                                                                                            | Unethical Procurement                                                                                           |                                                                                                                                                                                                                  |                                                                                                                                                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                               |                                                                                                                                                                                 |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) |                                                                        | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                                                      | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                 | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                        | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                                      | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |
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|                                    |                                                                        |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                      | I             | C | D | E | P | F | RR |  |  |  |  |  |  |
| S4-02                              |                                                                        |                                                                                                                                                                                                                                   | An unclear procurement plan creates significant risks, potentially leading to missed opportunities, decreased efficiency, unexpected costs, and damaged customer relationships<br><br>Unethical procurement could result in Audit findings, that would lead to investigation that could result in delays of construction                                                                                                                                      |                 |   |   |   |   |   |    | associated with the project to ensure they budget for certain requirements.                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |  |  |  |  |  |  |
|                                    | Preliminary Construction methodology and planning for tender purposes. | Failure to consider construction methodology requirements during tender stage.                                                                                                                                                    | Inadequate planning for construction methods may result in unsafe execution, project delays, cost overruns and variations during construction.                                                                                                                                                                                                                                                                                                                | 4               | 4 | 3 | 2 | 3 | 3 | 19 | Ensure that high-level construction methodology considerations are included during tender stage to inform planning, costing and sequencing without detailing contractor-specific methods                                                                                                                                                                                     | <ul style="list-style-type: none"><li>Final Health and Safety Specification</li><li>Final Baseline Risk Assessment</li><li>Project Execution Plan (or equivalent project planning documentation)</li></ul>                           | 3             | 3 | 2 | 2 | 2 | 2 | 14 |  |  |  |  |  |  |
| S4-03                              |                                                                        |                                                                                                                                                                                                                                   | Unable to identify health and safety legislative requirements in the tender could result in an Audit finding by Auditor General. This will also result in the successful bidder unable to identify the legislative requirements that could result in financial Implications so that the successful bidder can be able to comply to certain requirements.<br><br>Health and Safety Annexure, not specific to the project could lead to certain risks not being |                 |   |   |   |   |   |    | All tender documents must be reviewed by appointed BSC members to ensure requirements are met and the tender includes the required resources<br><br>BSC appointments to be made for specific technical experiences to ensure certain requirements are met by different professionals<br><br>Pr. CHSA to prepare the final SHEQ Annexures to ensure all requirements are met. | <ul style="list-style-type: none"><li>Approved and signed off DBSA Tender documents</li><li>DBSA SHEQ Policy</li><li>Final Health and Safety Specification</li><li>Final Baseline Risk Assessment</li><li>BSC appointments</li></ul> |               |   |   |   |   |   |    |  |  |  |  |  |  |
|                                    | Tender Documents and Health and Safety Annexures                       | Failure to identify Health and Safety requirements in tender documents<br><br>Unable to identify Health and Safety Resource and competency required for the bidder<br><br>Health and Safety annexures not specific to the project |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1               | 5 | 3 | 3 | 2 | 2 | 16 |                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                      | 1             | 5 | 2 | 2 | 2 | 2 | 14 |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                           | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                            | RISK EVALUATION                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                          | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                              | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                                                                        |                                                                                                                                                                                                                                                                       | I                                                                                                                                                                                                                                                                                                                                                                                                                                    | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                           | I             | C | D | E | P | F | RR |
| S4-04                              | Evaluation of principle contractor/s and contractor/s capability and competency        | No proof that the contractor is conversant with site-specific DBSA infrastructure hazards and risks to ensure compliance and non-conformance.<br><br>The contractor's capability and SHE performance are not evaluated and considered prior to awarding the contract. | identified as per scope of works. This can have a financial implication and delays in the kickoff of the project<br><br>Unable to identify the required competent resources required for the project could result in poor health and safety management of the construction project and the project being poorly managed by incompetent construction / project manager. This can lead to project delays, and financial mismanagement. |   |   |   |   |   |    | Evaluation of contractor's risk and safety management capabilities with adequate resources.<br><br>BEC must review competencies, past experiences and projects completed to ensure the contractor has the required and competent resources and is capable of conducting the scope of works as per standards and specifications | <ul style="list-style-type: none"> <li>Tender Returnable</li> <li>BEC appointments</li> <li>BEC evaluation report</li> </ul>                                                                              |               |   |   |   |   |   |    |
|                                    |                                                                                        |                                                                                                                                                                                                                                                                       | 4                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5 | 4 | 3 | 2 | 2 | 20 |                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                           | 3             | 5 | 3 | 2 | 2 | 2 | 17 |
| S4-05                              | Provision for health and safety requirements in project costing and Bill of Quantities | Failure to allocate adequate budget for health and safety requirements                                                                                                                                                                                                | Insufficient budgeting for health and safety may result in non-compliance, unsafe working conditions, project delays, contractor variations and financial losses                                                                                                                                                                                                                                                                     |   |   |   |   |   |    | Ensure that health and safety requirements are clearly defined and included in the Bill of Quantities and tender pricing to allow contractors to adequately price for compliance                                                                                                                                               | <ul style="list-style-type: none"> <li>Final Health and Safety Specification</li> <li>Bill of Quantities (OHS BOQ)</li> <li>Final Tender Documentation</li> <li>Final Baseline Risk Assessment</li> </ul> | 3             | 3 | 2 | 2 | 2 | 2 | 14 |

| ACTIVITY<br>(Work to be performed)                  |                                                                | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                       | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                       | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                     | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                                                                                                                                                                                                                                                          | RESIDUAL RISK |   |   |   |   |    |    |
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|                                                     |                                                                |                                                                                                    |                                                                                                                                                                     | I               | C | D | E | P | F | R  |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                          | I             | C | D | E | P | F  | RR |
| Stage 5 – Construction Documentation and Management |                                                                |                                                                                                    |                                                                                                                                                                     |                 |   |   |   |   |   |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |   |   |   |   |    |    |
| S5-01                                               | File Approval as per OHS Requirements and Client Specification | Work commencing prior to file being available and approved.                                        | Non-Conformances issued or Default letters issued could result in termination of non-compliant contractors that would result in project delays or cancelation       | 1               | 4 | 3 | 2 | 4 | 4 | 18 | No Work Commencement until approval has been signed off.                                                                                  | <ul style="list-style-type: none"><li>Health and Safety Plan / file approval letter</li><li>Copy of Health and Safety Plan</li><li>Copy of LOGS</li><li>Valid Competencies, appointments, medicals, work permits etc.</li><li>Site Establishment plan / layout</li></ul>                                                                                                                                                                                 | 1             | 3 | 2 | 2 | 2 | 12 |    |
|                                                     |                                                                | No valid registration with COID.                                                                   | Contractors with no valid COID could cause injured employees not to be covered by the compensation fund, this will lead to direct and indirect cost for the company |                 |   |   |   |   |   |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |   |   |   |   |    |    |
|                                                     |                                                                | Expired Documentation (e.g. competencies, equipment load test, medicals, work permits)             |                                                                                                                                                                     |                 |   |   |   |   |   |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |   |   |   |   |    |    |
|                                                     |                                                                | Documentation not available or approved as per required Client Spec and OHS act.                   |                                                                                                                                                                     |                 |   |   |   |   |   |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |   |   |   |   |    |    |
| S5-02                                               | Construction Work Permit Application                           | Successful bidder is unable to provide Construction Work Permit application documentation on time. | Contractor unable to provide required documentation and competencies for the CWP will result in further delays for the CHSA to submit the application to DoEL       | 1               | 3 | 3 | 3 | 3 | 4 | 17 | Contractor should submit all health and safety related information upon appointment so that the process of Construction permit can start. | <ul style="list-style-type: none"><li>Annexure 1</li><li>DBSA CWP Deliverable checklist</li><li>Approved Health and Safety Plan</li><li>Approved Health and Safety BOQ</li><li>OHS Resource appointment, competencies and SACPCMP registration</li><li>Construction Manager appointment, competency and SACPCMP registration</li><li>Final Site-Specific Health and Safety Specifications</li><li>Final site-specific Baseline Risk Assessment</li></ul> | 1             | 3 | 2 | 2 | 3 | 13 |    |
|                                                     |                                                                | No competency available for CHSA                                                                   | The delay in preparing the CWP application will result in delays for the construction activities to commence                                                        |                 |   |   |   |   |   |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |   |   |   |   |    |    |
|                                                     |                                                                | No OHS resources available from the bidder                                                         | Contravention of the OHS Act and its Regulations could result in fines and Work Stoppages. This will have cost implications.                                        |                 |   |   |   |   |   |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |   |   |   |   |    |    |
|                                                     |                                                                | Contractor commencing with works without required Construction Work Permit                         |                                                                                                                                                                     |                 |   |   |   |   |   |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |   |   |   |   |    |    |
|                                                     |                                                                |                                                                                                    |                                                                                                                                                                     |                 |   |   |   |   |   |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |   |   |   |   |    |    |

| ACTIVITY<br>(Work to be performed) |                                                                     | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                     | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                              | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                           | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                                                                                                                           | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                                                     |                                                                                                  |                                                                                                                                                                                                            | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                           | I             | C | D | E | P | F | RR |
| S5-03                              |                                                                     |                                                                                                  |                                                                                                                                                                                                            |                 |   |   |   |   |   |    | before planned commencement.                                                                                                                                                                                    | <ul style="list-style-type: none"><li>Final approved drawings</li><li>37(2) Written Agreement</li><li>CR5(1)(k) Appointment letter</li><li>Letter of Goodstanding</li></ul>                                                                                                                                               |               |   |   |   |   |   |    |
|                                    | Notifying Department of Employment and Labour of Construction works | Principal Contractor commencing with works without Notifying Department of Employment and Labour | Contravention of the OHS Act and its Regulations could result in fines and work stoppages                                                                                                                  | 1               | 3 | 3 | 3 | 3 | 4 | 17 | NOC to be submitted by Principal Contractor at least 7 days before commencement of works to the DoEL.                                                                                                           | <ul style="list-style-type: none"><li>Annexure 2</li><li>Proof of submission to DoEL</li></ul>                                                                                                                                                                                                                            | 1             | 3 | 2 | 2 | 2 | 3 | 13 |
|                                    |                                                                     |                                                                                                  |                                                                                                                                                                                                            |                 |   |   |   |   |   |    |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |
| S5-04                              |                                                                     |                                                                                                  |                                                                                                                                                                                                            |                 |   |   |   |   |   |    | Issue based Risk Assessment must be drafted by risk assessment team that includes the risk assessor, construction manager and supervisor, SHE Rep and skilled employee.                                         |                                                                                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                  |                                                                                                                                                                                                            |                 |   |   |   |   |   |    | All risk assessments, method statements and safe working procedures must be communicated to the required employees conducting those activities. Record of communication / training must be kept in Safety file. | <ul style="list-style-type: none"><li>Client Health and Safety Specification</li><li>Baseline Risk Assessment</li><li>Method Statement of Tasks</li><li>Risk Assessor competency</li><li>Issue based risk assessments</li><li>Training / communication records</li><li>SOP/SWP</li><li>Risk Assessment training</li></ul> |               |   |   |   |   |   |    |
|                                    | Risk Identification                                                 | Risk assessments not conducted, not site-specific, or performed by an incompetent person         | Failure to conduct suitable and sufficient risk assessments may result in hazards not being identified, leading to serious injuries, fatalities, inadequate control measures and unsafe working conditions | 4               | 4 | 4 | 4 | 3 | 3 | 22 | No Activity to commence if risk assessment and method statement has not been approved by the relevant person.                                                                                                   |                                                                                                                                                                                                                                                                                                                           |               | 4 | 4 | 3 | 3 | 2 | 2  |
|                                    |                                                                     |                                                                                                  |                                                                                                                                                                                                            |                 |   |   |   |   |   |    | All risk assessments and method statements must be reviewed if any changes occur, such as change of management, changes to conditions, changes to scope, incidents etc.                                         |                                                                                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                  |                                                                                                                                                                                                            |                 |   |   |   |   |   |    | Competent Risk Assessor to use hierarchy of controls when identifying controls to be implemented.                                                                                                               |                                                                                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                  |                                                                                                                                                                                                            |                 |   |   |   |   |   |    | No work may commence unless a suitable and sufficient risk assessment and method statement has been developed, approved and communicated to all affected person                                                 |                                                                                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |
| S5-05                              | Site Establishment - Setting up Camp &                              | Abnormal loading of trucks                                                                       | Unsafe or abnormal loading could cause                                                                                                                                                                     | 5               | 5 | 4 | 3 | 3 | 4 | 24 | Trucks must only be loaded according to its safe load capacity.                                                                                                                                                 | <ul style="list-style-type: none"><li>Safe Workload Certificate or Certificate</li></ul>                                                                                                                                                                                                                                  | 5             | 5 | 3 | 2 | 2 | 2 | 19 |

| ACTIVITY<br>(Work to be performed)                               | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                        | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                              | RISK EVALUATION |   |   |   |   |   |                                            | PREVENTATIVE MEASURES                                                                                                                                                                                                               | CONTROLS<br>(Registers, Policies,<br>Procedure)               | RESIDUAL RISK |   |   |   |   |   |    |  |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------|---|---|---|---|---|----|--|
|                                                                  |                                                                                                                                     |                                                                                                                                                                            | I               | C | D | E | P | F | R                                          |                                                                                                                                                                                                                                     |                                                               | I             | C | D | E | P | F | RR |  |
| Storage Facilities & Project Mobilization of Plant and Equipment | Traffic congestion / unwanted(unauthorized) members of the public walking in risk zone                                              | accidents that could lead to multiple fatalities.                                                                                                                          |                 |   |   |   |   |   |                                            | Appointed spotter (flag person) to be in position wearing reflective vest and whistle to assist Truck driver or Plant operator with movement on site.                                                                               | of Compliance for Lifting equipment                           |               |   |   |   |   |   |    |  |
|                                                                  | Containers placed on uneven surfaces.                                                                                               | Loaded truck uncontrolled movement on site can cause an accident resulting in serious injuries to operators and members of the public and damages to surrounding property. |                 |   |   |   |   |   |                                            | Traffic Management Plan must be communicated to all relevant parties to ensure controls are implemented.                                                                                                                            | • Traffic Management Plan                                     |               |   |   |   |   |   |    |  |
|                                                                  | Using defective / incorrect equipment to offload containers.                                                                        |                                                                                                                                                                            |                 |   |   |   |   |   |                                            | Clear all bystanders away from operations – Barricade area and post warning signage – Only Authorized workers/persons to enter construction area.                                                                                   | • Lifting Plan                                                |               |   |   |   |   |   |    |  |
|                                                                  | Fatigued operators                                                                                                                  |                                                                                                                                                                            |                 |   |   |   |   |   |                                            |                                                                                                                                                                                                                                     | • Appointment letters                                         |               |   |   |   |   |   |    |  |
|                                                                  | Unsafe / uncontrolled Truck Crane Operations                                                                                        | Containers falling over or off from stands/bricks could cause property damage.                                                                                             |                 |   |   |   |   |   |                                            | Appointed competent Banksman (Rigger) to oversee all lifting operations.                                                                                                                                                            | • Competencies – Operators, truck driver, flagperson, riggers |               |   |   |   |   |   |    |  |
|                                                                  | Unsafe and poor manual offloading practices from delivery vehicles / plant                                                          | Load / construction materials falling during lift could cause property damage or serious injuries or even fatalities.                                                      |                 |   |   |   |   |   |                                            | Pre-lift checks to be done on lifting material, and recorded on a Checklist, any deviations must be recorded and reported to Construction manager.                                                                                  | • Pre-lift checklists                                         |               |   |   |   |   |   |    |  |
|                                                                  | Operators under the influence of Alcohol or other substances while transporting machinery and equipment to site establishment area. | Fatigued operators could lead to accidents resulting in damage to plant or vehicles and serious injuries or fatalities.                                                    |                 |   |   |   |   |   |                                            | Slings and chain blocks to be checked prior lifting operations and have valid load test certificate. Lifting truck to also be in possession of a load test certificate and driver to be appointed in writing with valid competency. | • Safe Working Procedures                                     |               |   |   |   |   |   |    |  |
|                                                                  | Theft of material, equipment, and machinery                                                                                         |                                                                                                                                                                            |                 |   |   |   |   |   |                                            | Social facilitators to ensure community are aware of Construction work before Site establishment.                                                                                                                                   | • Issue based risk assessment                                 |               |   |   |   |   |   |    |  |
|                                                                  | Community unrest                                                                                                                    | Unsafe / uncontrolled lifting could result in load falling that could lead to property damage and serious injuries.                                                        |                 |   |   |   |   |   |                                            | Only Competent appointed Contractors or Service Providers will be authorized to work on the site.                                                                                                                                   | • Approved method statement                                   |               |   |   |   |   |   |    |  |
|                                                                  |                                                                                                                                     | Materials / Load falling could result in property damage.                                                                                                                  |                 |   |   |   |   |   |                                            | Dust Control measures to be implemented continuously at the site laydown area, watering the areas and roads on site.                                                                                                                | • DSTI                                                        |               |   |   |   |   |   |    |  |
|                                                                  | Materials / Load falling on employees could lead                                                                                    |                                                                                                                                                                            |                 |   |   |   |   |   | All operators must be appointed to operate | • Emergency contact numbers                                                                                                                                                                                                         |                                                               |               |   |   |   |   |   |    |  |

| ACTIVITY<br>(Work to be performed) |                                               | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                  | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CONTROLS<br>(Registers , Policies, Procedure)                                                                                                                                                                                                                                                                          | RESIDUAL RISK |   |   |   |   |   |    |    |  |  |  |  |  |
|------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|----|--|--|--|--|--|
|                                    |                                               |                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                        | I             | C | D | E | P | F | RR |    |  |  |  |  |  |
| S5-06                              |                                               |                                                                                                                                                                                               | to serious injuries and even fatalities.<br><br>Project Interruption and even delays with cost implications                                                                                                                                                                                                                                                                                                                                                                                            |                 |   |   |   |   |   |    | and inspect the specific plant he is competent in operating, medical fitness and competencies for operators must be valid and available on site.<br><br>Site Establishment Risk Assessment and Safe working Procedure / Method Statement to be communicated to all workers<br><br>Construction Manager and Supervisors must ensure continuous monitoring and enforcement of all control measures on site<br><br>If it is a live site, provide a separate gate or access to the site.                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                        |               |   |   |   |   |   |    |    |  |  |  |  |  |
|                                    | Site Establishment - Site clearing / Grubbing | Dust from plant used to clean and level areas.<br><br>Poor Visibility<br><br>Collisions<br><br>Incompetent operator / not medically fit<br><br>Unsafe / broken or mobile plant not roadworthy | Excessive dust could result in Occupational illness such as hypersensitivity pneumonitis in the surrounding communities and even to all the employees on site.<br><br>Accidents causing property damage and Accidents causing serious Injuries or even fatalities.<br><br>Poor Visibility could cause the operators to collide with surrounding property.<br><br>Operator not competent or medically fit operating plant could cause serious accidents leading to property damage and even fatalities. | 4               | 4 | 3 | 3 | 3 | 3 | 20 | Water Truck to be used to spray working areas in order to suppress dust.<br><br>Speed limit to be adhered to at all times while clearing the site.<br><br>Supervision on a continues basis with appointed flag persons assisting the operator while moving on site.<br><br>Workers to stand clear from moving machinery when clearing and grubbing takes place.<br><br>Only competent operators with valid competency to be appointed with a valid Occupational Health Medical (Annexure 3) will be allowed to operate mobile plant.<br><br>Pre-start inspections to be conducted, records to be kept in safety file.<br><br>All operators must be trained in the safe working/operating procedures and the issue-based Risk Assessment<br><br>Only construction vehicles and mobile plant that are roadworthy (records must be | <ul style="list-style-type: none"><li>• Operators' Competency</li><li>• Roadworthy Certificates</li><li>• Driver's License</li><li>• PDP</li><li>• Appointment letters</li><li>• SOP/SWP</li><li>• Issue based Risk Assessment</li><li>• Medical Certificate of Fitness</li><li>• Checklist</li><li>• DSTI's</li></ul> | 4             | 4 | 2 | 2 | 2 | 2 | 2  | 16 |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) |                                                                           | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                              | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                 | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                                                      | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |  |
|------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|--|--|--|--|--|--|--|
|                                    |                                                                           |                                                                             |                                                                                                                                         | I               | C | D | E | P | F | R  |                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                   | I             | C | D | E | P | F | RR |  |  |  |  |  |  |  |
|                                    |                                                                           |                                                                             | Operating plant that is unsafe or not roadworthy could cause accidents that may result in serious disabling injuries or even fatalities |                 |   |   |   |   |   |    | available) may be used for construction activities and for transporting materials etc.                                                                                                |                                                                                                                                                                                                                                                                                   |               |   |   |   |   |   |    |  |  |  |  |  |  |  |
|                                    |                                                                           |                                                                             | Colliding with property or other plant or vehicles will result in financial losses and delays in production                             |                 |   |   |   |   |   |    | Construction Manager and Supervisors must ensure continuous monitoring and enforcement of all control measures on site                                                                |                                                                                                                                                                                                                                                                                   |               |   |   |   |   |   |    |  |  |  |  |  |  |  |
| S5-07                              | Site Establishment - Installing Temporary services (Electrical, Plumbing) | Incompetent Electrical / Plumbing contractor installing temporary services. | Damages to underground services could cause a delay in production or commencement of the project.                                       |                 |   |   |   |   |   |    | All electrical installations to be conducted by a competent appointed person and COC's to be obtained when necessary.                                                                 | <ul style="list-style-type: none"><li>• COC</li><li>• Competencies / Registration</li><li>• Underground services report / drawings</li><li>• SOP/SWP</li><li>• Issue Based Risk Assessment</li><li>• DSTI; s</li><li>• CoC/CoA</li><li>• Medical Certificate of Fitness</li></ul> |               |   |   |   |   |   |    |  |  |  |  |  |  |  |
|                                    |                                                                           | Damages to underground services or surrounding services                     | Damages to underground services could also affect surrounding areas services such as electricity and water.                             | 3               | 3 | 3 | 3 | 4 | 4 | 20 | Power tools to be inspected by a competent person, pre-check inspections to be conducted, power tools to be recorded on inspection register.                                          |                                                                                                                                                                                                                                                                                   |               |   |   |   |   |   |    |  |  |  |  |  |  |  |
|                                    |                                                                           | Incorrect Location of Services                                              | Installing services in the incorrect areas could result in financial costs (loss)                                                       |                 |   |   |   |   |   |    | Drawings of underground services must be requested to identify location of services before commencing with works.                                                                     |                                                                                                                                                                                                                                                                                   |               |   |   |   |   |   |    |  |  |  |  |  |  |  |
|                                    |                                                                           | Environmental contamination                                                 | Spillages from toilet waste due to poor plumbing or incorrect installation would result in environmental pollution                      |                 |   |   |   |   |   |    | Competent Plumbers conducting plumbing activities must ensure all fittings and plumbing installations are secured. Plumbing Contractor to issue CoC / CoA once installations are done |                                                                                                                                                                                                                                                                                   |               |   |   |   |   |   |    |  |  |  |  |  |  |  |
|                                    |                                                                           |                                                                             |                                                                                                                                         |                 |   |   |   |   |   |    |                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                   |               |   |   |   |   |   |    |  |  |  |  |  |  |  |
| S5-08                              | Excavation Works - Excavating by hand                                     | Damages to underground services<br><br>Poor ergonomics used.                | Employees manually excavating and making contact with underground services could cause disruptions in services in                       | 4               | 4 | 3 | 3 | 3 | 4 | 21 | Drawings must be utilized to identify existing services. All Excavation work must be supervised by a competent person appointed.                                                      | <ul style="list-style-type: none"><li>• Checklists</li><li>• Issue Based Risk Assessment</li><li>• SOP/SWP</li><li>• Method Statement</li><li>• Toolbox talks</li></ul>                                                                                                           | 3             | 4 | 2 | 2 | 3 | 3 | 17 |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)              | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                              | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                     | CONTROLS<br>(Registers, Policies, Procedure)                                             | RESIDUAL RISK |   |   |   |   |   |    |  |
|------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|--|
|                                    |                                                           |                                                                                                                                                                                                         | I               | C | D | E | P | F | R |                                                                                                                                                                                                           |                                                                                          | I             | C | D | E | P | F | RR |  |
|                                    | Unsafe damaged hand tools used.                           | surrounding areas.<br>Damage to Property                                                                                                                                                                |                 |   |   |   |   |   |   | Employees need to be trained in the ergonomics safe working procedure and Risk Assessment.                                                                                                                | • DSTI's<br>• PTO<br>• Underground services drawings<br>• Medical Certificate of Fitness |               |   |   |   |   |   |    |  |
|                                    | Exposure to Heat and Sun                                  | Employees manually excavating and making contact with underground services could lead to employees being electrocuted.                                                                                  |                 |   |   |   |   |   |   | Employees need to take regular breaks to prevent strain on their backs.                                                                                                                                   |                                                                                          |               |   |   |   |   |   |    |  |
|                                    | Dust generated from picks and shovels used when excavated |                                                                                                                                                                                                         |                 |   |   |   |   |   |   | All hand tools must be inspected, and the findings recorded in the safety file. Damaged tools must be removed from site.                                                                                  |                                                                                          |               |   |   |   |   |   |    |  |
|                                    | Excavation Collapses                                      | Employees exposed to manual excavating for long periods could lead to minor to moderate back injuries.                                                                                                  |                 |   |   |   |   |   |   | Employees need to take regular breaks when working in the sun to prevent sunburn.<br>Employees need to drink enough water to stay hydrated.                                                               |                                                                                          |               |   |   |   |   |   |    |  |
|                                    |                                                           | The use of unsafe or damaged hand tools could cause head, bodily and hand injuries.                                                                                                                     |                 |   |   |   |   |   |   | Employees manually excavating must be issued with the required PPE.                                                                                                                                       |                                                                                          |               |   |   |   |   |   |    |  |
|                                    |                                                           | Employees exposed to working long periods of time in the sun could lead to long term/short term skin damage, this could include skin cancer, heat stroke and dehydration resulting in serious injuries. |                 |   |   |   |   |   |   | All excavation walls must be shored or braced and must be approved by appointed / competent excavation supervisor. All excavated materials must be placed at least 1.5 – 2m away from any excavation edge |                                                                                          |               |   |   |   |   |   |    |  |
|                                    |                                                           | Excessive dust could result in Occupational illnesses such as hypersensitivity pneumonitis to the exposed employees excavating                                                                          |                 |   |   |   |   |   |   | Water truck to be used daily or as per issue-based risk assessment to spray all roads with water to suppress the dust                                                                                     |                                                                                          |               |   |   |   |   |   |    |  |
|                                    |                                                           | Excavation collapsing could result in employees excavating to be trapped by collapsed                                                                                                                   |                 |   |   |   |   |   |   |                                                                                                                                                                                                           |                                                                                          |               |   |   |   |   |   |    |  |
|                                    |                                                           |                                                                                                                                                                                                         |                 |   |   |   |   |   |   |                                                                                                                                                                                                           |                                                                                          |               |   |   |   |   |   |    |  |
|                                    |                                                           |                                                                                                                                                                                                         |                 |   |   |   |   |   |   |                                                                                                                                                                                                           |                                                                                          |               |   |   |   |   |   |    |  |

| ACTIVITY<br>(Work to be performed) |                                                                                                          | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                        | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                         | RISK EVALUATION |   |   |   |   |   |                                                                                                                                                                                                                                                     | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                        | CONTROLS<br>(Registers, Policies,<br>Procedure) | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                                                                                          |                                                                                                                                     |                                                                                                                                                                                                                                                                       | I               | C | D | E | P | F | R                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 | I             | C | D | E | P | F | RR |
| S5-09                              | Excavation Works -<br>Excavating by<br>Machinery / Plant<br>such as TLB's,<br>Excavators, Ditch<br>witch |                                                                                                                                     | walls leading to serious<br>injuries even fatalities                                                                                                                                                                                                                  |                 |   |   |   |   |   |                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                                                          | Workers standing / walking or<br>working near mobile plant<br>operations.                                                           | Employees working /<br>standing or walking past<br>operational plant /<br>machinery could lead to<br>being struck by or being<br>driven over resulting in<br>disabling injury or even<br>fatality.                                                                    |                 |   |   |   |   |   |                                                                                                                                                                                                                                                     | Traffic control is to be managed to prevent<br>collision of mobile plant as well as collision<br>with personnel. Appointed Flag person to<br>control movement of plant within areas.                                                                                                                                                                                                                                                         |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                                                          | Operator incompetent and not<br>appointed.                                                                                          | Incompetent operators<br>operating mobile plant /<br>machinery could result in<br>accidents, property<br>damages and even<br>serious injuries and/ or<br>fatalities to surrounding<br>employees.                                                                      |                 |   |   |   |   |   |                                                                                                                                                                                                                                                     | Only competent / Appointed operators<br>authorized to operate machinery (must have<br>valid Competency, medical and PDP) will be<br>allowed to operate mobile plant.                                                                                                                                                                                                                                                                         |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                                                          | Unsafe / damages Mobile Plant<br>/ machinery used to excavate.                                                                      |                                                                                                                                                                                                                                                                       |                 |   |   |   |   |   | Machinery must be inspected before use,<br>findings to be recorded on a checklist, any<br>deviations must be recorded and reported to<br>a supervisor. Service / maintenance<br>schedule / history must be available for the<br>specific machinery. | <ul style="list-style-type: none"><li>• Issue-based Risk<br/>Assessment</li><li>• Method Statement</li><li>• SOP/SWP</li><li>• Appointment letters</li><li>• Competency for<br/>operators, excavation<br/>supervisor</li><li>• Underground services<br/>drawings</li><li>• Checklists</li><li>• Signages</li><li>• DSTI's</li><li>• PTO</li><li>• Breathalyzer records /<br/>register</li><li>• Medical Certificate of<br/>Fitness</li></ul> |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                                                          | Mobile plant / machinery<br>operating near unprotected<br>edge of an open trench /<br>excavation.                                   | The use of unsafe<br>damaged mobile plant /<br>machinery used could<br>result in property<br>damage and delays in<br>production.                                                                                                                                      |                 |   |   |   |   |   |                                                                                                                                                                                                                                                     | All operators must be breathalyzed daily to<br>test if they are intoxicated.                                                                                                                                                                                                                                                                                                                                                                 |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                                                          | Operator is intoxicated.                                                                                                            |                                                                                                                                                                                                                                                                       | 5               | 5 | 4 | 3 | 3 | 3 | 23                                                                                                                                                                                                                                                  | Before excavation work begins the stability of<br>the ground must be evaluated by a<br>competent person appointed (Excavation<br>Supervisor).                                                                                                                                                                                                                                                                                                |                                                 | 4             | 4 | 3 | 2 | 2 | 3 | 18 |
|                                    |                                                                                                          | Unsuitable ground conditions<br>for excavation                                                                                      |                                                                                                                                                                                                                                                                       |                 |   |   |   |   |   |                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                                                          | Dust generation                                                                                                                     | Mobile plant / machinery<br>operating near the edge<br>of an open excavation<br>could cause excavation /<br>trench walls to collapse<br>resulting in employees<br>being trapped<br>underneath that may<br>result in disabling injuries<br>and/or multiple fatalities. |                 |   |   |   |   |   |                                                                                                                                                                                                                                                     | Dust suppression methods to be used when<br>required such as water truck spraying area                                                                                                                                                                                                                                                                                                                                                       |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                                                          | Excessive noise generation<br>(especially during rock<br>breaking)                                                                  |                                                                                                                                                                                                                                                                       |                 |   |   |   |   |   |                                                                                                                                                                                                                                                     | Operators must be issued with the required<br>PPE such as dust masks, earplugs if<br>required.                                                                                                                                                                                                                                                                                                                                               |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                                                          | Open Excavations left open or<br>unattended.                                                                                        |                                                                                                                                                                                                                                                                       |                 |   |   |   |   |   |                                                                                                                                                                                                                                                     | Scanning devices to be used to identify<br>underground services prior excavation works,<br>in order to prevent cable damage and<br>possible electrocution.                                                                                                                                                                                                                                                                                   |                                                 |               |   |   |   |   |   |    |
|                                    | Damage to existing services<br>during excavations                                                        |                                                                                                                                     |                                                                                                                                                                                                                                                                       |                 |   |   |   |   |   |                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |               |   |   |   |   |   |    |
|                                    |                                                                                                          | Mobile plant / machinery<br>operating near the edge<br>of an open excavation<br>could result in mobile<br>plant / machinery falling |                                                                                                                                                                                                                                                                       |                 |   |   |   |   |   | All Deep trenches or excavations must be<br>braced or shored to prevent collapse if<br>mobile plant or machinery operates near the<br>trench or excavation. Bracing and Shoring                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |               |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) |                                                                                  | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                               | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                         | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                                                                 | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |
|------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|--|--|--|--|--|--|
|                                    |                                                                                  |                                                                                                                             |                                                                                                                                                                                             | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                 | I             | C | D | E | P | F | RR |  |  |  |  |  |  |
|                                    |                                                                                  |                                                                                                                             | into the excavation / trench when walls collapse resulting in serious damage to mobile plant and even disabling injuries and or multiple fatalities.                                        |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                               | must be supervised and approved by appointed excavation supervisor                                                                                                                                                                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |
|                                    |                                                                                  |                                                                                                                             | Intoxicated Operator operating mobile plant / machinery could result in accidents, property damages and even serious injuries and/ or fatalities to surrounding employees.                  |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                               | Mobile plant and machinery are not allowed to be operated within 5m of any open excavation or trench. Unless declared safe by appointed competent person and that the excavation or trench does not have any employees working in the open trench or excavation |               |   |   |   |   |   |    |  |  |  |  |  |  |
|                                    |                                                                                  |                                                                                                                             | Operator excavating or breaking rock for an extended period are exposed to excessive noise, and this could cause minor to moderate short term hearing loss and even long-term hearing loss. |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                               | Construction Manager and Supervisors must ensure continuous monitoring and enforcement of all control measures on site                                                                                                                                          |               |   |   |   |   |   |    |  |  |  |  |  |  |
|                                    |                                                                                  |                                                                                                                             | Damage to existing services could result in financial costs and loss of production. Making contact with electrical underground services could cause operator to be electrocuted             |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                 |               |   |   |   |   |   |    |  |  |  |  |  |  |
| S5-10                              | Excavation Works -<br>Barricading of excavated areas and warning signages posted | Deep open excavations, trenches or open edges left unprotected.<br><br>No warning signages posted<br><br>Unauthorized entry | Deep excavations / trenches left unprotected could result in employees / visitors falling into excavation / trench resulting in serious injuries.                                           | 5               | 4 | 4 | 3 | 3 | 3 | 22 | Excavations guarded/barricaded/lighted after dark in public areas and when there is no work conducted. All excavations are subject to daily inspections by a competent appointed person. Excavations must be kept open to a minimum, do not leave them open for long periods. | <ul style="list-style-type: none"><li>SOP/SWP</li><li>Issue based Risk Assessment</li><li>Toolbox talks</li><li>Checklist</li><li>DSTI's</li></ul>                                                                                                              | 4             | 4 | 2 | 2 | 2 | 2 | 16 |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) |                                                                                                                  | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                         | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CONTROLS<br>(Registers, Policies, Procedure)                                                                                    | RESIDUAL RISK |   |   |   |   |   |    |  |  |
|------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|--|--|
|                                    |                                                                                                                  |                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                 | I             | C | D | E | P | F | RR |  |  |
|                                    |                                                                                                                  |                                                                                                                                                                                                      | No warning signages posted could lead to employees, the public or even children not knowing of the open excavation, and this could lead to them falling into excavation resulting in serious injuries or even a fatality<br><br>Unauthorized entry by members of the public / children could result in members / children / visitors falling into open trenches or excavations. This could result in serious bodily injuries. During raining season this could result in members, children or visitors to drown when falling into or playing in open trenches and excavations |                 |   |   |   |   |   |    | Warning signages to be posted at all excavated areas to warn the other employees or members of the public of the risk.<br><br>Open trenches or excavations must be secured / closed off with a solid barricading. No Danger tape is allowed                                                                                                                                                                                                                                                                         |                                                                                                                                 |               |   |   |   |   |   |    |  |  |
|                                    |                                                                                                                  |                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                 |               |   |   |   |   |   |    |  |  |
| S5-11                              | Lifting operations (Loading and offloading of materials) - Manual handling / loading and offloading (Ergonomics) | Employees lifting heavy uncontrolled materials.<br><br>Employees not trained in safe manual lifting procedures.<br><br>Materials / equipment falling.<br><br>Walkways not clear of tripping hazards. | Employees manual handling materials / equipment exceeding 25kg per person could cause minor back strains and even long-term back injury.<br><br>Employees who do not understand the safe procedure to lift (Ergonomics) materials could result in injuries such as back injury or materials to fall resulting in property damages.                                                                                                                                                                                                                                            | 4               | 3 | 3 | 1 | 4 | 5 | 20 | Manual handling / lifting Safe work Procedure and Risk Assessment to be communicated to all workers on site. (Keep proof of communication in safety file)<br><br>Workers assisting each other to lift must communicate with each other to ensure safe lifting and lowering of items.<br><br>Before offloading or handling any materials, equipment or tools, ensure walkways are clear and free from tripping hazards.<br><br>Workers to assist each other if intended load to be lifted exceeds 25kg (per person). | <ul style="list-style-type: none"><li>Ergonomics Risk Assessment</li><li>SOP/SWP</li><li>Toolbox talks</li><li>DSTI's</li></ul> | 3             | 2 | 2 | 1 | 3 | 4 | 15 |  |  |

| ACTIVITY<br>(Work to be performed) |  | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                           | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                            | CONTROLS<br>(Registers, Policies, Procedure) | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
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|                                    |  |                                              | Materials / equipment falling when loading or offloading could lead to pinch point injuries to hands, fingers, and feet.<br><br>Workers tripping over hazards when moving with load could cause load to fall and employees to fall over resulting in bodily injuries |                 |   |   |   |   |   |   | Workers / Supervisors to ensure materials, equipment and tools are secure when offloading.<br><br>When manual lifting the correct procedure must be used, workers to lift loads using their legs and not their back.<br><br>Employees manually lifting equipment, materials must be issued with the required PPE such as gloves, hardhat, safety shoes, overalls |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | </ |

| ACTIVITY<br>(Work to be performed) |                                                                                                     | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                        | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                   | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                  | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                              | RESIDUAL RISK |   |   |   |   |   |    |  |  |
|------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|--|--|
|                                    |                                                                                                     |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                              | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                           | I             | C | D | E | P | F | RR |  |  |
|                                    |                                                                                                     |                                                                                                                                                     | and even lifting plant to fall over.<br><br>Striking of overhead power lines could result in electrocution of operator and or rigger.<br><br>Striking overhead powerline could cause cable and pole to fall over resulting in property damage and loss of production in the specific area that may also result in legal liability claims.<br><br>Unauthorized members of public could be struck by moving load resulting in serious injuries |                 |   |   |   |   |   |    | Visitors and members of public entering the site must do site induction to inform them of all risk activities of the day.<br><br>Flag person / Rigger to guide the operator to ensure safe movement of load<br><br>Lifting plan to be drafted, to identify hazards and risks, locations of lift, lift capacity of lifting equipment or machinery                                                       |                                                                                                                                                                                                           |               |   |   |   |   |   |    |  |  |
|                                    |                                                                                                     |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                           |               |   |   |   |   |   |    |  |  |
|                                    |                                                                                                     |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                           |               |   |   |   |   |   |    |  |  |
| S5-13                              | Lifting operations (Loading and offloading of materials) - Lifting Gear used for Lifting operations | Use of unsafe / damaged Lifting equipment such as slings, ropes and chains<br><br>Rigging done by incompetent person or object not correctly hooked | Using of unsafe damaged lifting tackle could result in load falling when tackle breaks or snaps.<br>Causing major property damages and financial cost to the company<br><br>Incorrect rigging could cause load to fall when lifting, lifting tackle to break resulting in serious injuries, possible fatalities, and property damages                                                                                                        | 4               | 3 | 3 | 2 | 4 | 4 | 20 | All lifting gear/ tackle must be inspected before use, deviations must be recorded on the checklist and reported to the construction manager.<br><br>CoC/SWL must be available for all lifting gear and its components.<br><br>Rigging must only be done by a competent person appointed for the works.<br><br>Safe Working Procedures and Risk Assessments to be communicated to all relevant workers | <ul style="list-style-type: none"><li>Valid SWL / CoC</li><li>Checklist</li><li>Rigger Competency</li><li>Rigger appointment</li><li>SOP/SWP</li><li>Issue-based risk assessment</li><li>DSTI's</li></ul> | 3             | 2 | 2 | 2 | 2 | 2 | 13 |  |  |
|                                    | Construction vehicles and mobile Plant Operations – TLB, Excavators, Bobcats, Telehandlers,         | Defective / unsafe Construction vehicles and mobile Plant used, or vehicles used that are not roadworthy.<br><br>Speeding onsite, near the          | The operation of unsafe / defective vehicles or plant could result in financial cost and accidents causing damages to property and                                                                                                                                                                                                                                                                                                           | 5               | 5 | 4 | 3 | 3 | 4 | 25 | All construction vehicles and mobile plant have to comply with Construction regulations and Driven Machinery Regulations. Other construction vehicles used must have a valid roadworthy certificate.                                                                                                                                                                                                   | <ul style="list-style-type: none"><li>Maintenance / service records</li><li>Driver's License</li><li>PDP</li><li>Appointment letters</li><li>Valid Competency</li></ul>                                   | 4             | 4 | 3 | 2 | 2 | 3 | 18 |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                              | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                         | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                     | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                                                                           |                                                                                                                                    | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                  | I             | C | D | E | P | F | RR |
| MEWP's, Trucks, Site vehicles      | construction site and/or within restricted areas.                                                         | serious injuries with a possibility of fatalities.                                                                                 |                 |   |   |   |   |   |   | Employees to be transported to and from work in a safe manner, never to be carried at the back of bakkies and trucks.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"><li>• Medical Fitness to work</li><li>• Signages</li><li>• Breathalyzer records</li><li>• Checklists</li></ul> |               |   |   |   |   |   |    |
|                                    | Operators and drivers untrained / not skilled or not in position of the required license to drive.        | Speeding onsite could result in running over employees or members of the public causing serious injuries and even fatalities.      |                 |   |   |   |   |   |   | Mobile plant operating on site to fully comply with CR 23. Maintenance / Service history must be available on site and used in accordance with their design and intention for which they were designed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    | Construction Vehicles / mobile plant left unattended.                                                     | Incompetent operators could result in uncontrolled driving causing multiple accidents.                                             |                 |   |   |   |   |   |   | Random alcohol and drug tests to be introduced and maintained.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    | Operators and drivers intoxicated or under the influence of Alcohol, Marijuana (Cannabis) or other drugs. | Unattended vehicle or plant could result in theft leading to financial costs.                                                      |                 |   |   |   |   |   |   | Ensure vehicles are isolated when not in operation, Construction vehicles and mobile plant left unattended after hours adjacent to roads and areas where there is traffic movement must be fitted with lights, reflectors or adequate barricades to prevent moving traffic from a sudden emergency, or to come into contact with the parked construction vehicles and mobile plant. In addition, construction vehicles and mobile plant left unattended after hours must be parked with all buckets, booms etc. fully lowered, the emergency brakes engaged and, where necessary, the wheels chocked, the transmission in neutral and the motor switched off and the ignition key removed and stored safely. |                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    | Failure to inspect vehicles                                                                               | Intoxicated operators could result in uncontrolled driving causing multiple accidents, injuries and even multiple fatalities.      |                 |   |   |   |   |   |   | Operators to drive according to the required speed limit on site and on public roads.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    |                                                                                                           | Unable to identify unsafe vehicles or plant could cause vehicles or plant to fail / breakdown resulting in loss of production/time |                 |   |   |   |   |   |   | All drivers must be appointed and must have a valid driver's license and PDP/Competency certificate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    |                                                                                                           |                                                                                                                                    |                 |   |   |   |   |   |   | Vehicles or plant not to exceed the prescribed weight limit of the plant or vehicle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                  |               |   |   |   |   |   |    |
|                                    |                                                                                                           |                                                                                                                                    |                 |   |   |   |   |   |   | Construction Vehicle to be Fitted with adequate signaling devices to make                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                  |               |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) |  | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                               | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                   | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                | CONTROLS<br>(Registers, Policies, Procedure) | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|------------------------------------|--|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------|---|---|---|---|---|----|--|--|--|--|--|--|--|--|
|                                    |  |                                                                                            |                                                                                                                                                                                              | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                      |                                              | I             | C | D | E | P | F | RR |  |  |  |  |  |  |  |  |
| S5-15                              |  |                                                                                            |                                                                                                                                                                                              |                 |   |   |   |   |   |    | movement safe including reversing; Fitted with two head and two taillights that are in good working condition whilst operating under poor visibility conditions.                                                                                                     |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  |                                                                                            |                                                                                                                                                                                              |                 |   |   |   |   |   |    | No loose tools, material etcetera is allowed in the driver and/or operators compartment/cabin nor in the compartment in which any other persons are transported.                                                                                                     |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  |                                                                                            |                                                                                                                                                                                              |                 |   |   |   |   |   |    | The construction site must be organized to facilitate the movement of construction vehicles and mobile plant in such a manner that pedestrians and other vehicles are not endangered. Traffic routes to be suitable, sufficient in number and adequately demarcated. |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  | Employees are not trained to operate machinery.                                            | Untrained or incompetent employees operating machinery or conducting hot work activities could lead to serious injuries and even a fatality.                                                 |                 |   |   |   |   |   |    | Only competent workers with the required skills and knowledge will be appointed to operate such machinery like grinders, welding machines, cutting torch etc.                                                                                                        |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  | Unsafe/Damaged tools and equipment used – No Flashback arrestors – No Guards on machinery. |                                                                                                                                                                                              |                 |   |   |   |   |   |    | Gas cylinders when used to be safely stored and to be secured, when not in use, in a cool place, upright position and locked in storeroom.                                                                                                                           |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  | Employees making contact with hot surfaces.                                                | Using tools and equipment that are damaged or unsafe or does not have the required guards in place could lead to an accident when cutting or grinding resulting in injuries to bodily parts. |                 |   |   |   |   |   |    | All hot works to be conducted in an enclosed place away from public and employees conducting other activities. Welding screens to be placed at welding areas and solid barricading used to close off areas.                                                          |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  | Uncontrolled Sparks, open flames or hot metals causing fire.                               |                                                                                                                                                                                              | 5               | 5 | 4 | 3 | 4 | 4 | 25 |                                                                                                                                                                                                                                                                      |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  | Incorrect storage of Gas Cylinders                                                         |                                                                                                                                                                                              |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                      |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  | Operators do not wear the required PPE.                                                    | Making contact with hot surfaces when or after conducting hot works can lead to serious burns.                                                                                               |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                      |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  | No Fire prevention controls available.                                                     |                                                                                                                                                                                              |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                      |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |  | Hot work area not closed off / barricaded / no welding                                     | Uncontrolled sparks could cause a fire                                                                                                                                                       |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                      |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                 | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                         | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                               | CONTROLS<br>(Registers, Policies, Procedure) | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |
|------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------|---|---|---|---|---|----|--|--|--|
|                                    |                                                                              |                                                                                                                                                                                                    | I               | C | D | E | P | F | R |                                                                                                                                                                                                                     |                                              | I             | C | D | E | P | F | RR |  |  |  |
|                                    | screens and no warning signages displayed within this area.                  | resulting in property damages and harm to the environment.                                                                                                                                         |                 |   |   |   |   |   |   | welding screens and wetting the areas with water.                                                                                                                                                                   |                                              |               |   |   |   |   |   |    |  |  |  |
|                                    | Incorrect fittings / attachments or component used when operating machinery. | Unsafe storage of gas cylinders could cause cylinders to fall over causing gas leaks and a possibility of explosion resulting in serious damages to property and resulting in multiple fatalities. |                 |   |   |   |   |   |   | Fire extinguishers must be placed near areas where hot works are conducted, and a trained competent appointed fire fighter to be available onsite.                                                                  |                                              |               |   |   |   |   |   |    |  |  |  |
|                                    | Overhead Hot work operations                                                 |                                                                                                                                                                                                    |                 |   |   |   |   |   |   | SABS approved PPE to be issued and used on site. Task specific PPE is required for Hot work activities, for example welding helmet, face shield when cutting, safety glasses, dust masks, welding apron etc.        |                                              |               |   |   |   |   |   |    |  |  |  |
|                                    | No firefighting equipment or firefighter available                           |                                                                                                                                                                                                    |                 |   |   |   |   |   |   |                                                                                                                                                                                                                     |                                              |               |   |   |   |   |   |    |  |  |  |
|                                    | Flammable and explosive chemicals stored near hot work area.                 | Conducting hot works without the required PPE could cause injuries to bodily part or face.                                                                                                         |                 |   |   |   |   |   |   | No Overhead Hot works will be allowed, if Hot work is required at height, it should be done from an approved scaffold or MEWP. Then the area below should be barricaded to prevent workers from entering that area. |                                              |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                                              | No fire prevention controls could cause an uncontrolled fire resulting in damages to property (including neighboring property) and serious harm to the environment.                                |                 |   |   |   |   |   |   | Hot work will not be allowed in wet conditions, electrical cables must be made safe and free/away from water sources.                                                                                               |                                              |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                                              | Hot work area not controlled / closed off or no welding screens could cause injuries to unauthorized employees or members of the public.                                                           |                 |   |   |   |   |   |   | All cylinders used onsite must be fitted with the correct fittings and clamps when connecting the hoses. All gauges must be in good working condition.                                                              |                                              |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                                              |                                                                                                                                                                                                    |                 |   |   |   |   |   |   | All new vessels must be checked for leaks, leaking vessels should NOT be used. Equipment must be identified/numbered and entered into a register. (Soap Test to be done)                                            |                                              |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                                              | Operating machinery without the required fittings / attachments or components could cause the machinery to break, resulting in injuries to the operator.                                           |                 |   |   |   |   |   |   | All workers conducting Hot work activities must be trained on the safe working procedures and issue-based risk assessments                                                                                          |                                              |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                                              |                                                                                                                                                                                                    |                 |   |   |   |   |   |   |                                                                                                                                                                                                                     |                                              |               |   |   |   |   |   |    |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                    | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                   | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                                                                                                                                                                                                                                                             | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                              | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | I             | C | D | E | P | F | RR |
|                                    |                                                                                 | Overhead hot work activities could cause harm / injuries to employees below or cause a fire resulting in property damage<br><br>No fire fighter or firefighting equipment on site could cause an uncontrolled fire resulting in damage to property and harm to the environment<br><br>Sparks from hot work activities could cause fire or even explosions at flammable storage area resulting in serious property damage and even fatalities |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |   |   |   |   |   |    |
| S5-16                              | Scaffolding – Scaffold erection, dismantling and Working from Scaffold platform | Improper erecting of scaffold. Not as per SANS 10085:2004<br><br>Employees not trained in erecting and dismantling of scaffold.<br><br>Erecting scaffold on uneven or unstable ground<br><br>Scaffold materials falling while erecting or dismantling.<br><br>Unsafe stacking and storage of scaffold materials<br><br>Construction materials or tools falling from scaffold.<br><br>No Safe access to platform                              |                 |   |   |   |   |   |   | Competent person with valid competency to be appointed to erect scaffold as per SANS 10085<br><br>Scaffold must be inspected by a competent person (valid Competency) whom has been appointed every time before use.<br><br>Scaffold must be inspected before use, findings must be recorded on a checklist<br><br>Scaffold must be fully erected according to SANS 10085 Standards, if scaffold is not fully erected or components missing, it must be dismantled or declared unsafe to use.<br><br>No Scaffold works are allowed in inclement weather or near overhead powerlines. Weather conditions must be monitored by Health and Safety resource and Construction Manager | <ul style="list-style-type: none"> <li>SANS Standards 10085-1:2004</li> <li>Issue-based risk assessment</li> <li>Method Statement</li> <li>SOP/SWP</li> <li>Checklists</li> <li>Appointment letter – Scaffold Erectors, Scaffold Inspectors, Scaffold Supervisor</li> <li>Competencies</li> <li>Work at Height training certificate</li> <li>Medical fitness to work at height</li> <li>SWL / CoC for fall protection equipment</li> <li>Fall Protection Plan</li> <li>DSTI's</li> </ul> | 4             | 4 | 3 | 2 | 3 | 3 | 19 |

[illegible]

| ACTIVITY<br>(Work to be performed) |                                                                          | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                        | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                                                                                                                  | RESIDUAL RISK |   |   |   |   |   |    |  |
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|                                    |                                                                          |                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                  | I             | C | D | E | P | F | R  |  |
| S5-17                              |                                                                          |                                                                                                                                                                     | result in employees been struck by lightning.<br><br>No warning signages or safe or unsafe signages posted at scaffold could cause employees to access a scaffold that is unsafe and could result in employees falling from scaffold.<br><br>Employees who are not medically fit to work at height could cause employee to experience blood pressure issues that could result in the employee fainting/collapsing.<br><br>Use of unsafe or damaged fall protection equipment could cause employees to fall resulting in serious disabling injuries or even a fatality |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                  |               |   |   |   |   |   |    |  |
|                                    | Work at Height activities – Working on edge of building or near openings | Construction materials and tools falling from edge.<br><br>Employees, Visitors or Management falling from Edge or into opening.<br><br>No Edge Protection available | Tools and equipment falling from height (edge) could fall on top of workers below resulting in serious injuries to the head and body.<br><br>Falling tools and equipment could lead to damages to structures below or damages to the tools and equipment resulting in financial costs.                                                                                                                                                                                                                                                                                | 5               | 5 | 3 | 2 | 4 | 4 | 23 | Comprehensive fall protection plan developed by a competent fall protection plan developer, plan to include all WAH activities, fall protection and fall prevention methods used; The fall protection plan must include but not limited: A Risk assessment of all work carried out from a fall risk position, procedures and methods used to address all the risks identified.<br><br>Edge Protection (Solid) to be installed and inspected by competent person (No Barricading net) | <ul style="list-style-type: none"><li>• Scope specific Fall Protection Plan</li><li>• SOP/SWP</li><li>• Issue-based risk assessment</li><li>• Checklists</li><li>• Signages</li><li>• Work at height competency certificate</li><li>• Medical fitness to work at height</li><li>• Fall Protection Plan</li></ul> | 4             | 4 | 2 | 2 | 2 | 2 | 16 |  |

| ACTIVITY<br>(Work to be performed) |                                                             | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                    | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                 | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                               | CONTROLS<br>(Registers , Policies, Procedure)                                                                                                                                                       | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |
|------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|--|--|--|
|                                    |                                                             |                                                                 |                                                                                                                                                                            | I               | C | D | E | P | F | R  |                                                                                                                                                                                                     |                                                                                                                                                                                                     | I             | C | D | E | P | F | RR |  |  |  |
| S5-18                              | Work at Height activities –<br>Use of Trestles to work from |                                                                 | Employee, Visitors or Management falling from Edge or into opening could result in a fatality or serious disabling injuries.                                               |                 |   |   |   |   |   |    | Warning Signages to be posted to inform public and employees regarding the open edges.<br><br>All construction materials, tools and equipment to be stacked at least 1.5m-2m away from an open edge |                                                                                                                                                                                                     |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                             | Trestle used on uneven / unstable surface.                      | Trestle used on uneven / unstable surface could cause trestle to fall over while employees are working from it, this could result in lost time and even disabling injuries |                 |   |   |   |   |   |    |                                                                                                                                                                                                     | All trestles and its components must be inspected before use; findings must be recorded on a checklist.                                                                                             |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                             | Trestle not fully boarded (Platform)                            | Trestle used not fully boarded could cause employees working from trestle to fall due to the small space to work from.                                                     |                 |   |   |   |   |   |    |                                                                                                                                                                                                     | Trestles used must be fully boarded that have been secured to prevent movement. Workers will not be allowed to work from trestle if platform is fully extended.                                     |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                             | Trestle platform not secured.                                   | Trestle platform / boards not secured could cause employees or materials to fall from trestle when moving or conducting activities                                         |                 |   |   |   |   |   |    |                                                                                                                                                                                                     | Employees must be trained on the Safe Working Procedures and Issue based Risk Assessment for trestle works                                                                                          |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                             | Trestle platform damaged / bent or unsafe to use.               | Damaged or bent platform could cause employees, tools or materials to fall                                                                                                 | 4               | 3 | 4 | 2 | 4 | 4 | 21 |                                                                                                                                                                                                     | No tools or construction materials to be left unattended on the trestle                                                                                                                             |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                             | Employees working from fully extended Trestle base.             | Employees working from fully extended trestle platform could cause trestle platform to fall over                                                                           |                 |   |   |   |   |   |    |                                                                                                                                                                                                     | All trestles may only be erected on level surfaces, bricks are not allowed to level the trestles. Baseplate with jack or solid wood slab to be used. Trestles must be erected as per SANS standards |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                             | Workers and tools falling from trestle platform.                | Employees falling from trestle could cause                                                                                                                                 |                 |   |   |   |   |   |    |                                                                                                                                                                                                     | All trestles' activities must be conducted under supervision                                                                                                                                        |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                             | Employee working on trestle not medically fit to work at height |                                                                                                                                                                            |                 |   |   |   |   |   |    |                                                                                                                                                                                                     |                                                                                                                                                                                                     |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                             |                                                                 |                                                                                                                                                                            |                 |   |   |   |   |   |    |                                                                                                                                                                                                     |                                                                                                                                                                                                     |               |   |   |   |   |   |    |  |  |  |
|                                    |                                                             |                                                                 |                                                                                                                                                                            |                 |   |   |   |   |   |    |                                                                                                                                                                                                     |                                                                                                                                                                                                     |               |   |   |   |   |   |    |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                               | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                  | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                             | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                            | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                                            |                                                                                                                                                             | I               | C | D | E | P | F | R  |                                                                                                                                                                   |                                                                                                                                                                                                                         | I             | C | D | E | P | F | RR |
| S5-19                              | Work at Height activities – Using ladder to work from or to use for access |                                                                                                                                                             |                 |   |   |   |   |   |    | serious injuries or even disabling injuries                                                                                                                       |                                                                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                            | Unsafe or damaged ladders used could cause ladder / rugs to break when accessing or descending the ladder resulting in the employee falling from the ladder |                 |   |   |   |   |   |    |                                                                                                                                                                   |                                                                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                            | Unsafe or damaged ladders used such as Self-made or wooden ladders.                                                                                         |                 |   |   |   |   |   |    | No Self-made ladders to be used                                                                                                                                   |                                                                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                            | Incorrect ladders used for specific activities.                                                                                                             |                 |   |   |   |   |   |    | All ladders to be inspected before use. Findings to be recorded on a checklist.                                                                                   |                                                                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                            | Employee falling from ladder.                                                                                                                               |                 |   |   |   |   |   |    | Employees working from ladders must be trained on the Issue Based Risk Assessment and Safe working procedure                                                      |                                                                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                            | Tools and equipment falling from ladder.                                                                                                                    |                 |   |   |   |   |   |    | If ladder cannot be secured when working from it, it must be held in position by an employee                                                                      | <ul style="list-style-type: none"> <li>SOP/SWP</li> <li>Issue-based Risk Assessment</li> <li>Checklist</li> <li>DSTI's</li> <li>Toolbox talks</li> <li>Medical fitness to work</li> <li>Fall Protection Plan</li> </ul> |               |   |   |   |   |   |    |
|                                    |                                                                            | Ladder unstable or surface uneven                                                                                                                           |                 |   |   |   |   |   |    | Employees working from ladder to make use of a tool bag to ensure tools are secured at all times. No tools to be left unattended on a ladder.                     |                                                                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                            | Ladder used is not secured.                                                                                                                                 |                 |   |   |   |   |   |    | Ladder to be used on a secure / stable surface.                                                                                                                   |                                                                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                            | Employee working on ladder not medically fit to work at height                                                                                              |                 |   |   |   |   |   |    | If work activities are required from ladder for a certain amount of time a scaffold must be used to conduct these activities                                      |                                                                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                            |                                                                                                                                                             | 4               | 3 | 3 | 2 | 4 | 4 | 20 |                                                                                                                                                                   |                                                                                                                                                                                                                         |               | 3 | 2 | 2 | 2 | 3 | 15 |
| S5-20                              | Work at Height activities – General Work at heights (Any fall risk)        | Employees not trained to work at height.                                                                                                                    |                 |   |   |   |   |   |    |                                                                                                                                                                   |                                                                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                            | Employees not medically fit to                                                                                                                              | 5               | 5 | 3 | 2 | 4 | 4 | 23 | All employees working at Height must be competent, they must be trained on working at height, identifying risk, the correct use of Fall Protection Equipment etc. | <ul style="list-style-type: none"> <li>Fall Protection Plan</li> <li>Work at Height Rescue Plan</li> <li>SOP/SWP</li> </ul>                                                                                             |               | 4 | 4 | 3 | 2 | 3 | 19 |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                    | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                                                    | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                 | I             | C | D | E | P | F | RR |
| S5-21                              | position)                                                                       | work at height.<br><br>Work at Height activities in inclement weather such as strong winds, rain and thunderstorms<br><br>Unsafe or damaged fall protection equipment used.<br><br>Unsafe Fall Prevention equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |   |   |   |   |   |    | All employees working at height must be declared medically fit to conduct work at height. Records in the form of Annexure 3 must be kept on site.<br><br>No work at height activities to commence in inclement weather. Works must be stopped until declared safe.<br><br>All Fall prevention / fall protection equipment must be inspected before use; all findings must be recorded on a checklist. All damaged equipment must be removed from site. CoC certificates must be available for all Fall prevention / fall protection equipment. | <ul style="list-style-type: none"> <li>• Work at Height Competency certificate</li> <li>• Medical fitness to work</li> <li>• Issue-based Risk Assessment</li> <li>• DSTI's</li> <li>• Checklist</li> <li>• Signages</li> <li>• SWL/COC for fall protection equipment</li> </ul> |               |   |   |   |   |   |    |
|                                    |                                                                                 | to identify hazards associated with WAH activities, actions to be taken to prevent incidents.<br><br>Employees who are not medically fit could cause drowsiness, dizziness or even blurred vision that could result in the employee collapsing.<br><br>Working at height in inclement weather could cause employees to slip and fall due to slippery surfaces or losing balance due to strong winds resulting in employees falling from height.<br><br>Use of unsafe or damaged fall protection or fall prevention equipment could cause it to break resulting in employee falling from heights<br><br>Employee falling from height could result in serious disabling injuries or even fatality |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                 |               |   |   |   |   |   |    |
| S5-21                              | Hazardous Chemical Agents – Handling and storage of HCA and flammable materials | Improper storage of chemicals, transportation, and handling<br><br>Spilled chemical substances.<br><br>Ingesting, inhaling or Eye / skin contact with HCS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |   |   |   |   |   |    | The principal contractor to ensure that:<br><ul style="list-style-type: none"> <li>➤ No person is required or permitted to work in a place where there is the danger of fire or an explosion due to flammable vapors being present unless adequate precautions is taken.</li> <li>➤ Flammables stored on a construction site are stored in a well-ventilated, reasonably</li> </ul>                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Gas test results</li> <li>• SOP/SWP</li> <li>• Issue-based Risk Assessment</li> <li>• MSDS/SDS</li> <li>• Appointment letter</li> <li>• Signages</li> <li>• Checklists</li> </ul>                                                      |               |   |   |   |   |   |    |
|                                    |                                                                                 | Unsafe stacking, handling or transporting of chemicals could cause stack to fall over resulting in spillages.<br><br>Spilled Chemicals could result in soil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3               | 4 | 4 | 4 | 3 | 3 | 21 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                 | 2             | 3 | 3 | 3 | 2 | 2 | 15 |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                        | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                       | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                           | CONTROLS<br>(Registers, Policies, Procedure) | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                                                     |                                                                                                                                                                  | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                                 |                                              | I             | C | D | E | P | F | RR |
|                                    | Employees not trained to work with or handle HCA.                   | contamination and loss of product that result in financial costs.                                                                                                |                 |   |   |   |   |   |   | fire-resistant container, cage, room or bunded area that is kept locked with consistent access control measures in place and sufficient firefighting equipment installed and fire prevention methods practiced for example proper housekeeping. | • PrDP"D" Certificate                        |               |   |   |   |   |   |    |
|                                    | Employees not issued with specific PPE to work with and handle HCA. | Ingesting, inhaling or eye / skin contact could cause nausea, dizziness, skin irritation or even short-term vision impairment.                                   |                 |   |   |   |   |   |   | Containers (including empty containers) to be kept closed to prevent fumes/vapors from escaping and accumulating in low lying areas.                                                                                                            |                                              |               |   |   |   |   |   |    |
|                                    | Fire or Explosion caused by a source of ignition.                   | Employees who are not trained in HCA could result in serious injuries or harm to health.                                                                         |                 |   |   |   |   |   |   | All flammable materials / containers must be clearly marked/labelled                                                                                                                                                                            |                                              |               |   |   |   |   |   |    |
|                                    | Lack of warning signages at HCA store                               | Employees not issued with the correct PPE could cause employees to be exposed to skin contact, fume inhalation resulting in harm to health.                      |                 |   |   |   |   |   |   | All employees must be trained in Risk Assessments, Safe working Procedures and MSDS's/SDS's on the HCA used on site.                                                                                                                            |                                              |               |   |   |   |   |   |    |
|                                    | Unlabeled Containers                                                | Fire / spark or any source of ignition near HCA could cause a fire and even an explosion resulting in serious injuries, even fatalities and damages to property. |                 |   |   |   |   |   |   | Employees need to be issued with the task specific PPE to handle and use HCA.                                                                                                                                                                   |                                              |               |   |   |   |   |   |    |
|                                    |                                                                     | No Warning signages posted could cause employees to be unaware of HCA in certain areas that might lead to Injuries, Fire or even explosions.                     |                 |   |   |   |   |   |   | No fires, smoking or Hot work activities can take place near HCA storages areas or at areas HCA are used. If specific activities are required while HCA are present a Gas test must be done to ensure the LEL level is safe.                    |                                              |               |   |   |   |   |   |    |
|                                    |                                                                     | Unlabeled containers could cause employees                                                                                                                       |                 |   |   |   |   |   |   | Warning Signages to be posted at HCA storage areas with the required demarcation                                                                                                                                                                |                                              |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                                                                                  |                 |   |   |   |   |   |   | Firefighting equipment must be made available near HCS storage areas                                                                                                                                                                            |                                              |               |   |   |   |   |   |    |
|                                    |                                                                     |                                                                                                                                                                  |                 |   |   |   |   |   |   | All vehicle used to transport HCS must comply with legislative requirements, it must clearly be marked to certify the vehicle is allowed to transport HCS. The driver must hold a PrDP "D" certificate to transport HCS                         |                                              |               |   |   |   |   |   |    |

[illegible]

| ACTIVITY<br>(Work to be performed) |                                                                                         | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type injury/damage/loss) | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                | CONTROLS<br>(Registers, Policies, Procedure) | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                                    |                                                                                         |                                              |                                            | I               | C | D | E | P | F | R |                                                                                                                                                                                      |                                              | I             | C | D | E | P | F | RR |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S5-23                              | Use of portable electrical tools and hand tools<br>(Including use of Portable lights) – |                                              |                                            |                 |   |   |   |   |   |   | Portable electrical tools and equipment must be inspected regularly but at least on a weekly basis and maintained to the same standards as portable electrical tools and appliances. |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) |                                                      | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                    | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                       | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                           | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |
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|                                    |                                                      |                                                                                                 |                                                                                                                                                                                                                                                                  | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                        | I             | C | D | E | P | F | RR |  |  |  |  |  |  |
| S5-24                              |                                                      |                                                                                                 |                                                                                                                                                                                                                                                                  |                 |   |   |   |   |   |    | <p>- A register be kept for each piece of equipment with findings of regular inspections undertaken to evaluate the condition of these lights.</p> <p>- Inspections must be undertaken that concentrate on at least the plug, cord, switch, guard and any obvious faults; and</p> <p>- When used in wet/damp/metal container conditions, it must be protected.</p> <p>Risk Assessment and Safe working Procedure for the operation of task specific Portable electrical tools must be communicated to those operating and exposed to hazards when using portable electrical tools</p> <p>Gas cylinders when in use to be safely stored and secured, when not in use, in a cool place, upright position and locked storeroom.</p> <p>All hot works to be conducted in an enclosed place away from public and employees conducting other activities. Welding screens to be placed at welding areas and solid barricading used to close off areas.</p> <p>Firefighting equipment must readily be available in the designated area</p> |                                                                                                                                                                                                                                                        |               |   |   |   |   |   |    |  |  |  |  |  |  |
|                                    | Illumination during construction activities at night | Poor illumination at night / Poor Visibility<br>Unauthorized Work at Night<br>Poor Quality work | Conducting work activities at night could result in serious bodily injuries due to being unable to see hazards associated with the work activities.<br><br>Poor visibility could cause Construction Plant and equipment accidents resulting in financial losses. | 5               | 5 | 3 | 3 | 3 | 3 | 21 | <p>If any Work requires to be conducted at night sufficient lighting should be supplied.</p> <p>All activities to be conducted at night must be internally approved by Construction Manager with guidance from competent Safety Professional. Night work must be approved by the Client Project Manager.</p> <p>Supervision must be available for all activities taking place after hours / at night</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"><li>Approval Letter</li><li>Issue-based Risk Assessment</li><li>SOP/SWP</li><li>Appointment letter</li><li>Working at night procedure / Method Statement</li><li>Medical fitness to work</li><li>Checklist</li></ul> | 4             | 3 | 2 | 2 | 2 | 2 | 15 |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)            | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                      | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                                                                                                                                                           | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                         |                                                                                                                                                                                                                                                                                                                 | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                        | I             | C | D | E | P | F | RR |
| S5-25                              |                                                         |                                                                                                                                                                                                                                                                                                                 |                 |   |   |   |   |   |   | Issue-based Risk Assessment must be communicated to all employees conducting work after hours or at night shift                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                        |               |   |   |   |   |   |    |
|                                    | Lack of communication between various parties involved. | Instructions not adequately followed through<br>Information not transmitted as supposed to<br>Schedule slippage due to rework                                                                                                                                                                                   |                 |   |   |   |   |   |   | Implement and ensure a proper communication system between various parties involved.<br>Site meetings to be conducted on set intervals including integration between various parties. Minutes of meeting to be kept for record of discussions                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>Minutes of meetings</li> <li>Communication protocol/policy/procedure</li> <li>Site attendance registers</li> </ul>                                                                                                                                                                                                                              | 1             | 2 | 2 | 2 | 2 | 2 | 11 |
|                                    |                                                         |                                                                                                                                                                                                                                                                                                                 |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                        |               |   |   |   |   |   |    |
| S5-26                              |                                                         |                                                                                                                                                                                                                                                                                                                 |                 |   |   |   |   |   |   | A contractor to appoint a temporary works designer in writing, to design, inspect and approve the erected temporary works.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                        |               |   |   |   |   |   |    |
|                                    | Temporary structure (Temporary works) – Formwork        | Inadequate designs<br>Incompetent formwork erectors and inspectors<br>Temporary structure collapse due to poor design<br>Unsafe access to elevated areas<br>Poor stacking and storage of Form work materials<br>Manual handling<br>Pinch points<br>Work at Fall Positions<br>Medically unfit for work at height |                 |   |   |   |   |   |   | Temporary works to be carried out under the supervision of a competent person appointed in writing.<br>To be erected by competent persons.<br>Temporary structure to be inspected by a competent person immediately, before, during and after the placement of concrete.<br>After inclement weather or any other imposed load and at least on a daily basis until the temporary works has been removed and results recorded in a register.<br>All temporary works to be carried out as per Construction regulations 12.<br>Temporary work structures to be so designed, erected, supported, braced and maintained that they will be able to support any vertical or lateral loads that may be applied. | <ul style="list-style-type: none"> <li>Appointment letter</li> <li>Competencies</li> <li>Work at height competency</li> <li>Medical fitness to work</li> <li>Method Statement</li> <li>Fall protection plan</li> <li>PPE Issue register / checklist</li> <li>Checklists</li> <li>DSTI's</li> <li>Issue-based Risk Assessment</li> <li>Approved drawings for temporary works</li> </ul> | 4             | 4 | 3 | 2 | 3 | 3 | 19 |
|                                    |                                                         |                                                                                                                                                                                                                                                                                                                 |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                        |               |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) |  | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type injury/damage/loss)                                               | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES | CONTROLS<br>(Registers, Policies, Procedure)                                        | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| S5-27                              |  |                                              | cause serious bodily injuries, disabling or even a fatality if employee fell from height |                 |   |   |   |   |   |   |                       | No load to be imposed onto a structure that the structure is not designed to carry. |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) |                                                 | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                        | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                               | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                        | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                            | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |
|------------------------------------|-------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|--|--|--|--|
|                                    |                                                 |                                                                     |                                                                                                                                                                             | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                            | I             | C | D | E | P | F | RR |  |  |  |  |
|                                    |                                                 |                                                                     | hands and fingers                                                                                                                                                           |                 |   |   |   |   |   |    | All tools and equipment to be used must be inspected and registered on a checklist, deviations must be recorded and reported to appointed supervisor.                                                                                                                                                                                                                                        |                                                                                                                                                                                                            |               |   |   |   |   |   |    |  |  |  |  |
|                                    |                                                 |                                                                     | The use of unsafe or damaged handtools could result in hand and finger injuries                                                                                             |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                            |               |   |   |   |   |   |    |  |  |  |  |
|                                    |                                                 |                                                                     | Cutting of steel rods with a grinder could cause heat exposure leading to burns to hands                                                                                    |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                            |               |   |   |   |   |   |    |  |  |  |  |
|                                    |                                                 |                                                                     | Cutting of steel with grinder could cause debris to cause damage to eyes of the operator or surroundings employees                                                          |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                            |               |   |   |   |   |   |    |  |  |  |  |
| S5-28                              | Limited resources to conduct all task           | Contractual non-compliance                                          | Delays in the project could result in the PC not to achieve completion in time resulting in penalties – Financial Loss                                                      |                 |   |   |   |   |   |    | Client to ensure that contractor is well aware of current scope definition as well as the requirements stipulated in the tender specifications.<br><br>Contractor to ensure compliance on set specifications from client<br><br>Contractor to ensure workers comply to working hours guided by the Basic Conditions of Employment Act                                                        | <ul style="list-style-type: none"><li>Approved Programme of works</li><li>Issue-based Risk Assessment</li><li>Basic Conditions of Employment Act</li></ul>                                                 |               |   |   |   |   |   |    |  |  |  |  |
|                                    |                                                 | Schedule and cost over run on project                               | Lack of resources could cause employees to overwork that would make them tired resulting in incident and accidents at the workplace                                         | 4               | 3 | 3 | 2 | 2 | 2 | 16 |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                            | 3             | 2 | 2 | 1 | 2 | 2 | 12 |  |  |  |  |
|                                    |                                                 |                                                                     |                                                                                                                                                                             |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                            |               |   |   |   |   |   |    |  |  |  |  |
| S5-29                              | Stacking and storage of material & Housekeeping | Unstable stacking of goods / materials / Unsafe Stacking Procedures | Unsafe or unstable stack of materials could cause the stack to fall over resulting in serious injuries and even fatalities when employees are trapped underneath the stack. |                 |   |   |   |   |   |    | Sufficient space for stacking of material to be provided, housekeeping to be maintained and cleaning of areas to be maintained.<br><br>Stacking and storage areas to be barricaded to prevent unauthorized entry. Signages must be placed at designated area<br><br>All contaminated ground must be removed and disposed of at a registered waste facility. Waste Disposal must be available | <ul style="list-style-type: none"><li>Checklists</li><li>Issue-Based Risk Assessment</li><li>DSTI's</li><li>Toolbox talks</li><li>Stacking Procedure</li><li>Appointment letter</li><li>Signages</li></ul> |               |   |   |   |   |   |    |  |  |  |  |
|                                    |                                                 | Stacking & Storage area not identified and demarcated               |                                                                                                                                                                             | 4               | 3 | 3 | 3 | 3 | 3 | 19 |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                            | 3             | 2 | 2 | 2 | 2 | 3 | 14 |  |  |  |  |
|                                    |                                                 | Pinch Points                                                        |                                                                                                                                                                             |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                            |               |   |   |   |   |   |    |  |  |  |  |
|                                    |                                                 | Environmental contamination from spillages                          | Not wearing the required PPE when stacking of materials could result in                                                                                                     |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                            |               |   |   |   |   |   |    |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)        | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                 | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CONTROLS<br>(Registers, Policies, Procedure)                                                                                  | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                     |                                                                                                                                                                                                                            | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                               | I             | C | D | E | P | F | RR |
|                                    | Snakes                                              | pinch point injuries to hands and fingers                                                                                                                                                                                  |                 |   |   |   |   |   |    | Workers to be aware of snakes, toolbox talks to be done for the awareness of snakes in surrounding area, if snakes are found on site, a snake handler must be contacted to remove snakes safely.                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                               |               |   |   |   |   |   |    |
|                                    | No clear walkways at stacking and storage areas     | HCS not sealed and not stored in a bunded area could cause spillages resulting in environmental contaminations. This leads to financial losses due to the rehabilitation of the environment costs and fines by authorities |                 |   |   |   |   |   |    | All walkways at stacking and storage area must be kept clean and free from tripping hazards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                               |               |   |   |   |   |   |    |
|                                    | Unauthorized entry                                  | Poor Housekeeping standards when stacking of materials could cause snakes to find shelter resulting in snake bites that could cause serious injuries, disability or even a fatality                                        |                 |   |   |   |   |   |    | Waste must be removed on a regular basis to a registered waste facility, proof must be kept in the safety file on site.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                               |               |   |   |   |   |   |    |
|                                    | Poor waste removal                                  | No clear walkways at stacking area could cause employees to trip and fall over materials resulting in bodily injuries                                                                                                      |                 |   |   |   |   |   |    | Housekeeping on site must be done on a daily basis, all rubble must be removed and placed in the designated waste area.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                               |               |   |   |   |   |   |    |
|                                    | Unstable Aggregate or Sand                          |                                                                                                                                                                                                                            |                 |   |   |   |   |   |    | Aggregate or soil should be stacked at a reasonable height and not close to any machinery or equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                               |               |   |   |   |   |   |    |
| S5-30                              | Emergency Preparedness (Fire Prevention, First aid) | Inadequate emergency planning                                                                                                                                                                                              |                 |   |   |   |   |   |    | The principal contractor to ensure that:<br>- A competent person is appointed in writing to supervise all stacking and storage on a construction site.<br>- The height of any stack does not exceed 3 times the base unless stepped back at least half the depth of a single container at least every fifth tier or the approval of an inspector of the Department of Labour has been obtained to build the stacks higher with the aid of a machine. (The operator of the machine must be protected against items falling from overhead or off the stack and no items may overhang); |                                                                                                                               |               |   |   |   |   |   |    |
|                                    |                                                     | Inadequate first aid.                                                                                                                                                                                                      | 5               | 5 | 3 | 2 | 3 | 3 | 21 | <b>Emergency Preparedness</b><br>The principal contractor to appoint a competent person to act as emergency controller and/or coordinator.                                                                                                                                                                                                                                                                                                                                                                                                                                           | • Emergency Plan / Preparedness Plan<br>• Emergency Evacuation Procedure<br>• Checklists<br>• Competencies / training records | 4             | 3 | 2 | 2 | 2 | 2 | 15 |
|                                    |                                                     | Inadequate fire prevention and protection measures                                                                                                                                                                         |                 |   |   |   |   |   |    | The principal contractor to conduct an emergency identification exercise and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                               |               |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)          | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                 | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                          | CONTROLS<br>(Registers , Policies,<br>Procedure)                                                                                                                                                                                     | RESIDUAL RISK |   |   |   |   |   |    |  |
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|                                    |                                                       |                                                                                                                                                                                                               | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                      | I             | C | D | E | P | F | RR |  |
|                                    | Incompetent First Aider or Fire<br>fighters appointed | No first aid equipment<br>could cause infections to<br>minor injuries such as<br>cuts if not cleaned<br>immediately. This could<br>increase the severity of<br>any injury                                     |                 |   |   |   |   |   |   | establishes what emergencies (such as<br>health, safety, environmental, third party or<br>community related actions etcetera) could<br>possibly develop. Contractor must then<br>develop detailed contingency plans and<br>emergency procedures, considering any<br>emergency plan that the project/site may<br>have in place. | <ul style="list-style-type: none"><li>• Appointment letters</li><li>• Emergency Contact<br/>details</li><li>• Inductions</li><li>• Communication records</li><li>• Toolbox talks</li><li>• Issue-based Risk<br/>Assessment</li></ul> |               |   |   |   |   |   |    |  |
|                                    |                                                       | Incompetent First Aider<br>could cause injured<br>employees' severity of<br>an injury to increase<br>when applying incorrect<br>treatment                                                                     |                 |   |   |   |   |   |   | The principal contractor and the other<br>contractors must hold regular practice drills<br>of contingency plans and emergency<br>procedures to test them and familiarize<br>employees with them. Emergency evacuation<br>points must be available, and signage<br>displayed                                                    |                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |  |
|                                    |                                                       | Incompetent Fire Fighter<br>could cause fires on site<br>to become uncontrolled<br>resulting in serious<br>injuries, or even multiple<br>fatalities. This will also<br>have an impact on<br>damaged property. |                 |   |   |   |   |   |   | <b>First - Aid</b>                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |  |
|                                    |                                                       | No firefighting equipment<br>available on site could<br>cause a fire to become<br>uncontrolled resulting in<br>serious injuries, property<br>damage or even multiple<br>fatalities                            |                 |   |   |   |   |   |   | The principal contractor to provide first-aid<br>equipment and has qualified first-aider(s) on<br>site as required by General Safety<br>Regulation 3 of the OHSACT.                                                                                                                                                            |                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |  |
|                                    |                                                       |                                                                                                                                                                                                               |                 |   |   |   |   |   |   | The contingency plan of the principal<br>contractor to include arrangements for the<br>speedy and timeous transportation of injured<br>and/or ill person(s) to a medical facility or<br>getting emergency medical support to<br>person(s) who may require it.                                                                  |                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |  |
|                                    |                                                       |                                                                                                                                                                                                               |                 |   |   |   |   |   |   | The principal contractor has firm<br>arrangements with his contractors in place<br>regarding the responsibility of these<br>contractors' first-aid arrangements as well as<br>treatment of injured and/or ill employees.                                                                                                       |                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |  |
|                                    |                                                       |                                                                                                                                                                                                               |                 |   |   |   |   |   |   | <b>Fire Prevention and Protection</b>                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |  |
|                                    |                                                       |                                                                                                                                                                                                               |                 |   |   |   |   |   |   | The principal contractor to ensure that<br>a) Sufficient and suitable storage of<br>flammables is provided.<br>b) employees are trained in the use of the                                                                                                                                                                      |                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |  |

| ACTIVITY<br>(Work to be performed) |                                     | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                  | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                         | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | CONTROLS<br>(Registers , Policies,<br>Procedure)                                       | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |
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|                                    |                                     |                                                                               |                                                                                                                                                                                                                                                                                                                       | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | I             | C | D | E | P | F | RR |  |  |  |  |  |  |
| S5-31                              |                                     |                                                                               |                                                                                                                                                                                                                                                                                                                       |                 |   |   |   |   |   |    | firefighting equipment and know how to attempt to extinguish a fire; (these employees must be appointed and proof of competency to be available on site.<br>c) A sufficient number of employees are appointed and trained to act as an emergency team to deal with fires and other emergencies.<br>d) Employees are informed regarding emergency evacuation procedures and escape routes this must be included in the induction of all workers and visitors.<br>e) Emergency escape routes are always kept clear and clearly marked.<br>f) Roll call is held after evacuation to account for all employees and to ensure that no-one including visitors and disabled persons have been left behind.<br>g) A clear audible siren or alarm is fitted and regularly tested. If this is not practicable to the site, other method of warning employees must be used, for example whistles.<br><br>All emergency procedures / plans must be communicated to all employees onsite |                                                                                        |               |   |   |   |   |   |    |  |  |  |  |  |  |
|                                    | Site security and public protection | Public gaining access to the construction site.<br><br>Theft<br><br>Vandalism | Unauthorized members or children entering the construction site could result in serious injuries and even fatality if children are unattended.<br><br>Unsecured Construction site could cause materials, equipment and machinery to be stolen or damaged during strikes resulting in time delays and financial losses | 4               | 3 | 4 | 2 | 3 | 3 | 19 | Principal contractor to ensure the project is always secure. Access control to be maintained and no unauthorized entry to be permitted to the project.<br><br>When there are no activities on site and no personnel conducting works. The Project must be left in a safe manner so that the public can't gain access and that all hazards are attended to prior vacating the site.<br><br>Security should be available due to valuable materials and equipment that might be stored on site. Security will also be responsible to monitor site access by unauthorized people / children<br><br>Warning Signages must be posted to inform                                                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"><li>• Site Rules posted</li><li>• Signages</li></ul> | 3             | 2 | 3 | 2 | 2 | 3 | 15 |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                               | POSSIBLE RISK<br>(Type injury/damage/loss)                      | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                            | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                                                                            |                                                                 | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                         | I             | C | D | E | P | F | RR |
| S5-32                              | Ablution and welfare facilities                                                            |                                                                 |                 |   |   |   |   |   |    | the community of hazards and risks                                                                                                                                                                                                                                                                   |                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                                            | Inadequate provision of toilet facilities for each sex          |                 |   |   |   |   |   |    | Principal Contractor to provide toilets for each sex as required in terms of the National Building Regulations and Construction Regulation 30.                                                                                                                                                       |                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                                            | No hand washing stations available                              |                 |   |   |   |   |   |    | Chemical toilets are allowed only if they are cleaned on a regular basis by registered contracted company. Toilets must be provided at a ratio of at least 1 toilet per 30 employees. Disposal waste certificate to be obtained to ensure waste has been removed and dumped at a registered facility |                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                                            | No secured area for each sex to change clothing (Changing area) |                 |   |   |   |   |   |    | Toilets must be provided for each sex. Toilets must be enclosed, lockable to provide adequate privacy. Signages must be posted to indicate the sex for each of the toilets.                                                                                                                          | <ul style="list-style-type: none"> <li>Checklists</li> <li>Waste Disposal Certificates</li> <li>Issue-based Risk Assessment</li> <li>Signages</li> </ul>                |               |   |   |   |   |   |    |
|                                    |                                                                                            | No sheltered eating area with tables and chairs provided        | 3               | 3 | 3 | 2 | 3 | 3 | 18 | Daily inspections to be done to ensure toilets are cleaned on a daily                                                                                                                                                                                                                                |                                                                                                                                                                         | 2             | 2 | 2 | 2 | 2 | 3 | 13 |
|                                    |                                                                                            | Poor Hygiene standards                                          |                 |   |   |   |   |   |    | Handwashing stations must be provided near toilet facilities with soap, clean water (running water) and drying materials such as towels.                                                                                                                                                             |                                                                                                                                                                         |               |   |   |   |   |   |    |
|                                    |                                                                                            | Poor ergonomically designed facilities                          |                 |   |   |   |   |   |    | Drinking water must be made available to all employees, water must be regularly tested and monitored for any contaminations. Signages must be posted in areas where drinking water is available. All drinking water bottles must be labelled "drink water"                                           |                                                                                                                                                                         |               |   |   |   |   |   |    |
| S5-33                              | Concrete Works – Concrete Mixing and Pouring (Manually and Mixer) and use of Concrete Pump | Concrete spillages                                              |                 |   |   |   |   |   |    | Concrete mixers to be regularly serviced in order to prevent breakdown leading to oil spillages. Spot checks to be done prior to each shift.                                                                                                                                                         | <ul style="list-style-type: none"> <li>Concrete truck / concrete pump truck service history presented</li> <li>SOP/SWP</li> <li>Issue-based Risk Assessments</li> </ul> |               |   |   |   |   |   |    |
|                                    |                                                                                            | Use of hand tool                                                | 4               | 4 | 4 | 4 | 3 | 3 | 22 |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                         | 3             | 3 | 3 | 3 | 2 | 3 | 17 |
|                                    |                                                                                            | Oil spillages                                                   |                 |   |   |   |   |   |    | All hand tools to be inspected by a                                                                                                                                                                                                                                                                  |                                                                                                                                                                         |               |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                            | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                            | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                         | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                        | RESIDUAL RISK                                                                                                                 |   |   |   |   |   |    |
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|                                    |                                                                                         |                                                                                                                                                                                          | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                        | I                                                                                                                             | C | D | E | P | F | RR |
|                                    | Cement dust generation (Silica)                                                         | environment could result in poor water quality                                                                                                                                           |                 |   |   |   |   |   |   | competent person.                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"><li>• Method Statement</li><li>• Competencies</li><li>• Appointment letters</li><li>• Toolbox talks</li><li>• Checklists</li><li>• Medical fitness to work</li></ul> |                                                                                                                               |   |   |   |   |   |    |
|                                    | Incompetent concrete mixer operators                                                    | from underground water resources                                                                                                                                                         |                 |   |   |   |   |   |   | When concrete is being poured, concrete spillages are to be prevented and plastic sheet to be placed on the ground when spillages cannot be prevented.                                                                                                                                                                                                                                                        |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Concrete mixer operated without guards in place                                         | Inhaling of cement dust could have short term effect such as nose and throat irritations. Long term exposure to cement dust could result in asthma, silicosis and scarring of the lungs. |                 |   |   |   |   |   |   | Concrete washout area to be created where concrete run off will be discharged.                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Miscommunication between operator and flagman                                           |                                                                                                                                                                                          |                 |   |   |   |   |   |   | A flagman must be well trained in order for him to be able to provide proper signals thus preventing employees being hit by a mixer.                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Mixer operating near excavation                                                         |                                                                                                                                                                                          |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Incompetent Concrete Pump Operator                                                      | Oil spillages from concrete trucks or pump trucks could cause environmental pollution, contaminating the environment leading to water contamination                                      |                 |   |   |   |   |   |   | Operators to be well trained and no unauthorized employees must operate the mixer.                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Unsafe operation or control of Concrete Pump - Hoses / pipes moving around uncontrolled |                                                                                                                                                                                          |                 |   |   |   |   |   |   | Only Competent / Appointed operator to operate concrete Pump, Ready-mix Truck. Competency must be valid and available                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Inhaling of Cement dust and skin contact with wet cement                                | Concrete mixer operated by incompetent person could result in serious injuries to arms and hands if safe procedure is not followed                                                       |                 |   |   |   |   |   |   | Dust mask must be provided to employees handling cement as a last resource when dust cannot be controlled. If exposed to cement dust for long periods a breathing apparatus must be used. Workers exposed to Dry Cement or Wet Cement must be supplied with the minimum required PPE (Overalls, Gumboots, Safety Boots, PVC Gloves, Safety Glasses, Earplugs, if exposed to wet cement raincoats can be used. |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Incompetent or intoxicated truck driver                                                 |                                                                                                                                                                                          |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Concrete Pump Blockages                                                                 |                                                                                                                                                                                          |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Concrete mixer truck unable to offload in time (Suppliers)                              | Operating concrete mixer without protective guard in place can result in serious hand and finger injuries                                                                                |                 |   |   |   |   |   |   | Concrete ready-mix truck, Concrete Pump Truck and Concrete Mixers must keep a safe distance from excavation edges, when pouring into excavation flagman have to be more vigilant and a regular toolbox talk must be held.                                                                                                                                                                                     |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    | Noise from Concrete mixer                                                               | Concrete mixer operated near open trenches and excavation could cause trenches or excavation walls to collapse due to the vibrations                                                     |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                        |                                                                                                                               |   |   |   |   |   |    |
|                                    |                                                                                         | Noise exposure from                                                                                                                                                                      |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                        | Issue-based risk assessment and safe working procedures for all activities must be developed and communicated to all relevant |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) |  | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES | CONTROLS<br>(Registers, Policies,<br>Procedure) | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                                    |  |                                              | operating concrete mixer for long periods could result in long-term / permanent hearing loss |                 |   |   |   |   |   |   | employees             |                                                 |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed)                                                  | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                  | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | CONTROLS<br>(Registers , Policies,<br>Procedure)                                                                                                                                             | RESIDUAL RISK |   |   |   |   |   |    |
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|                                                                                     |                                              |                                                                                                                                                                                                                                                                | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              | I             | C | D | E | P | F | RR |
| New Infrastructure,<br>replacing or installing<br>of temporary electrical<br>supply | Substandard equipment                        | installations and open<br>wires could result in<br>employees and other                                                                                                                                                                                         |                 |   |   |   |   |   |   | project, including the installation of temporary<br>electricity for construction use shall be in<br>accordance with Construction Regulation 24<br>and the Electrical Installation Regulations<br><br>The principal contractor to ensure that:<br>- Existing services are to be located and<br>clearly marked before construction<br>commences and during the progress<br>thereof.<br>- Electrical installations and -machinery are<br>sufficiently robust to withstand normal<br>working conditions on site.<br>- Temporary electrical installations must be<br>inspected at least once per week by a<br>competent person and a record of the<br>inspections kept on the occupational health<br>and safety file.<br><br>Electrician with a Wireman's License must<br>install, commission and inspect all electrical<br>installations. Employee to be authorized,<br>competent and appointed. COC must be<br>available for electrical connections done.<br><br>All DB's to be locked. Key register to are<br>established and proof of key use to be<br>evident.<br><br>Lock out procedure to be communicated to<br>all employees exposed.<br><br>Issue -based Risk assessments and method<br>statement to be communicated to the<br>relevant employees conducting or assisting<br>with installations<br><br>All electrical components / parts to be used<br>must be SABS approved. | Assessment<br>• SOP/SWP<br>• Method Statement<br>• Wireman's License<br>• Competencies<br>• Appointment letter<br>• Medical Fitness to work<br>• DSTI's<br>• Checklists<br>• LOTO procedures |               |   |   |   |   |   |    |
|                                                                                     | Poor cable management                        | persons being<br>electrocuted with                                                                                                                                                                                                                             |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |
|                                                                                     | Incompetent Installer                        | subsequent injuries or<br>even fatalities as well as                                                                                                                                                                                                           |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |
|                                                                                     | Unauthorized Access to DB's                  | asset damage due to fire                                                                                                                                                                                                                                       |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |
|                                                                                     | Fires and Explosions                         | Improper grounding<br>could cause electrical                                                                                                                                                                                                                   |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |
|                                                                                     | Improper grounding                           | current to take<br>unintended paths                                                                                                                                                                                                                            |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |
|                                                                                     | Contact with live open wires                 | through metal objects, if<br>contact is made with this                                                                                                                                                                                                         |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |
|                                                                                     | Overloads and short circuits                 | metal the person will be<br>shocked and can even<br>be electrocuted                                                                                                                                                                                            |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |
|                                                                                     |                                              | Poor cable management<br>could result in tripping<br>and falling resulting in<br>bodily injuries                                                                                                                                                               |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |
|                                                                                     |                                              | Unprotected or open<br>wires could cause sparks<br>leading to electrical fire.<br>This could result in major<br>property damage if<br>buildings are burned<br>down                                                                                             |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |
|                                                                                     |                                              | Overloading of electrical<br>installations could cause<br>wires to generate heat<br>resulting in fires. This<br>can also cause the<br>continues tripping of<br>electrical supply that<br>would result in<br>production delays and<br>financial costs to repair |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                              |               |   |   |   |   |   |    |

[illegible]

| ACTIVITY<br>(Work to be performed) |  | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                      | CONTROLS<br>(Registers, Policies, Procedure) | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| S5-36                              |  |                                              | machinery could cause Hand-Arm Vibration Syndrome (HAVS), also known as Vibration White Finger (VWF), this could also result in musculoskeletal disorders or herniated discs<br><br>Use of unsafe handtools and portable electrical tools could result in hand and arm injuries and being shocked if unsafe electrical tools are used<br><br>Operators of tools, plant or machinery, not being competent could cause serious injuries if employees do not understand the hazards and risks |                 |   |   |   |   |   |   | All trades specific Risk Assessments and Safe working procedures must be communicated to the relevant exposed workers. Proof of communication must be kept.<br><br>Supervisor / Construction Manager to ensure NO overhead activities from different trades or simultaneous operations from different contractor overhead. |                                              |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                               | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RISK EVALUATION |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | PREVENTATIVE MEASURES | CONTROLS<br>(Registers, Policies,<br>Procedure) | RESIDUAL RISK |   |   |   |   |    |  |  |  |  |  |  |  |
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|                                    |                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | I               | C | D | E | P | F | R | I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |                                                 | C             | D | E | P | F | RR |  |  |  |  |  |  |  |
|                                    | condition<br><br>Structural integrity<br>compromised of other existing<br>buildings<br><br>Excessive Noise | operators or surrounding<br>employees. If employees<br>are crushed or trapped<br>when a wall falls over<br>this could result in<br>fatalities<br><br>Excessive exposure to<br>dust can lead to various<br>health problems,<br>including respiratory<br>illnesses like asthma,<br>COPD, and silicosis, as<br>well as skin irritation and,<br>in severe cases, cancer<br><br>Falling of debris or bricks<br>could cause serious<br>injuries if surrounding<br>employees are struck by<br>it. This could result in<br>head and bodily injuries<br><br>Unauthorized visitors or<br>children entering<br>demolition area could<br>cause them not to<br>understand the hazards<br>and risks and could<br>result in serious injuries,<br>even fatalities<br><br>Incompetent operators,<br>operating excavators or<br>TLB's could cause<br>unsafe movement and<br>breaking / demolishing of<br>other structures. This<br>could result in serious<br>injuries and have a<br>financial implication if<br>incorrect building/walls<br>are demolished. |                 |   |   |   |   |   |   | Steps to be taken to ensure that where a<br>structure is being demolished:<br>- precautions are taken to prevent the<br>collapse of the structure when any frame,<br>support or reinforcement is cut or removed.<br>- no employee is required or allowed to<br>work under unsupported overhanging<br>material; and<br>- the stability of an adjacent building must<br>not be compromised.<br>- Demolition area to be barricaded with<br>warning signages posted to warn and<br>prevent the public and the employees<br>entering the work area<br>- All employees, operators working inside<br>the demarcated demolition area must wear<br>the required PPE<br>- The location and nature of any existing<br>services such as water, electricity, gas<br>etcetera to be established before any<br>demolition is commenced with and any<br>service that may be affected by the<br>demolition must be protected and made<br>safe for employees and other persons.<br><br>Demolished structure / debris to be removed<br>from site<br><br>All tools, equipment or plant used to<br>demolish a structure must be inspected<br>before use and findings recorded on a<br>checklist.<br><br>Method Statement and Issue based Risk<br>Assessment must be communicated to all<br>relevant parties<br><br>Employees, operators or surrounding<br>workers exposed to excessive noise and<br>vibration should take regular breaks and<br>drink enough water<br><br>Only competent appointed operators to |                       |                                                 |               |   |   |   |   |    |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) |                            | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                                                                                                                                                                          | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                                                                                                        | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |
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|                                    |                            |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                     | I             | C | D | E | P | F | RR |  |  |  |  |
| S5-37                              |                            |                                                                                                                                                                                                                                                                                                                                                       | Demolishing or changing the structural integrity of other walls or buildings not to be demolished could cause them to fall over resulting in property damages, financial costs and serious injuries, even fatalities<br><br>Excessive exposure to continues noise could cause short- and long-term hearing loss                                                                                                                                                                                         |                 |   |   |   |   |   |    | operate plant or machinery to demolish structures. Operators must have a valid medical fitness to work<br><br>Dust suppression should take place through water trucks spraying all dusty areas.<br><br>Issue-based Risk assessment must be done by competent risk assessor, this risk assessment, method statement and SOP/SWP must be communicated to the demolition team.<br><br>All employees must be medically fit to work, with a valid medical certificate and annexure 3. Exit medicals must be done once the trade team are done with their scope to ensure employees did not obtain any health issues from working on this project                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                     |               |   |   |   |   |   |    |  |  |  |  |
|                                    | Demolition Work - Blasting | Defective explosives used<br><br>Incompetent Blaster / Explosives Supervisor / Unregistered person<br><br>Danger area not identified or closed off<br><br>Unsafe transportations of explosives<br><br>Excessive Noise<br><br>Dust<br><br>Excessive Vibrations<br><br>Unsafe Surrounding structures or houses<br><br>Unauthorized blasting / no permit | Failure to comply or issue required permits could cause work stoppages resulting in loss of production, and might have cost implications<br><br>Blasting near unsafe infrastructure or poorly built houses could cause buildings or part thereof or surrounding houses to collapse. This will lead to cost implications and community unrests (Property damages)<br><br>Employees, other contractors or members from public entering the danger zone during a blast could result in serious injuries or | 5               | 5 | 5 | 5 | 3 | 3 | 26 | Only registered blaster appointed may apply for a blasting permit with Department of Employment and Labour<br><br>Site Plan / blasting plan to be prepared by competent, appointed person to identify risks, methods to be used and control measures to be implemented.<br><br>Competent person to inspect explosives to be used to ensure it is safe and comply to requirements<br><br>Method Statement and Safe Operation Procedures, risk assessment and blasting plan to be communicated with other contractors, employees, surrounding businesses and members of the public<br><br>Company conducting the blasting may only transport explosives if they were issued with a permit to transport the explosives. In transit, transportation vehicle may not be left unattended at any time. Vehicle must be road | <ul style="list-style-type: none"><li>• Blasting Plan</li><li>• Method Statement</li><li>• Issue-based Risk Assessment</li><li>• Checklist</li><li>• Competency</li><li>• Appointments</li><li>• Permits</li><li>• Public Notes</li><li>• Signages</li><li>• Wayleaves</li><li>• DSTI's</li><li>• Medical Fitness to work</li></ul> | 5             | 5 | 3 | 3 | 2 | 2 | 20 |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                 | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                       | CONTROLS<br>(Registers, Policies,<br>Procedure) | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                              |                                                                                                                                                                                               | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                             |                                                 | I             | C | D | E | P | F | RR |
|                                    |                                              | Uncontrolled ejection of rock and debris when blasting                                                                                                                                        |                 |   |   |   |   |   |   | worthy.                                                                                                                                                                                                                                     |                                                 |               |   |   |   |   |   |    |
|                                    | Fire                                         | Uncontrolled debris striking employees, other contractors, visitors or members from the public against the head could cause serious head injuries                                             |                 |   |   |   |   |   |   | Public Notices must be done at least 24 hours in advance before blasting takes place. Emergency contacts must be shared with all surrounding public members, businesses, houses, schools etc.                                               |                                                 |               |   |   |   |   |   |    |
|                                    | Incorrect charging of holes                  |                                                                                                                                                                                               |                 |   |   |   |   |   |   |                                                                                                                                                                                                                                             |                                                 |               |   |   |   |   |   |    |
|                                    | Uncontrolled use of hydraulic jack hammer    | Transporting of explosives without required permit could result in fines from authorities                                                                                                     |                 |   |   |   |   |   |   | Use of suitable materials (Ground) to cover blasting areas, to ensure blast is contained                                                                                                                                                    |                                                 |               |   |   |   |   |   |    |
|                                    |                                              | Incompetent blaster responsible for managing the blast could cause uncontrolled blasting, misfires causing serious injuries, multiple fatalities and serious property damages                 |                 |   |   |   |   |   |   | All other construction activities, or end-user activities must be stopped until blast has been completed, and area is declared safe by competent person                                                                                     |                                                 |               |   |   |   |   |   |    |
|                                    |                                              | Excessive Vibrations caused by hydraulic Jackhammers could lead to Hand-arm Vibration syndrome / white finger syndrome and nerve damage to the operators' back. Resulting in serious injuries |                 |   |   |   |   |   |   | Wayleaves must be available if blasting near any services                                                                                                                                                                                   |                                                 |               |   |   |   |   |   |    |
|                                    |                                              | Excessive noise caused by the blast or by operating of hydraulic jack hammers could cause noise induced hearing loss and might also result in disabling injuries                              |                 |   |   |   |   |   |   | Danger area or blasting area must be closed off to ensure no other employees, visitors or members of the public gain access to this high-risk area. Flag person / must be made available to ensure access to the danger zone is prohibited. |                                                 |               |   |   |   |   |   |    |
|                                    |                                              |                                                                                                                                                                                               |                 |   |   |   |   |   |   | Only competent person with valid certificates to be appointed to conduct blasting/explosives activities on site. Competent person to determine safe area (distance from blast)                                                              |                                                 |               |   |   |   |   |   |    |
|                                    |                                              |                                                                                                                                                                                               |                 |   |   |   |   |   |   | All holes drilled to be inspected by competent person to ensure the correct depth was drilled.                                                                                                                                              |                                                 |               |   |   |   |   |   |    |
|                                    |                                              |                                                                                                                                                                                               |                 |   |   |   |   |   |   | Blasting siren to be sounded to ensure construction site, surrounding businesses and communities are aware of the blast taking place                                                                                                        |                                                 |               |   |   |   |   |   |    |
|                                    |                                              |                                                                                                                                                                                               |                 |   |   |   |   |   |   | Operators operating hydraulic jack hammers to wear the required PPE such as gloves,                                                                                                                                                         |                                                 |               |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) |                                                                                                                                                                                | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                         | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                   | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                   | CONTROLS<br>(Registers , Policies, Procedure)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RESIDUAL RISK                                                                          |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
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|                                    |                                                                                                                                                                                |                                                                                                                                                                                      |                                                                                                                                                                                                                              | I               | C | D | E | P | F | R  |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | I                                                                                      | C | D | E | P | F | RR |  |  |  |  |  |  |  |  |
| S5-38                              |                                                                                                                                                                                |                                                                                                                                                                                      |                                                                                                                                                                                                                              |                 |   |   |   |   |   |    | earmuffs, safety glasses, back belt/support and they need to ensure they take regular breaks away from the noise and vibration.         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                        |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                                                                                                                |                                                                                                                                                                                      |                                                                                                                                                                                                                              |                 |   |   |   |   |   |    | Only competent appointed persons to operate hydraulic jack hammers. These employees must be medically fit to operate machinery / plant. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                        |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
| S5-38                              | Exposure to poisonous / Venomous or other dangerous animals, reptiles or insects<br><br>And exposure to animals, insects, birds, reptiles, amphibians in their natural habitat | Snake bites<br>Spider bites<br>Scorpion Sting<br>Bee sting<br>Wasp sting<br>Uncontrolled removal of Fauna and Flora in an area. Habitat destruction / habitat loss and fragmentation | Venomous snake bites could cause person to hyperventilate, vomit and even paralysis. If not treated in time could result in disabling injuries or even a fatality                                                            |                 |   |   |   |   |   |    |                                                                                                                                         | The principal contractor to ensure that the following are duly adhered to:<br>- the emergency procedure to be expanded to provide for the effective treatment of employees or other persons visiting exposed to bites or stings from poisonous animals and insects, i.e. the contact details of the nearest medical unit that could treat employees exposed to bites or stings be obtained and arrangements be made with this service provider on the procedures to be followed to ensure swift response when required.<br>- confirmation to be obtained or made available from the nearest medical unit that they have anti venom reserved to treat employees or other persons visiting that may be exposed to snake bites or scorpion stings.<br>- competent / appointed first aiders to be available to facilitate the treatment of employees or other persons visiting exposed to stings or bites.<br>- the potential exposure posed by poisonous or venomous animals or insects and awareness thereof to be discussed with all employees as part of the toolbox talks and general awareness training and other persons visiting as part of the pre-site visit induction process<br><br>If Snakes are located on site, contact nearest snake handler to assist with removal of the snake. Do not attempt to remove snake if not trained. | • Inductions<br>• Medical fitness to work<br>• Toolbox talks<br>• Posters and Signages |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                                                                                                                |                                                                                                                                                                                      | Non-venomous snake bite could cause injury to body, tissue damage, swelling and severe pain                                                                                                                                  |                 |   |   |   |   |   |    |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                        |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                                                                                                                |                                                                                                                                                                                      | Scorpion Sting could cause difficult breathing, muscle twitching, sweating and vomiting.                                                                                                                                     | 4               | 2 | 2 | 3 | 4 | 4 | 19 |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                        |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                                                                                                                |                                                                                                                                                                                      | Uncontrolled removal of Fauna and Flora could result in the loss or destruction of native plants and animals from a specific area. This can have an impact on biodiversity, ecosystem stability and the well-being of humans |                 |   |   |   |   |   |    |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                        |   |   |   |   |   |    |  |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) |                              | POTENTIAL HAZARD /<br>(Injury / Damage / Loss)                                                                               | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                                              | RESIDUAL RISK |   |   |   |   |   |    |    |  |  |  |  |  |
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|                                    |                              |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              | I             | C | D | E | P | F | RR |    |  |  |  |  |  |
| S5-39                              |                              |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |   |   |   |   |   |    | Emergency contacts to be freely available on site and in safety file.<br><br>Environmental impact assessment to be conducted to ensure the project does not have an impact on the Fauna and Flora to the specific location of the project<br><br>All bee hives should not be disturbed in their natural environment, if distrusting of construction works, a beekeeper must be contacted to remove the hive in a safe manner to relocate the beehive. Do not hit or remove the hives yourself.<br><br>All visitors and employees on site must be briefed in emergency, first aid procedures and health issues prior to work/visit on site.                                                                                                                                                                                                                       |                                                                                                                                                                                                                                              |               |   |   |   |   |   |    |    |  |  |  |  |  |
|                                    | Working in Inclement weather | Exposed to thunderstorms / lightning<br><br>Strong winds<br><br>Rain<br><br>Sand / dust storms<br><br>Extreme hot conditions | Exposure to working in thunderstorms / lightning outdoors could cause the employee to be struck by the lightning resulting in cardiac arrest, respiratory arrest, loss of consciousness, and burns. Long-term effects may include neurological damage, cognitive impairments, and chronic pain. This could also result in a fatality<br><br>Exposure to working in very hot conditions / temperatures could cause heat exhaustion – fatigue, dizziness, nausea, headache, moist skin. Heat stroke – hot dry skin, confusion, convulsions and | 5               | 4 | 3 | 2 | 3 | 3 | 20 | The principal contractor to implement an early warning system to identify inclement weather and to prevent such weather from posing negative implications on the safety of employees and other persons visiting<br><br>The early warning system too, as a minimum. Provide for the following:<br>- <b>Construction work done during electrical storms</b><br>a) The principal contractor to ensure that all employees are removed from heights and all employees are as safe as possible, in inclement weather conditions.<br>b) No work to be allowed on the construction site during electric storms where employees cannot be protected from it. Protection involves:<br>- eating area fitted with a lightning mast<br>- workshops<br>- inside buildings<br>c) No work to be allowed in electrical storms on top of open structural steel, even when earthed. | <ul style="list-style-type: none"><li>• Toolbox Talks</li><li>• DSTI's</li><li>• PTO</li><li>• Medical fitness to work</li><li>• SOP/SWP</li><li>• Issue-based Risk Assessment</li><li>• Wind anemometer</li><li>• Lightning alarm</li></ul> | 3             | 2 | 2 | 2 | 2 | 2 | 2  | 13 |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                      | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                    | CONTROLS<br>(Registers, Policies,<br>Procedure) | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |
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|                                    |                                              |                                                                                                                                                                                                                                                                                    | I               | C | D | E | P | F | R |                                                                                                                                                                                          |                                                 | I             | C | D | E | P | F | RR |  |  |  |
|                                    |                                              | eventual loss of consciousness. This can result in a fatality if not detected at an early stage                                                                                                                                                                                    |                 |   |   |   |   |   |   | d) No work to be allowed on height where the lightning is within a 10-kilometer radius.<br>e) After inclement weather on-site risk assessments to be reviewed to include wet conditions. |                                                 |               |   |   |   |   |   |    |  |  |  |
|                                    |                                              | Working in rain could cause cold stress and hypothermia if low temperatures. It could also cause slip and fall injuries on wet surfaces. If working with electrical tools equipment could cause electrical shock and damages to tools and equipment resulting in financial losses. |                 |   |   |   |   |   |   |                                                                                                                                                                                          |                                                 |               |   |   |   |   |   |    |  |  |  |
|                                    |                                              | Working in dust storms could cause skin irritation and short-term eye / vision impairment.                                                                                                                                                                                         |                 |   |   |   |   |   |   |                                                                                                                                                                                          |                                                 |               |   |   |   |   |   |    |  |  |  |
|                                    |                                              | Working at heights during extreme weather condition such as rain and strong winds could cause scaffold to fall over if not secured and employees falling from heights resulting in serious injuries even fatalities                                                                |                 |   |   |   |   |   |   |                                                                                                                                                                                          |                                                 |               |   |   |   |   |   |    |  |  |  |
|                                    |                                              |                                                                                                                                                                                                                                                                                    |                 |   |   |   |   |   |   |                                                                                                                                                                                          |                                                 |               |   |   |   |   |   |    |  |  |  |

| ACTIVITY<br>(Work to be performed) |                           | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CONTROLS<br>(Registers , Policies, Procedure)                                                                                                                                                                                                                                                                                                                           | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |
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|                                    |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                         | I             | C | D | E | P | F | RR |  |  |  |  |  |
| S5-40                              |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |   |   |   |   |   |    | - Ensure that scaffolding is inspected immediately after inclement weather conditions.<br>- Ensure that the risks associated with working at heights during inclement weather are identified and reasonably mitigated.<br>- Be cautious of slip/trip hazards when performing activities during inclement weather.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                         |               |   |   |   |   |   |    |  |  |  |  |  |
|                                    | Working in Confined areas | <p>Poisonous gas, fume or vapor present in confined space.</p> <p>Lack of oxygen for employees working in confined space area.</p> <p>The presence of flammable gasses in confined space can lead to fire or explosion.</p> <p>Employees being exposed to excessive high noise levels in confined space.</p> <p>Employees being exposed to extreme temperatures / changes in temperature in confined space.</p> <p>Insufficient safe access for employees in and out of work area.</p> <p>Risk of exposure to hazards associated with lack of adequate ventilation for activities in confined spaces.</p> <p>Employees not medically fit</p> <p>Poor visibility</p> | <p>Working in confined area with lack of oxygen could cause dizziness, nausea, loss of awareness or judgement and can even result in a fatality</p> <p>Working in a confined space where chemical fumes or vapors are present could cause asphyxiation and poisoning resulting in the employee to become unconscious and suffocating that could lead to a fatality</p> <p>Noise levels can be amplified in confined area causing noise levels to exceed the safe exposure limit. This could result in short-term hearing loss and even long-term hearing loss if exposed for long durations</p> <p>Working In confined space during extreme temperatures could cause a heat stroke/ stress, severe</p> | 5               | 5 | 3 | 2 | 3 | 3 | 21 | <p>Principal Contractor to ensure confined space works comply with the following</p> <p><b>- Ventilation</b></p> <p>a) The confined space to be opened and allowed to ventilate for at least 15 minutes before entering the manhole. All open manholes to be barricaded and manned at all times.</p> <p>A gas monitor to be lowered to the bottom of the confined space with a rope to test the presence of any toxic/flammable gas. If any gas is detected, the space to be force ventilated by means of a blower for at least 15 minutes where after the air should be tested again. Under no circumstances may any space be entered while there is a toxic/flammable gas present.</p> <p>After the undertaking of the necessary work, the person in charge of the activities to confirm that all the employees are accounted for.</p> <p><b>- Entering a confined space</b></p> <p>a) When entering a confined space, the person entering the space to wear a safety harness and fully operational gas detector. A lifeline should be attached to the safety harness and a person on the surface should be in continuous contact with the person in the confined space. At least one person on the surface to be trained in basic first aid (level 1) with proof of such training as well as</p> | <ul style="list-style-type: none"><li>• SOP/SWP</li><li>• Issue-based Risk Assessment</li><li>• Method Statement</li><li>• Toolbox talks</li><li>• DSTI's</li><li>• Gas testing results</li><li>• Gas tester competency</li><li>• Gas testing machine calibration certificate</li><li>• Medical Fitness to work</li><li>• Entry register</li><li>• Checklists</li></ul> | 3             | 3 | 2 | 2 | 2 | 2 | 14 |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                          | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                             | CONTROLS<br>(Registers, Policies,<br>Procedure) | RESIDUAL RISK |   |   |   |   |   |    |  |  |
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|                                    |                                              |                                                                                                                                                                                                                                                                                                                                                                                                        | I               | C | D | E | P | F | R |                                                   |                                                 | I             | C | D | E | P | F | RR |  |  |
|                                    |                                              | dehydration and fainting                                                                                                                                                                                                                                                                                                                                                                               |                 |   |   |   |   |   |   | a fully equipped first aid box available on site. |                                                 |               |   |   |   |   |   |    |  |  |
|                                    |                                              | Workers unable to gain access into and out of the confined space could cause employees to gain access unsafely by climbing in and out this could result in slip and fall injuries. Being unable to gain access out of the confined space could result in suffering from claustrophobic could accelerate heart rate and shallow breathing to trembling limbs and a profound sense of an impending death |                 |   |   |   |   |   |   |                                                   |                                                 |               |   |   |   |   |   |    |  |  |
|                                    |                                              | Working in confined spaces with poor visibility could cause tripping and falling injuries, being struck by structures causing head and body injuries                                                                                                                                                                                                                                                   |                 |   |   |   |   |   |   |                                                   |                                                 |               |   |   |   |   |   |    |  |  |
|                                    |                                              |                                                                                                                                                                                                                                                                                                                                                                                                        |                 |   |   |   |   |   |   |                                                   |                                                 |               |   |   |   |   |   |    |  |  |
|                                    |                                              |                                                                                                                                                                                                                                                                                                                                                                                                        |                 |   |   |   |   |   |   |                                                   |                                                 |               |   |   |   |   |   |    |  |  |
|                                    |                                              |                                                                                                                                                                                                                                                                                                                                                                                                        |                 |   |   |   |   |   |   |                                                   |                                                 |               |   |   |   |   |   |    |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)          | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                      | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                   | I             | C | D | E | P | F | RR |
| S5-41                              |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |   |   |   |   |   |    | <p>d) Competent person to conduct continues gas monitoring of confined spaces</p> <p>Task Specific Risk Assessment / Safe working Procedure and Method Statement for Work activities in Confined space to be communicated to relevant employees. (Proof of communication to be available in safety file)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                   |               |   |   |   |   |   |    |
|                                    | Public health & safety and Pedestrians access to site | <p>Uncontrolled Access by members of public and children</p> <p>No site hoarding</p> <p>No warning signages</p> <p>Unprotected trenches and excavations</p> <p>Uncontrolled Access to heights</p> <p>Unprotected trenches and excavations could result in children or members from public entering these areas that could result in falling into open trench or excavation resulting in serious injuries, if water in trench or excavation could result in drowning of members or children</p> <p>Uncontrolled access to heights by members of the public and children could cause individuals to fall from unprotected edges resulting in</p> | 5               | 5 | 2 | 2 | 2 | 2 | 18 | <p>The principal contractor will be responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimize those dangers. This includes among others:</p> <ul style="list-style-type: none"> <li>- Non- employees entering the site for whatever reason.</li> <li>- The surrounding community.</li> <li>- Public bystanders</li> </ul> <p>Appropriate signage must be posted to this extent and all employees on site must be instructed to ensure that non-employees are protected at all times.</p> <p>All non-employees entering the site must receive site applicable induction into the hazards and risks and the control measures for these.</p> <p>Only visitors who are medically fit will be allowed to enter the construction work areas. If not medically fit, he will only be allowed to enter the site offices</p> <p>Safe demarcated walkway to be erected / conducted or displayed for visitors</p> <p>Pedestrian crossings to be conducted and utilized</p> <p>No Construction work near public vehicles.</p> | <ul style="list-style-type: none"> <li>• Induction Records</li> <li>• Site Access control register</li> <li>• Signages</li> <li>• Posters</li> <li>• Site Safety Rules</li> </ul> | 3             | 3 | 2 | 2 | 2 | 2 | 14 |

| ACTIVITY<br>(Work to be performed) |                       | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                        | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CONTROLS<br>(Registers , Policies, Procedure)                                                                                                                                                                                                                                   | RESIDUAL RISK |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
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|                                    |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                 | I             | C | D | E | P | F | RR |  |  |  |  |  |  |  |  |
| S5-42                              |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | serious injuries and even fatality<br><br>No warning signages posted on construction site could cause unauthorized members of public or children to enter unsafe areas that could result in serious injuries                                                                                                                                                                                                                                                      |                 |   |   |   |   |   |   | Construction area must be barricaded (No Danger tape) or fenced to prevent Public from entering work area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                 |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    | Installation of fence | Lifting of heavy fence poles / panels or rolls of wire with poor ergonomics could result in serious lower back injuries<br><br>Transportation and handling of fence. (Poor Ergonomics)<br>- Offloading of fence poles and heavy wire rolls<br><br>Use of ladders<br><br>Use of scaffolding<br><br>Contact with underground services/ electricity<br><br>Fencing collapses on employees or surrounding property<br><br>Mixing and pouring of concrete<br><br>Use of unsafe / damaged tools<br><br>Making contact or damage underground water services could | Using of unsecured ladder on uneven surface while installing of fence or fence poles could cause employee to slip and fall over from ladder resulting in serious bodily injuries<br><br>Making contact with underground electrical services when digging holes for fence poles could cause employees to be shocked and even electrocuted resulting in a fatality. This could also result in delays in certain activities and costs to repair the damaged services |                 |   |   |   |   |   |   | Rolls of fence to be transported mechanically if possible. Make use of TLB if truck crane is not available to lift and move rolls of fence<br><br>Proper PPE and suitable hand gloves to be provided to employees involved. Task specific PPE required for mixing of concrete<br><br>Ladders to be inspected by a competent person appointed in writing and to be well positioned and secure when in use. No wooden ladders or self-made ladders to be used.<br><br>Tools to be inspected daily before work start<br>Faulty tools to be repaired or removed from site immediately<br><br>Drawings / plans or Underground scans must be available for areas to be excavated to identify any underground services like electrical cables, water or sewer lines.<br><br>All fence poles to be inserted into the ground as per drawing requirements and to be secured with Concrete.<br><br>If large section of fence is being installed there must be enough support to assist and to hold the fence in position while being installed | <ul style="list-style-type: none"><li>• SOP/SWP</li><li>• Issue-based Risk Assessment</li><li>• Method Statement</li><li>• Toolbox talks</li><li>• DSTI's</li><li>• Checklists</li><li>• Appointment letters</li><li>• Competencies</li><li>• Medical fitness to work</li></ul> |               |   |   |   |   |   |    |  |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) |                                   | POTENTIAL HAZARD<br>(Injury / Damage / Loss)              | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                           | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                              | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                              | RESIDUAL RISK |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
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|                                    |                                   |                                                           |                                                                                                                                                                                                                                                      | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                           | I             | C | D | E | P | F | RR |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
|                                    |                                   |                                                           | result in project delays and costs to repair the water services                                                                                                                                                                                      |                 |   |   |   |   |   |    | If scaffold is used it must be fully erected as per SANS 10085 standards, safe access must be provided to a full boarded platform secured with all required rails. Scaffold must be erected by competent and appointed scaffold erectors and signed off by competent appointment scaffold inspector and supervisor |                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
|                                    |                                   |                                                           | Unplanned and installing of unsecured fence panels could cause the panels to fall over on top of employees resulting in body and head injuries                                                                                                       |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
|                                    |                                   |                                                           | Mixing of cement on ground could cause environmental pollution                                                                                                                                                                                       |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
|                                    |                                   |                                                           | Use of unsafe or damaged tools could cause hand and finger injuries                                                                                                                                                                                  |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
|                                    |                                   |                                                           | Making use of non-compliant scaffold not erected as per SANS 10085 could cause scaffold to collapse or fall over, the risk of not fully erected scaffold could also cause employees to fall from unprotected platform resulting in serious injuries. |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
| S5-43                              | Asbestos Works (If found on site) | Inhalation of Asbestos fibers.                            | Exposure to asbestos fibers leading to an Occupational illness and disease (asbestosis).                                                                                                                                                             |                 |   |   |   |   |   |    | Asbestos Risk Assessment and Method statement for Handling of Asbestos to be communicated to the relevant exposed employees.                                                                                                                                                                                       | <ul style="list-style-type: none"><li>• SOP/SWP</li><li>• Issue-based Risk Assessment</li><li>• Asbestos Risk Assessment</li><li>• Method Statement</li><li>• Asbestos Management Plan</li><li>• Medical Surveillance plan</li><li>• Checklists</li></ul> |               |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
|                                    |                                   | Improper Asbestos removal and placing of Asbestos on site | This results in the lung tissue scarring                                                                                                                                                                                                             |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
|                                    |                                   | Incompetent person conducting removal                     |                                                                                                                                                                                                                                                      | 5               | 5 | 4 | 4 | 4 | 3 | 25 |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    | Only registered Contractor will be allowed to be removed and dispose Asbestos at a registered (designated) facility - Proof of disposal must be kept on record. Registration and competencies must be verified before handling of asbestos | 4 | 4 | 3 | 3 | 3 | 2 | 19 |  |  |  |
|                                    |                                   | Asbestos Contractor not registered                        | Employees and public exposed to asbestos causing occupational illness and diseases                                                                                                                                                                   |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |
|                                    |                                   | Incorrect PPE worn when                                   |                                                                                                                                                                                                                                                      |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                           |               |   |   |   |   |   |    |                                                                                                                                                                                                                                            |   |   |   |   |   |   |    |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)    | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                               | RISK EVALUATION |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                      | CONTROLS<br>(Registers , Policies,<br>Procedure)                                                                                                                                                                                                                                     | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                 |                                                                                                                                                                                                                                                                             | I               | C | D | E | P | F | R |                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                      | I             | C | D | E | P | F | RR |
|                                    | removing, making contact with asbestos          | Use of incompetent person or unregistered contractor to remove asbestos could cause his employees to be exposed to health risk associated with asbestos, reputational damages to client and property damages                                                                |                 |   |   |   |   |   |   | If Asbestos is noticed on site Department of Labour must be informed.                                                                                                                                                                      | <ul style="list-style-type: none"><li>• DSTI's</li><li>• PTO's</li><li>• Medical Fitness to work</li><li>• Disposal certificate</li><li>• Clearance Certificate</li><li>• Competencies</li><li>• Proof of Registration as Asbestos contractor</li><li>• Appointment letter</li></ul> |               |   |   |   |   |   |    |
|                                    | Unprotected or damaged bags containing asbestos | Not wearing the correct PPE required to handle asbestos could cause the employees to be exposed to the health risks of making contact or inhaling asbestos fibers                                                                                                           |                 |   |   |   |   |   |   | Only workers with the required task specific PPE and who have been trained will be allowed to handle and remove Asbestos                                                                                                                   |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |
|                                    | Strong Winds                                    | Unprotected or damaged bags used to contain asbestos containing materials could cause fibers to be spread to surrounding areas such as communities if strong winds occur                                                                                                    |                 |   |   |   |   |   |   | Other simultaneous operations in the direct vicinity of Asbestos must be halted / stopped until asbestos has been removed.                                                                                                                 |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |
|                                    | No records of disposal                          | Illegal dumping of Asbestos could result in reputational damage, financial losses and fines. This is a major risk for communities where asbestos is illegally dumped as the members and children of that community will be exposed to health risks associated with asbestos |                 |   |   |   |   |   |   | Designated area to be identified on site to be barricaded for the temporary storage of asbestos containing materials. Warning signages must be posted. Plastic bags must be sealed and must be identified as asbestos with asbestos labels |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |
|                                    | Public or community exposed to asbestos         | Unidentified Asbestos containing materials                                                                                                                                                                                                                                  |                 |   |   |   |   |   |   | Compliance with asbestos abatement regulations 2020 must be enforced.                                                                                                                                                                      |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |
|                                    | Illegal Dumping of Asbestos contained materials |                                                                                                                                                                                                                                                                             |                 |   |   |   |   |   |   | Clearance inspections and certificates to be issued before handing over a section.                                                                                                                                                         |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |
|                                    | Unidentified Asbestos containing materials      |                                                                                                                                                                                                                                                                             |                 |   |   |   |   |   |   | Monitor wind speeds and stop work when wind is above 30km/h blowing in a certain direction that might spread the asbestos particles.                                                                                                       |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |
|                                    |                                                 |                                                                                                                                                                                                                                                                             |                 |   |   |   |   |   |   | All asbestos works must be supervised by competent person                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |
|                                    |                                                 |                                                                                                                                                                                                                                                                             |                 |   |   |   |   |   |   | Areas where asbestos were stored on site must be rehabilitated after asbestos has been removed from site.                                                                                                                                  |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |
|                                    |                                                 |                                                                                                                                                                                                                                                                             |                 |   |   |   |   |   |   | Asbestos AIA must identify all asbestos containing materials on site and determine the type of asbestos.                                                                                                                                   |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |
|                                    |                                                 | Unidentified asbestos                                                                                                                                                                                                                                                       |                 |   |   |   |   |   |   | Once asbestos has been removed a clearance certificate must be issued to the client / end user that included records of                                                                                                                    |                                                                                                                                                                                                                                                                                      |               |   |   |   |   |   |    |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss) | POSSIBLE RISK<br>(Type injury/damage/loss)                                                                                                                                                                                                                                                           | RISK EVALUATION                                                                                                                                                                                                                                                                          |   |   |   |   |   |   | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CONTROLS<br>(Registers, Policies, Procedure)                                                                                                                                                                                                                                                                                                               | RESIDUAL RISK |   |   |   |   |   |    |
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|                                    |                                              |                                                                                                                                                                                                                                                                                                      | I                                                                                                                                                                                                                                                                                        | C | D | E | P | F | R |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                            | I             | C | D | E | P | F | RR |
|                                    |                                              |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                          |   |   |   |   |   |   | visual inspection conducted, air sampling test results and clear declaration for the purpose of the clearance certificate<br><br>Asbestos Management plan must be drafted specific to the project, asbestos containing materials and type of asbestos noted on site. The Asbestos management plan must clearly identify the procedures to follow to handle, remove and transport asbestos containing materials<br><br>Registered Asbestos contractor must provide proof of medical surveillance plan |                                                                                                                                                                                                                                                                                                                                                            |               |   |   |   |   |   |    |
| S5-44                              | Safeguarding of existing structures          | Damages to existing services and structures.                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                          |   |   |   |   |   |   | Ensure identification of all existing services and structures before commencing with construction activities.<br><br>Site drawings to be reviewed to identify any services<br><br>If drawings are not available, request assistance from end-user or property owner to identify potential services                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Drawings</li> <li>• Detailed Scope of works</li> <li>• Risk Assessments</li> <li>• Services survey</li> <li>• Conditional Assessments</li> </ul>                                                                                                                                                                  |               |   |   |   |   |   | 16 |
| <b>Stage 6 – Project Close-out</b> |                                              |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                          |   |   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                            |               |   |   |   |   |   |    |
| S6-01                              | Site Demobilization                          | Unsafe disconnection of temporary services<br><br>Improper loading of materials, equipment, offices and storage containers<br><br>Improper loading of Mobile Plant on to trucks<br><br>Transporting of equipment, machinery, plant, offices or storage containers with unsafe (not roadworthy) truck | Unsafe disconnection of electrical services by incompetent person could cause the person to be shocked or even electrocuted resulting in a fatality. This could also have an impact on electrical supply to existing and new structures<br><br>Improper loading of items could cause the |   |   |   |   |   |   | All disconnections to be made by a competent person appointed for the specific activity.<br><br>Lifting operations to be conducted by Competent operator, with assistance of a competent rigger to assist with the rigging and loading of items.<br><br>Risk Assessment and Method Statements must be available and communicated to team conducting the demobilization.<br><br>Only roadworthy trucks or vehicles to be                                                                              | <ul style="list-style-type: none"> <li>• SOP/SWP</li> <li>• Issue-based Risk Assessment</li> <li>• Method Statement</li> <li>• DSTI's</li> <li>• Toolbox talks</li> <li>• Checklists</li> <li>• Appointment letter</li> <li>• Competencies / Driver's license / PDP</li> <li>• Medical Fitness to work</li> <li>• SWL/COC for lifting equipment</li> </ul> |               |   |   |   |   |   | 16 |

| ACTIVITY<br>(Work to be performed) |                                   | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                                                                                                        | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                         | RESIDUAL RISK |   |   |   |   |   |    |    |
|------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|----|
|                                    |                                   |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                         | I             | C | D | E | P | F | RR |    |
| S6-02                              |                                   | Incompetent person disconnecting temporary services<br><br>Exposed to open excavations or trenches<br><br>Exposed to open / unsafe electrical wires | load to fall from the truck resulting in damage to property with cost implications. Items falling could also result in serious injuries to persons body, disability injuries and even fatalities<br><br>Transporting of items with unsafe truck or vehicle could cause an accident to happen resulting in multiple serious injuries or fatalities<br><br>Open excavations and open trenches could cause members of the public or end-user to fall into the opening resulting in leg injuries (bodily injuries) or if water (from rain is present) could cause children to drown in these openings |                 |   |   |   |   |   |    | used for transportation of items removed from site. Driver must have a valid driver's license specific to the type of vehicle. Truck or vehicle must be inspected before leaving site for any defects, if defects are noted, it must be reported and attended to before driving<br><br>All trenches and Excavation opened to disconnect services must be closed and compacted to its original state. No open wires, or piping must be left unattended.                                                                   | • CoC<br>• Registration (Electrical Contractor)                                                                                                         |               |   |   |   |   |   |    |    |
|                                    | Housekeeping and Waste Management | Poor Housekeeping<br><br>Tripping hazards<br><br>Unauthorized dumping of waste<br><br>Fire                                                          | Poor housekeeping could cause tripping hazards resulting in employees, visitors or the end-user to trip and fall leading to bodily injuries<br><br>Dumping of waste or construction rubble at areas not identified as a registered facility could result in fines that will have cost implications.                                                                                                                                                                                                                                                                                               | 4               | 3 | 3 | 4 | 3 | 3 | 20 | All walkways to be clear from construction material, equipment and any object that might have an impact on the flow of a walkway. All existing walkways must be reinstated as per original<br><br>Inspection Checklists to be conducted by supervisors to ensure housekeeping is done daily and on close-out of project<br><br>All construction rubble and waste must be removed from site before site handover to end-user. Waste must be dumped at a registered dumping site. Records must be kept as proof of dumping | • Disposal Waste Certificates<br>• Issue-based Risk Assessment<br>• SOP/SWP<br>• Medical Fitness to work<br>• DSTI's<br>• Toolbox talks<br>• Agreements | 3             | 2 | 2 | 3 | 2 | 2 |    | 14 |

| ACTIVITY<br>(Work to be performed) |                                                                                        | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                           | POSSIBLE RISK<br>(Type<br>injury/damage/loss)                                                                                                                                                                                                                                  | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                      | CONTROLS<br>(Registers, Policies,<br>Procedure)                                                                                                                                                                                       | RESIDUAL RISK                                                                                                                                                                                                                                                                                                                                                                           |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|----|--|--|--|--|--|--|--|--|
|                                    |                                                                                        |                                                                        |                                                                                                                                                                                                                                                                                | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                       | I                                                                                                                                                                                                                                                                                                                                                                                       | C | D | E | P | F | RR |  |  |  |  |  |  |  |  |
|                                    |                                                                                        |                                                                        | Long grass and bushes left at newly built areas could result in fire if ignited that could cause the building to burn down resulting in property damages with cost implication and could also result in serious injuries or fatalities if people are stuck inside the building |                 |   |   |   |   |   |    | No Construction Materials may be left on site for end-user unless a written agreement is in place to ensure the end-user will remove the materials<br><br>All bushes and grass must be cut around construction area to ensure a clean site is handed over to end-user<br><br>All flammable materials must be disposed of or removed from site, may not be left unattended for the end-user |                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
| S6-03                              | Construction Activities at Practical Completion, Works Completion and Final Completion | No Supervision                                                         | Conducting work activities without supervision can lead to processes and procedures not followed resulting accidents and serious injuries                                                                                                                                      |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                            | All construction activities must be supervised by appointed competent person.                                                                                                                                                         | <ul style="list-style-type: none"><li>• Inductions</li><li>• SOP/SWP</li><li>• Issue-based Risk Assessment</li><li>• Method Statements</li><li>• Medical Fitness to work</li><li>• Appointment letter<ul style="list-style-type: none"><li>• Competency</li><li>• Checklists</li></ul></li><li>• Approved Extension of time</li><li>• Approval of night work or weekend works</li></ul> |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                        | No Health and Safety Resources on site                                 | No H&S resource available on site will cause Health and Safety file not to be maintained on a daily basis this could result in Prohibition notices issued by DoEL. This will result in delay of taking Final Completion                                                        |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                            | Health and Safety resources must be available on site until site is handed over back to the end-user                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                        | No Health and Safety File / Documentation available                    | No H&S resource available on site will cause Health and Safety file not to be maintained on a daily basis this could result in Prohibition notices issued by DoEL. This will result in delay of taking Final Completion                                                        |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                            | Health and Safety file must be maintained until site is handed over to end-user. Once site is closed, the consolidated file can be submitted to the DBSA                                                                              |                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                        | Notification of Construction Works or Construction Work permit expired | No H&S resource available on site will cause Health and Safety file not to be maintained on a daily basis this could result in Prohibition notices issued by DoEL. This will result in delay of taking Final Completion                                                        | 3               | 3 | 3 | 3 | 3 | 3 | 18 |                                                                                                                                                                                                                                                                                                                                                                                            | Issue-based Risk Assessment for maintenance works must be available and communicated to the team conducting snags                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                        | Unsafe working practices                                               | No H&S resource available on site will cause Health and Safety file not to be maintained on a daily basis this could result in Prohibition notices issued by DoEL. This will result in delay of taking Final Completion                                                        |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                            | All tools and equipment must be inspected, and defects recorded before use.                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                        | Unauthorized access to work areas and working at unauthorized times    | Working at unauthorized time (night shifts) could cause serious injuries due to poor visibility, fatigue and no supervision                                                                                                                                                    |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                            | All areas where snags are taking place must be closed off to prohibit no unauthorized entry.                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                        | Unsafe tools and equipment used                                        | Working at unauthorized time (night shifts) could cause serious injuries due to poor visibility, fatigue and no supervision                                                                                                                                                    |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                            | Detailed programme of works with approved extension of time (if required) must be submitted to Department of Employment and Labour to request the extension of the Notification of Construction Works or the Construction Work Permit |                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |    |  |  |  |  |  |  |  |  |
|                                    |                                                                                        | Use of unsafe tools and equipment could cause hand and finger injuries | Working at unauthorized time (night shifts) could cause serious injuries due to poor visibility, fatigue and no supervision                                                                                                                                                    |                 |   |   |   |   |   |    |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |    |  |  |  |  |  |  |  |  |

| ACTIVITY<br>(Work to be performed) | POTENTIAL HAZARD<br>(Injury / Damage / Loss)                               | POSSIBLE RISK<br>(Type injury/damage/loss)                                                            | RISK EVALUATION |   |   |   |   |   |    | PREVENTATIVE MEASURES                                                                                                                                                                                                                                                                                                                                                                                                                      | CONTROLS<br>(Registers, Policies, Procedure)                                                                    | RESIDUAL RISK |   |   |   |   |   |    |
|------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|---|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|---|---|---|---|---|----|
|                                    |                                                                            |                                                                                                       | I               | C | D | E | P | F | R  |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                 | I             | C | D | E | P | F | RR |
|                                    |                                                                            |                                                                                                       |                 |   |   |   |   |   |    | All works required after hours need approval by project manager, DBSA and client representative                                                                                                                                                                                                                                                                                                                                            |                                                                                                                 |               |   |   |   |   |   |    |
| S6-04                              | Consolidated Health and Safety file and Close-out report submitted to DBSA | Non-Submission of close-out report<br><br>Non-Submission of Health and Safety file lost               |                 |   |   |   |   |   |    | Close-Out Report not submitted could result in the project not to be closed out and would remain open with the end-user. This will lead to cost implications as the end-user will not pay for the final payment certificate<br><br>Non-Submission of the Health and Safety File could cause all records to be lost resulting in loss of critical information creating uncertainty and additional cost for DBSA to manage legal obligations |                                                                                                                 |               |   |   |   |   |   |    |
|                                    |                                                                            |                                                                                                       | 1               | 3 | 1 | 1 | 3 | 3 | 12 | Prepare and agree on the requirements of information provided to DBSA for the continuous health and safety management of the facility including operations and maintenance requirements during its life cycle.<br><br>Conduct Health and Safety inspection to ensure close-out report indicates that the site is left in a safe and healthy manner<br><br>Submit copy of Health and Safety file and electronic copy to DBSA                | <ul style="list-style-type: none"> <li>Consolidated Health and Safety file</li> <li>Close-out Report</li> </ul> | 1             | 1 | 1 | 1 | 2 | 2 | 8  |
| S6-05                              | Exit Occupational Health and Safety Fitness to work medicals               | Unidentified illnesses, injuries or health risks contracted from working on this construction project |                 |   |   |   |   |   |    | Unable to identify health concerns or illnesses could result in legal court cases that will have financial implications to the Client. This will also lead to reputational damages                                                                                                                                                                                                                                                         |                                                                                                                 |               |   |   |   |   |   |    |
|                                    |                                                                            |                                                                                                       | 4               | 4 | 2 | 2 | 3 | 3 | 18 | All employees who conduct construction activities on the project must undergo an exit medical to ensure the employee has not contracted any illnesses or health concerns from working on the project.<br><br>Records of Exit Medicals must be submitted to DBSA in the copy of the Consolidated Health and Safety file                                                                                                                     | <ul style="list-style-type: none"> <li>Consolidated Health and Safety file</li> <li>Exit Medicals</li> </ul>    | 3             | 3 | 1 | 1 | 2 | 2 | 12 |

## 7. DECLARATION OF ACKNOWLEDGMENT AND COMPLIANCE

I, \_\_\_\_\_, hereby confirm the following:

- I have read and understood the Baseline Risk Assessment.
- I confirm my intention to comply with all relevant legislative requirements.
- I acknowledge and accept the responsibilities and duties assigned to me and confirm my understanding thereof.

This declaration is made and agreed to at \_\_\_\_\_, on this \_\_\_\_\_ day of \_\_\_\_\_, 2026, in the presence of the undersigned witness.

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Witness Name:** \_\_\_\_\_

**Witness Signature:** \_\_\_\_\_

**Signed on behalf of (TBA) (*PROFESSIONAL SERVICE PROVIDER*)**