

Document No	S-BRA-001-00	HEALTH, SAFETY, ENVIRONMENTAL & QUALITY MANAGEMENT	
Revision	01		
Appointment date	23-Jul-26		

Baseline Risk Assessment

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

ANNEXURE B

APPOINTMENT OF A CONTRACTOR TO CONSTRUCT AN OVERHEAD PEDESTRIAN BRIDGE AND UPGRADE THE PARKING AREA AT THE ADMINISTRATIVE HEADQUARTERS OF THE GOVERNMENT PRINTING WORKS (GPW)

(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 DESIGN AND BUILD CONTRACTOR
(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 Contractor to construct an Overhead Pedestrian Bridge and Upgrade the Parking Area at the Administrative Headquarters of the Government Printing Works (GPW).***

The scope of works will include the following:

Work Package 2: Parking Area Upgrade & Overhead Pedestrian Link Bridge **Minaar Street Parking Area Upgrade**

The scope of works for the Minaar Street Parking Area Upgrade shall comprise the planning, supply of materials, construction, installation, testing, commissioning, and completion of all associated infrastructure required to deliver a functional, safe, and sustainable parking facility.

The scope shall include, but not be limited to, the following:

- i. Earthworks
- ii. Paving Works
- iii. Landscaping
- iv. Stormwater Reticulation and Management
- v. Reinstatement of Existing Asphalt Surfaces
- vi. Covered parking structures
- vii. Construction of Guard Houses and associated works (Client to confirm)
- viii. Solar Photovoltaic (PV) High-Mast Lighting
- ix. Fire Reticulation Infrastructure
- x. Testing, Commissioning, and Handover
- xi. As Built Information

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Visagie Street Overhead Pedestrian Link Bridge

The scope of work includes the design, supply, installation, testing & commissioning of overhead pedestrian link bridge comprising the following:

- i. Detection and Protection of Underground Services:
- ii. Construction of the Overhead Pedestrian Link Bridge:
- iii. Associated Civil and Infrastructure Works
- iv. Testing and Commissioning
- v. Handover and Close-Out Documentation
- vi. As-Built Information
- vii. Provision of training operation and maintenance for a period of twenty-four (24) months

The Baseline Risk Assessment will be reviewed and updated should significant changes occur in the project scope, design or construction methodology.

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3. ABBREVIATIONS & DEFINITIONS

DEFINITIONS	
Purpose of the Act	- 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
the Act	- means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)
Agent	- means a competent person who acts as a representative for a client
AIA	- means an Inspection Authority approved by the chief inspector: Provided that an inspection authority approved by the chief inspector with respect to any particular service shall be an Approved Inspection Authority with respect to that service only
Asbestos	- means the following fibrous silicates: ➤ Asbestos actinolite ➤ Asbestos grunerite (amosite) ➤ Asbestos anthophyllite ➤ Chrysotile ➤ Crocidolite ➤ Asbestos tremolite ➤ Any mixture containing these fibrous silicates
Asbestos-containing material	- 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
Asbestos Demolition Work	- 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.
Asbestos dust	- means airborne or settled dust, which contains or is likely to contain regulated asbestos fibers
Asbestos Waste	- means an undesirable or superfluous asbestos-containing by-product, emission or residue of any process or activity that has been – ➤ discarded by any person

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	➤ accumulated and stored by any person with the purpose of eventually discarding it with or without prior treatment connected with the discarding thereof; or ➤ stored by any person with the purpose of recycling, re-using or extracting a usable product from such matter
Asbestos Work	- means work that exposes or is likely to expose any person to asbestos dust.
Client	- means any person for whom construction work is performed
Competent Person	- means any person having the knowledge, training, experience and qualifications specific to the work or task being performed.
Construction manager	- 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
Construction site	- means a workplace where construction work is being performed
Construction supervisor	- means a competent person responsible for supervising construction activities on a construction site
Construction work	- means any work in connection with - ➤ the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or ➤ 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.
Contractor	- means an employer who performs construction work
Designer	- means ➤ a competent person who- ○ prepares a design ○ checks and approves a design ○ 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 ○ designs temporary work, including its components ➤ an architect or engineer contributing to, or having overall responsibility for a design ➤ a building services engineer designing details for fixed plant ➤ a surveyor specifying articles or drawing up specifications

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	➤ a contractor carrying out design work as part of a design and building project; or an interior designer, shopfitter or landscape architect.
DBSA	- Development Bank of Southern Africa
DSTI	- Daily Safety Task Instruction
Excavation work	- means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping
Fall protection plan	- means a documented plan, which includes and provides for ➤ all risks relating to working from a fall risk position, considering the nature of work undertaken ➤ the procedures and methods to be applied in order to eliminate the risk of falling; and ➤ a rescue plan and procedures.
Fall arrest equipment	- means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration device, lifelines or similar equipment
Fall prevention equipment	- 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
Fall risk	- means any potential exposure to falling either from, off or into
Health and Safety File	- means a file, or other record containing the information in writing required by the Construction Regulations 2014
Health and Safety Plan	- means a site, activity or project specific documented plan in accordance with the client's health and safety specification
Health and Safety Specification	- means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work
HCS	- Hazardous Chemical Substances
HBA	- Hazardous Biological Agents
HIRA	- Hazard Identification Risk Assessment

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Method Statement	- means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment
MSDS/SDS	- means material safety data sheet / safety data sheet for hazardous chemicals
National Building Regulations	- 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
PSP	- Professional Service Provider
PPE	- Personal Protective Equipment
PTO	- Planned Task Observation
Risk Assessment	- means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard.
Shoring	- 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
Structure	- means ➤ 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 ➤ any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or ➤ 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
Service Provider	- means an employer appointed by the client to perform construction work
SACPCMP	- means the South African Council for the Project and Construction Management Professions
SOP / SWP	- Standard Operating Procedure / Safe Working Procedure

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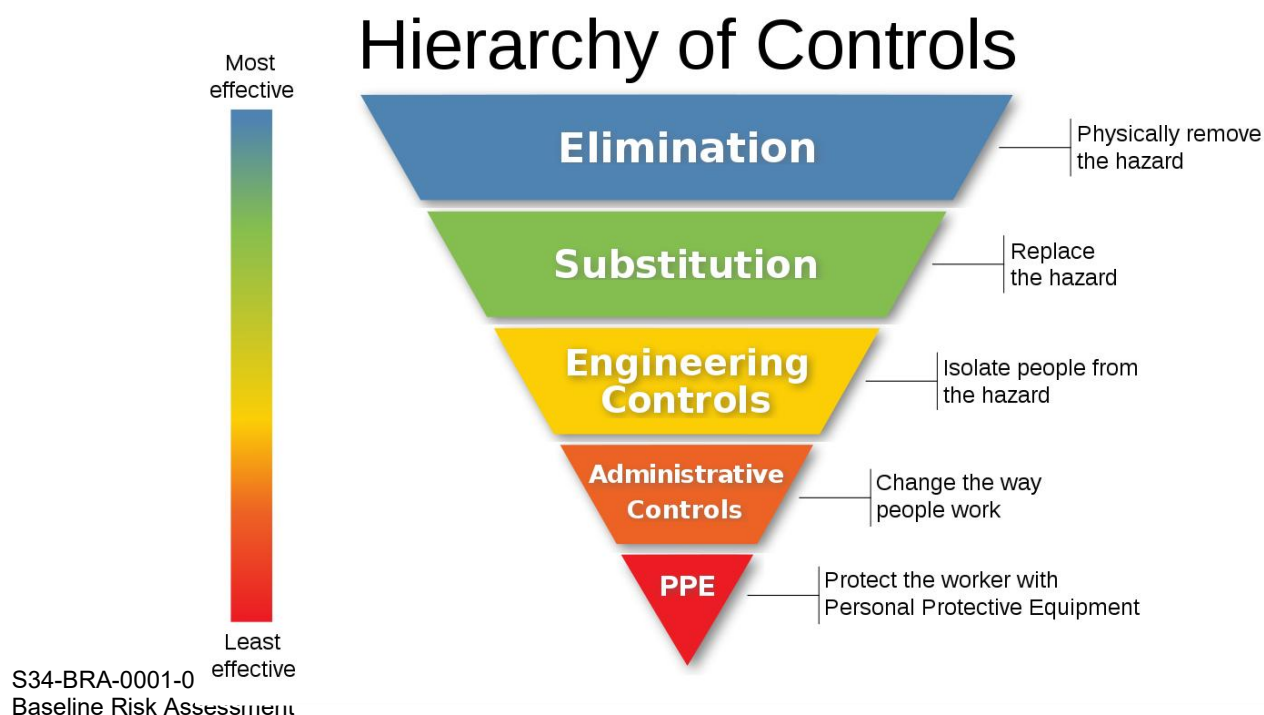
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Temporary works	means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work
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Definitions to understand under Control Measures	
Elimination	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
Substitution	This involves substituting a dangerous process or substance with one that is not as dangerous
Isolation	Separate or Isolate the Hazards from making contact with people
Engineering	Implement Engineering controls to eliminate or reduce the risk
Administrative	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. Administrative controls include – Procedures, Signages, Permits etc.
PPE	Provision of Personal Protective Equipment should only be considered if all the other control measures are impractical.



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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.

4.1 RISK METHODOLOGY

ASSESSMENT				RISK MATRIX					RISK CALCULATION	PRIORITY OF ACTION			
I	INJURY SEVERITY	C	FINANCIAL IMPLICATIONS	26	27	28	29	30	SUM OF: INCIDENT / FINANCIAL / DAMAGE / ENVIRONMENTAL / FREQUENCY / PROBABILITY = 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]										

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6. BASELINE RISK ASSESSMENT

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK									
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR			
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. Unclear Procurement plan / process Final Health and Safety specification and final Baseline Risk Assessment not integrated with tender documents Unethical Procurement	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.									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 Ensure a project plan is tailored to the specifications/performance of DBSA and consistent with best practices and agreed. Final health and safety specification and baseline risk assessment conducted by Pr.CHSA must be issued with all tenders to ensure the bidders are aware of risks associated with the project to ensure they budget for certain requirements.	• Design Report • Final health and safety specification • Final baseline risk assessment • BSC approved tender documents • Final Construction project health and safety cost estimates									
			Not addressing key risks could result in project delays/disruptions when bidders did not budget for certain requirements to be met																			
			An unclear procurement plan creates significant risks, potentially leading to missed opportunities, decreased efficiency, unexpected costs, and damaged customer relationships																			
			Unethical procurement could result in Audit findings, which would lead to investigation that could result in delays of construction																			
S4-02	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	• Final Health and Safety Specification • Final Baseline Risk Assessment • Project Execution Plan (or equivalent project planning documentation)	3	3	2	2	2	2		14	

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK							
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR	
S4-03	Tender Documents and Health and Safety Annexures		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.								All tender documents must be reviewed by appointed BSC members to ensure requirements are met and the tender include the required resources BSC appointments to be done for specific technical experiences to ensure certain requirements are met by different professionals Pr.CHSA to prepare the final SHEQ Annexures to ensure all requirements are met.	• Approved and signed off DBSA Tender documents • DBSA SHEQ Policy • Final Health and Safety Specification • Final Baseline Risk Assessment • BSC appointments								
		Failure to identify Health and Safety requirements in tender documents																		
		Unable to identify Health and Safety Resource and competency required for the bidder	1	5	3	3	2	2	16	1			5	2	2	2	2	14		
		Health and Safety annexures not specific to the project																		
			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.																	
S4-04	Evaluation of principal contractor/s and contractor/s capability	No proof that the contractor is conversant with site-specific DBSA infrastructure hazards	Contractor being unable to conduct the scope of works could lead to poor	4	5	4	3	2	2	20	Evaluation of contractor's risk and safety management capabilities with adequate resources.	• Tender Returnable • BEC appointments • BEC evaluation report	3	5	3	2	2	2	17	

ACTIVITY (Work to be performed)	POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK						
			I	C	D	E	P	F	R			I	C	D	E	P	F	RR
	and competency	and risks to ensure compliance and non-conformances. The contractor's capability and SHE performance is not evaluated and considered prior to awarding the contract.								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								
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	4	5	3	2	3	3	20	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	- Final Health and Safety Specification - Bill of Quantities (OHS BOQ) - Final Tender Documentation - Final Baseline Risk Assessment	3	3	2	2	2	2	14
S4-06	Design Review and coordination	Inadequate design coordination, omission of safety requirements and constructability considerations	4	4	4	2	3	3	20	Ensure design risks are identified and addressed during design reviews. Incorporate health and safety requirements into tender documentation and coordination between design disciplines	- Construction Regulations 2014 - Design risk register - Design review records - Tender documentation	3	3	3	2	2	2	15
S4-07	Existing services identification and site information	Unknown underground or overhead services and inaccurate site information	4	4	4	2	3	3	20	Obtain and verify existing services information before construction. Ensure available information is incorporated	- Existing services drawings - Utility records - Site investigation reports	3	3	3	2	2	2	15
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. No valid registration with COIDA. Expired Documentation (e.g. competencies, equipment load test, medicals, work permits)								No Work Commencement until approval has been signed off. Client Health and Safety Specification provided to each Principal Contractor or Contractor. Baseline Risk Assessment provided to each Principal Contractor or Contractor	- Health and Safety Plan / file approval letter - Copy of Health and Safety Plan - Copy of LOGS - Valid Competencies, appointment, medicals, work permits etc. - Site Establishment plan /	1	3	2	2	2	2	12

ACTIVITY (Work to be performed)	POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK						
			I	C	D	E	P	F	R			I	C	D	E	P	F	RR
S5-03		Documentation not available or approved as per required Client Spec and OHS act.								Principal Contractor with valid LOGS will be allowed to commence with Site Establishment. LOGS must be presented at tender stage to prohibit a contractor to be awarded with a tender if LOGS is not available Principal Contractor to provide updated list of employees, with competencies, ID's, Medicals and work permits if required	layout							
	Notifying Department of Employment and Labour of Construction works	Principal Contractor commencing with works without Notifying Department of Employment and Labour								NOC to be submitted by Principal Contractor at least 7 days before commencement of works to the DoEL.	- Annexure 2 - Proof of submission to DoEL	1	3	2	2	2	3	13
S5-04	Risk Identification	Risk assessments not conducted, not site-specific, or performed by an incompetent person								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 No Activity to commence if risk assessment and method statement has not been approved by the relevant person. 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	- Client Health and Safety Specification - Baseline Risk Assessment - Method Statement of Tasks - Risk Assessor competency - Issue based risk assessments - Training / communication records - SOP/SWP - Risk Assessment training	4	4	4	4	3	3	22

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK													
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR							
											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 & Storage Facilities & Project Mobilization of Plant and Equipment	Abnormal loading of trucks	Unsafe or abnormal loading could cause accidents that could lead to multiple fatalities.								Truck must only be loaded according to its safe load capacity.															
		Traffic congestion / unwanted(unauthorized) members of the public walking in risk zone	Loaded truck uncontrolled movement on site can cause an accident resulting in serious injuries to operator and members of the public and damages to surrounding property.									Appointed spotter (flag person) to be in position wearing reflective vest and whistle to assist Truck driver or Plant operator with movement on site.														
		Containers placed on uneven surfaces.	Containers falling over or off from stands/bricks could cause property damages.									Traffic Management Plan must be communicated to all relevant parties to ensure controls are implemented.	• Safe Workload Certificate or Certificate of Compliance for Lifting equipment													
		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.	• Traffic Management Plan													
		Fatigued operators										Appointed competent Banksman (Rigger) to oversee all lifting operations.	• Lifting Plan • Appointment letters													
		Unsafe / uncontrolled Truck Crane Operations											• Competencies – Operators, truck driver, flagperson, riggers	5	5	3	2	2	2						19	
		Unsafe and poor manual offloading practices from delivery vehicles / plant	Load / construction materials falling during lift could cause property damages 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 • Safe Working Procedures													
		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 damages to plant or vehicles and serious injuries or fatalities.									Slings and chain blocks to be checked prior lifting operations and to 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.	• Issue based risk assessment • Approved method statement • DSTI • Emergency contact numbers													
		Theft of material, equipment, and machinery	Unsafe / uncontrolled lifting could result in load falling that could lead to property damage and serious injuries.									Social facilitators to ensure community are aware of Construction work before Site establishment.														
		Community unrest										Only Competent appointed Contractors or Service Providers will be authorized to work on the site.														

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK									
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR			
			Materials / Load falling could result in property damages. Materials / Load falling on employees could lead to serious injuries and even fatalities. Project Interruption and even delays with cost implications								Dust Control measures to be implemented continuously at the site laydown area, watering the areas and roads on site. All operators must be appointed to operate and inspect the specific plant he is competent in operating, medical fitness and competencies for operators must be valid and available on site. Site Establishment Risk Assessment and Safe working Procedure / Method Statement to be communicated to all workers Construction Manager and Supervisors must ensure continuous monitoring and enforcement of all control measures on site If it is a live site, provide a separate gate or access to the site.											
S5-06	Site Establishment - Site clearing / Grubbing	Dust from plant used to clean and level areas. Poor Visibility Collisions Incompetent operator / not medically fit 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. Accidents causing property damage and Accidents causing serious Injuries or even fatalities. Poor Visibility could cause the operators to collide with surrounding property. Operator not competent or medically fit operating	4	4	3	3	3	3	20	Water Truck to be used to spray working areas in order to suppress dust. Speed limit to be adhered to at all times while clearing the site. Supervision on a continues basis with appointed flag persons assisting the operator while moving on site. Workers to stand clear from moving machinery when clearing and grubbing takes place. Only competent operators with valid competency to be appointed with a valid Occupational Health Medical (Annexure 3) will be allowed to operate mobile plant. Pre-start inspections to be conducted, records to be kept in safety file.	- Operators' Competency - Roadworthy Certificates - Driver's License - PDP - Appointment letters - SOP/SWP - Issue based Risk Assessment - Medical Certificate of Fitness - Checklist - DSTI's	4	4	2	2	2	2	2	16		

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK										
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR				
			plant could cause serious accidents leading to property damage and even fatalities. Operating plant that is unsafe or not roadworthy could cause accidents that may result in serious disabling injuries or even fatalities Colliding with property or other plant or vehicles will result in financial losses and delays in production								All operators must be trained in the safe working/operating procedures and the issue-based Risk Assessment Only construction vehicles and mobile plant that are roadworthy (records must be available) may be used for construction activities and for transporting materials etc. 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 or surrounding services Incorrect Location of Services Environmental contamination Spillages from toilet waste due to poor plumbing or incorrect installation would result in environmental pollution									All electrical installations to be conducted by a competent appointed person and COC's to be obtained when necessary. Power tools to be inspected by a competent person, pre-check inspections to be conducted, power tools to be recorded on inspection register. Drawings of underground services must be requested to identify location of services before commencing with works. Competent Plumbers conducting plumbing activities must ensure all fittings and plumbing installations are secured. Plumbing Contractor to issue CoC / CoA once installations are done	• COC • Competencies / Registration • Underground services report / drawings • SOP/SWP • Issue Based Risk Assessment • DSTI' s • CoC/CoA • Medical Certificate of Fitness	3	3	2	2	2	2	14			

ACTIVITY (Work to be performed)	POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK						
			I	C	D	E	P	F	R			I	C	D	E	P	F	RR
S5-08	Excavation Works - Excavating by hand									Employees manually excavating and making contact with underground services could cause disruptions in services in surrounding areas. Damage to Property	Drawings must be utilized to identify existing services. All Excavation works must be supervised by a competent person appointed.							
										Employees manually excavating and making contact with underground services could lead to employee being electrocuted.	Employees need to be trained on the ergonomics safe working procedure and Risk Assessment.							
		Damages to underground services								Employees need to take regular breaks to prevent strain on their backs.	- Checklists - Issue Based Risk Assessment							
		Poor ergonomics used.								All hand tools must be inspected, and the findings recorded in the safety file. Damaged tools must be removed from site.	- SOP/SWP - Method Statement							
		Unsafe damaged hand tools used.	4	4	3	3	3	4	21	Employees need to take regular breaks when working in the sun to prevent sunburn. Employees need to drink enough water to stay hydrated.	- Toolbox talks - DSTI's - PTO	3	4	2	2	3	3	17
		Exposure to Heat and Sun								Employees need to drink enough water to stay hydrated.	Underground services drawings							
		Dust generated from picks and shovels used when excavated								Employees manually excavating must be issued with the required PPE.	Medical Certificate of Fitness							
		Excavation Collapses								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 illness such as hypersensitivity pneumonitis to the	Water truck to be used daily or as per issue-based risk assessment to spray all roads with water to suppress the dust							

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			I	C	D	E	P	F	R			I	C	D	E	P	F	RR
S5-09		exposed employees excavating																
		Excavation collapsing could result in employees excavating to be trapped by collapsed walls leading to serious injuries even fatalities																
S5-09	Excavation Works - Excavating by Machinery / Plant such as TLB's, Excavators, Ditch witch	Workers standing / walking or working near mobile plant operations.									Traffic control to be managed to prevent collision of mobile plant as well as collision with personnel. Appointed Flag person to control movement of plant within areas.							
		Operator incompetent and not appointed.									Only competent / Appointed operators authorized to operate machinery (must have valid Competency, medical and PDP) will be allowed to operate mobile plant.							
		Unsafe / damages Mobile Plant / machinery used to excavate.																
		Mobile plant / machinery operating near unprotected edge of an open trench / excavation.									Machinery must be inspected before use, findings to be recorded on a checklist, any deviations must be recorded and reported to a supervisor. Service / maintenance schedule / history must be available for the specific machinery.							
		Operator intoxicated.	5	5	4	3	3	3	23		All operators must be breathalyzed daily to test if they are intoxicated.							
		Unsuitable ground conditions for excavation																
		Dust generation									Before excavation work begins the stability of the ground must be evaluated by a competent person appointed (Excavation Supervisor).							
		Excessive noise generation (especially during rock breaking)									Dust suppression methods to be used when required such as water truck spraying area							
		Open Excavations left open or unattended.									Operators must be issued with the required PPE such as dust masks, earplugs if required.							
		Damage to existing services during excavations									Scanning devices to be used to identify underground services prior excavation works,							

[illegible]

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK							
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR	
S5-10	Lifting operations (Loading and offloading of materials) - Manual handling / loading and offloading (Ergonomics)		Employees manual handling materials / equipment exceeding 25kg per person could cause minor back strains and even long-term back injury.								Manual handling / lifting Safe work Procedure and Risk Assessment to be communicated to all workers on site. (Keep proof of communication in safety file) Workers assisting each other to lift must communicate with each other to ensure safe lifting and lowering of items. Before offloading or handling any materials, equipment or tools, ensure walkways are clear and free from tripping hazards. Workers to assist each other if intended load to be lifted exceeds 25kg (per person). Workers / Supervisors to ensure materials, equipment and tools are secure when offloading. When manual lifting the correct procedure must be used, workers to lift loads using their legs and not their back. Employees manually lifting equipment, materials must be issued with the required PPE such as gloves, hardhat, safety shoes, overalls	- Ergonomics Risk Assessment - SOP/SWP - Toolbox talks - DSTI's								
		Employees lifting heavy uncontrolled materials.																		
		Employees not trained in safe manual lifting procedures.	4	3	3	1	4	5	20	3			2	2	1	3	4	15		
		Materials / equipment falling.																		
		Walkways not clear of tripping hazards.																		
		Workers tripping over hazards when moving with load could cause load to fall and employees to fall over resulting in bodily injuries																		
S5-11	Lifting operations (Loading and offloading of materials) - Mobile Crane / Tower Crane and or truck crane lifting operations	Operating of unsafe / Defective mobile plant	Operating of defective lifting plant could result in excessive carbon emissions, oil leaks that could result in environmental contamination.								Mobile Plant must be inspected before use by appointed person, all deviations must be recorded on the checklist and reported to the Construction manager. Service records must be available. Only operators that have been appointed with a valid competency and medical certificate to operate plant. No lifting or crane operation during strong winds, thunderstorms or when it is raining.	- Safe Workload Certificate or Certificate of Compliance for Lifting equipment - Traffic Management Plan - Lifting Plan - Appointment letters - Competencies – Operators, truck driver, flagperson, riggers - Pre-lift checklists - Safe Working Procedures								
		Incompetent Operator or not medically fit operating lifting machinery																		
		Severe weather conditions such as strong winds, rain and thunderstorms	5	4	4	3	3	3	22	4			4	3	2	2	2	17		
		Operations near overhead powerlines																		

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK								
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR		
S5-12		Visitors / employees or members from public entering the lift zone	Operator with poor vision or hearing could result in the unsafe movement of a load resulting in load striking surrounding infrastructure. Strong winds can cause load to swing uncontrollable placing strain on lifting tackle and the stability of the lifting plant, this may cause lifting boom to fail or lifting tackle to break and even lifting plant to fall over. Striking of overhead power lines could result in electrocution of operator and or rigger. 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. Unauthorized members of public could be struck by moving load resulting in serious injuries								Safe Working Procedure and Risk Assessment for working near powerline must be communicated to all relevant parties. All lifting operations must be accompanied by an appointed with valid competency rigger. Guide ropes must be used for all lifting operations. Lifting area must be closed off to prevent other workers or members of public to enter this area. No other works may take place within the lift zone. Warning signages must be posted at this area. Visitors and members of public entering the site must do site induction to inform them of all risk activities of the day. Flag person / Rigger to guide the operator to ensure safe movement of load Lifting plan to be drafted, to identify hazards and risks, locations of lift, lift capacity of lifting equipment or machinery	• Issue based risk assessment • Approved method statement • DSTI's									
	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 Rigging done by incompetent person or object not correctly	Using of unsafe damaged lifting tackle could result in load to fall when tackle breaks or snaps. Causing major property damages and	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.	• Valid SWL / CoC • Checklist • Rigger Competency • Rigger appointment • SOP/SWP • Issue-based risk	3	2	2	2	2	2	13		

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				I	C	D	E	P	F	R			I	C	D	E	P	F	RR						
S5-13		hooked	financial cost to the company Incorrect rigging could cause load to fall when lifting, lifting tackle to break resulting in serious injuries, possible fatalities, and property damages								CoC/SWL must be available for all lifting gear and its components. Rigging must only be done by a competent person appointed for the works. Safe Working Procedures and Risk Assessments to be communicated to all relevant workers	assessment • DSTI's													
	Construction vehicles and mobile Plant Operations – TLB, Excavators, Bobcats, Telehandlers, MEWP's, Trucks, Site vehicles	Defective / unsafe Construction vehicles and mobile Plant used, or vehicles used that are not roadworthy. Speeding onsite, near the construction site and/or within restricted areas. Operators and drivers untrained / not skilled or not in position of the required license to drive. Construction Vehicles / mobile plant left unattended. Operators and drivers intoxicated or under the influence of Alcohol, Marijuana (Cannabis) or other drugs. Failure to inspect vehicles	The operation of unsafe / defective vehicles or plant could result in financial cost and accidents causing damages to property and serious injuries with a possibility of fatalities. Speeding onsite could result in running over employees or members of the public causing serious injuries and even fatalities. Incompetent operators could result in uncontrolled driving causing multiple accidents. Unattended vehicle or plant could result in theft leading to financial costs. Intoxicated operators could result in uncontrolled driving causing multiple accidents, injuries and even multiple fatalities.	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. Employees to be transported to and from work in a safe manner, never to be carried at the back of bakkies and trucks. 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. Random alcohol and drug tests to be introduced and maintained. 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,	• Maintenance / service records • Driver's License • PDP • Appointment letters • Valid Competency • Medical Fitness to work • Signages • Breathalyzer records • Checklists	4	4	3	2	2	3	18						

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S5-14			Unable to identify unsafe vehicles or plant could cause vehicles or plant to fail / breakdown resulting in loss of production/time								the transmission in neutral and the motor switched off and the ignition key removed and stored safely.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

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			I	C	D	E	P	F	R			I	C	D	E	P	F	RR							
	Uncontrolled Sparks, open flames or hot metals causing fire.	damaged or unsafe or does not have the required guards in place could lead to an accident when cutting or grinding									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.	• Appointment letter • DSTI's													
	Incorrect storage of Gas Cylinders	resulting in injuries to bodily parts.									All equipment used for Hot works must be inspected before use, all findings to be recorded on a checklist and any deviation must be recorded and reported to a supervisor, all guards must be in place and correct blades/ discs or drill bits to be used.														
	Operators not wearing 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 screens and no warning signages displayed within this area.	Uncontrolled sparks could cause a fire resulting in property damages and harm to the environment.											If conducting hot works near flammable materials or the bush, spark containment must be used, for example fire blankets, 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											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	resulting in serious damages to property and resulting in multiple fatalities.											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												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.												
	Flammable and explosive chemicals stored near hot work area.	Conducting hot works without the required PPE could cause injuries to bodily part or face.											Hot work will not be allowed in wet conditions, electrical cables must be made safe and free/away from water sources.												
		No fire prevention controls could cause an uncontrolled fire resulting in damages to property (including neighboring property) and serious harm to the environment.											All cylinders used onsite must be fitted with the correct fittings and clamps when												

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S5-15			Hot work area not controlled / closed off or no welding screens could cause injuries to unauthorized employees or members of the public. Operating machinery without the required fittings / attachments or components could cause the machinery to break, resulting in injuries to the operator. Overhead hot work activities could cause harm / injuries to employees below or cause a fire resulting in property damage No fire fighter or firefighting equipment on site could cause an uncontrolled fire resulting in damage to property and harm to the environment Sparks from hot work activities could cause fire or even explosions at flammable storage area resulting in serious property damage and even fatalities								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) All workers conducting Hot work activities must be trained on the safe working procedures and issue-based risk assessments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

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			I	C	D	E	P	F	R			I	C	D	E	P	F	RR
	Employees not trained in erecting and dismantling of scaffold.	on employees below resulting in serious head or bodily injuries.								Scaffold must be inspected by a competent person (valid Competency) whom has been appointed every time before use.	• SOP/SWP • Checklists • Appointment letter – Scaffold Erectors, Scaffold Inspectors, Scaffold Supervisor							
	Erecting scaffold on uneven or unstable ground	Scaffold collapse could also cause scaffold erectors to fall from height resulting in serious injuries or even a fatality.								Scaffold must be inspected before use, findings must be recorded on a checklist	• Competencies • Work at Height training certificate • Medical fitness to work at height							
	Scaffold materials falling while erecting or dismantling.									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.	• SWL / CoC for fall protection equipment • Fall Protection Plan • DSTI's							
	Unsafe stacking and storage of scaffold materials	Incompetent scaffold erectors could cause scaffold to be erected								No Scaffold works allowed in inclement weather or near overhead powerlines. Weather conditions must be monitored by Health and Safety resource and Construction Manager								
	Construction materials or tools falling from scaffold.	unsafe resulting in collapse, scaffold materials falling and scaffold erectors falling from height resulting in serious injuries or even fatalities.																
	No Safe access to platform																	
	Scaffold erected near overhead powerlines.									All employees working from Scaffold must be provided with the correct Safety Harnesses, they must be fully hooked at all times when working from scaffold								
	Working in inclement weather such as strong winds, rain and thunderstorms	Erecting scaffold on uneven surfaces could cause scaffold to fall over, resulting in property damage.								Ground must be inspected for stability before scaffold can be erected. If ground is stable scaffold can be erected, base jacks must be used to level the scaffold.								
	No Signages available to indicate scaffold is safe or unsafe to use.	Unsafe stacking of scaffold components could cause pinch point injuries when stacked materials fall over.								All safety harnesses must be inspected before use, all findings must be recorded on a checklist, and any deviations must be recorded and reported to supervisor. COC for harness must be available in safety file.								
	Employees falling from scaffold.																	
	Scaffold collapsing																	
	Fall Protection Equipment not available or damaged.	Tools, equipment or materials falling from height could fall on employees below the scaffold resulting in serious head or bodily injuries.								All scaffold materials must be stacked neatly in a safe manner in a demarcated storage area								
	Employees working at height not medically fit to work at heights									Employees must be trained on the Issue Based Risk Assessment, Safe Work Procedure and the Fall Protection Plan								
		Scaffold making contact with overhead																

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers , Policies, Procedure)	RESIDUAL RISK							
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR	
			powerlines could cause employees to be electrocuted / shocked that could result in serious disabling injuries or even fatalities. Working on scaffold during inclement weather could cause employees to slip and fall due to slippery surfaces resulting in serious injuries or even fatalities. Working at height during thunderstorm could result in employees been struck by lightning. 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. Employees not medically fit to work at height could cause employee to experience blood pressure issues that could result in the employee fainting/collapsing. Use of unsafe or damaged fall protection equipment could cause employees to fall resulting in serious									Workers must be trained in the usage of safety harnesses and working at height. (Proof of competency must be available) All workers working on scaffold must be medically fit (proof of valid medical must be available in the form of annexure 3. Medical must include fit for work at height.								

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK							
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR	
S5-16	Work at Height activities – Working on edge of building or near openings		disabling injuries or even a fatality																	
		Construction materials and tools falling from edge.	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.	• Scope specific Fall Protection Plan • SOP/SWP • Issue-based risk assessment • Checklists • Signages • Work at height competency certificate • Medical fitness to work at height • Fall Protection Plan	4	4	2	2	2	2	16	
		Employees, Visitors or Management falling from Edge or into opening.	Employee, Visitors or Management falling from Edge or into opening could result in a fatality or serious disabling injuries.								Edge Protection (Solid) to be installed and inspected by competent person (No Barricading net)									
		No Edge Protection available									Warning Signages to be posted to inform public and employees regarding the open edges									
			All construction materials, tools and equipment to be stacked at least 1.5m-2m away from an open edge																	
S5-17	Work at Height activities – Use of Trestles to work from	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)									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.	• SANS1854:2023 • SOP/SWP • DSTI's • Checklist • Signages • Work at Height competency certificate • Medical Fitness to work • Issue-based Risk Assessment • Fall Protection Plan	3	2	3	2	3	3	16	
		Trestle platform not secured.																		
		Trestle platform damaged / bent or unsafe to use.	Trestle used not fully boarded could cause employees working from trestle to fall due to the small space to work from.	4	3	4	2	4	4	21	Employees must be trained on the Safe Working Procedures and Issue based Risk Assessment for trestle works									
		Employees working from fully extended Trestle base.									No tools or construction materials to be left unattended on the trestle									
		Workers and tools falling from trestle platform.																		
		Employee working on trestle not medically fit to work at height	Trestle platform / boards not secured could cause employees or materials to fall from trestle when									All trestles may only be erected on level surfaces, bricks are not allowed to level the trestles. Baseplate with jack or solid wood								

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers , Policies, Procedure)	RESIDUAL RISK						
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR
			moving or conducting activities Damaged or bent platform could cause employees, tools or materials to fall Employees working from fully extended trestle platform could cause trestle platform to fall over Employees falling from trestle could cause serious injuries or even disabling injuries								slab to be used. Trestles must be erected as per SANS standards All trestles' activities must be conducted under supervision								
S5-18	Work at Height activities – Using ladder to work from or to use for access	Unsafe or damaged ladders used such as Self-made or wooden ladders. Incorrect ladders used for specific activities. Employee falling from ladder. Tools and equipment falling from ladder. Ladder unstable or surface uneven Ladder used is not secured. Employee working on ladder not medically fit to work at height	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 Incorrect ladders used when accessing a certain area or to work from could cause ladder to fall over Tools and equipment falling from ladder could cause head or body injuries to employees below. Tools and Equipment falling from ladders could result in property damages or damages to tools and equipment	4	3	3	2	4	4	20	No Self-made ladders to be used All ladders to be inspected before use. Findings to be recorded on a checklist. Employees working from ladders must be trained on the Issue Based Risk Assessment and Safe working procedure If ladder cannot be secured when working from it, it must be held in position by an employee 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 to be used on a secure / stable surface. If work activities are required from ladder for a certain amount of time a scaffold must be used to conduct these activities	• SOP/SWP • Issue-based Risk Assessment • Checklist • DSTI's • Toolbox talks • Medical fitness to work • Fall Protection Plan	3	2	2	2	3	3	15

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK							
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR	
			resulting in financial costs. Employee working from unstable / unsecured ladder could cause ladder to fall over Employee falling from ladder could result in serious injuries and even disabling injuries																	
S5-19	Work at Height activities – General Work at heights (Any fall risk position)	Employees not trained to work at height. Employees not medically fit to work at height. Work at Height activities in inclement weather such as strong winds, rain and thunderstorms Unsafe or damaged fall protection equipment used. Unsafe Fall Prevention equipment used	Employees who are not competent to work at height could result in the employee being unable to identify hazards associated with WAH activities, actions to be taken to prevent incidents. Employees not medically fit could cause drowsiness, dizziness or even blurred vision that could result in the employee collapsing. 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. Use of unsafe or damaged fall protection or fall prevention equipment could cause it	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. 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. No work at height activities to commence in inclement weather. Works must be stopped until declared safe. 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.	- Fall Protection Plan - Work at Height Rescue Plan - SOP/SWP - Work at Height Competency certificate - Medical fitness to work - Issue-based Risk Assessment - DSTI's - Checklist - Signages - SWL/COC for fall protection equipment	4	4	3	2	3	3	19	

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers , Policies, Procedure)	RESIDUAL RISK						
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR
			to break resulting in employee falling from heights Employee falling from height could result in serious disabling injuries or even fatality																
S5-20	Hazardous Chemical Agents – Handling and storage of HCA and flammables materials		Unsafe stacking, handling or transporting of chemicals could cause stack to fall over resulting in spillages.								The principal contractor to ensure that: ➤ 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. ➤ Flammables stored on a construction site are stored in a well-ventilated, reasonably 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. ➤ Containers (including empty containers) to be kept closed to prevent fumes/vapors from escaping and accumulating in low lying areas. All flammable materials / containers must be clearly marked/labelled All employees must be trained on Risk Assessments, Safe working Procedures and MSDS's/SDS's on the HCA used on site. Employees need to be issued with the task specific PPE to handle and use HCA. 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.	- Gas test results - SOP/SWP - Issue-based Risk Assessment - MSDS/SDS - Appointment letter - Signages - Checklists - PrDP"D" Certificate							
		Improper storage of chemicals, transportation, and handling	Spilled Chemicals could result in soil contamination and loss of product that result in financial costs.																
		Spilled chemical substances.	Ingesting, inhaling or Eye / skin contact with HCS.																
		Employees not trained to work with or handle HCA.	Ingesting, inhaling or eye / skin contact could cause nausea, dizziness, skin irritation or even short-term vision impairment.																
		Employees not issued with specific PPE to work with and handle HCA.	Employees not trained in HCA could result in serious injuries or harm to health.	3	4	4	4	3	3	21			2	3	3	3	2	2	15
		Fire or Explosion caused by a source of ignition.	Employees not issued with the correct PPE could cause employees being exposed to skin contact, fume inhalation resulting in harm to health.																
		Lack of warning signages at HCA store	Fire / spark or any source of ignition near HCA could cause a fire																
		Unlabeled Containers																	

ACTIVITY (Work to be performed)	POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK						
			I	C	D	E	P	F	R			I	C	D	E	P	F	RR
S5-21										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 to 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								
	Working near overhead powerline – Conducting construction activities near overhead powerlines	Sagging KV line Roof inclining near the KV line Scaffolding erected close to the KV Line Untrained employees, temporary workers, or local laborer's (general workers) working near the KV line. Construction Vehicles or plant operations near overhead powerlines								Employees unable to identify overhead powerlines near work activities could cause employees or equipment to make contact with high voltage powerlines resulting in severe injuries such as burns and shock and could also result in electrocution of employees Mobile Plant making contact with high voltage powerlines could cause operators to be electrocuted if cab is not fitted with insulators.								
			5	5	4	3	3	3	23	Ensure Mobile Plant cab is fitted with insulators to prevent the operator to be electrocuted. If mobile plant has made contact with an overhead powerline the operator should reverse away from the contact area if this is not possible, the operator should remain seated until the line is de-energized. Only approved authority employees to work near overhead power line. Allowed distance to work near overhead powerline to be determined by relevant authorities including Eskom thereafter employees to be made aware of the hazards and risks associated	- SOP/SWP - Issue-based Risk Assessment - Competencies - DSTI's - PTO's	4	4	3	2	2	2	17

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK											
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR					
											No scaffolding to be erected close to the overhead powerline No Construction vehicles to be operated within 10m of overhead powerlines, unless declared safe by Competent Authority Safe working Procedure and Risk Assessment must be communicated to those employees exposed to working near overhead powerlines Trained and Competent Spotters / Flag person must be present at ALL times when plant is operational near overhead powerlines.													
S5-22	Use of portable electrical tools and hand tools (Including use of Portable lights) –	Unsafe, sub-standard and/or defective equipment used. Untrained employees using portable electrical tools. Operating electrical tools near flammable materials Unsafe stacking and storage of all electrical tools and hand tools	The use of unsafe or damaged hand tools could cause hand injuries such as cuts. Unprotected cables could result in employee being shocked Untrained employees operating power tools could cause employees to be unable to control the equipment resulting in serious bodily injuries and even disability Unsafe stacking of portable electrical tools could result in tools falling and breaking, this could lead to financial losses to buy new equipment and delays if being unable to procure new tools	4	3	3	2	4	4	20	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. The use, inspection and maintenance of portable electrical tools and equipment must be governed by the following: - Regular inspections by a competent person appointed in writing. - Inspection results must be recorded in a register. - Only competent authorized persons are allowed to use portable electrical tools and equipment; and - The correct protective equipment is worn/used whilst operating portable electrical tools and equipment. These equipment – - Must be maintained in good condition at all times - The main source should incorporate an earth leakage protection device or receive power through a double wound transformer	• Checklists • Issue-based Risk Assessment • SOP/SWP • Competency • Appointment letter • Medical fitness to work • DSTI's • Signages	3	2	2	2	3	3	15					

ACTIVITY (Work to be performed)	POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK						
			I	C	D	E	P	F	R			I	C	D	E	P	F	RR
										or be double insulated and clearly marked as such; and - All equipment must be fitted with a switch to allow for safe and easy starting and stopping. The following requirements to be applied with when portable lights are utilized - Must be fitted with a robust non-hygroscopic non-conducting handle. - Metal parts which may become live must be protected against contact. - The lamp must be protected by a strong guard. - The cable lead-in must withstand rough handling. - A register be kept for each piece of equipment with findings of regular inspections undertaken to evaluate the condition of these lights. - Inspections must be undertaken that concentrate on at least the plug, cord, switch, guard and any obvious faults; and - When used in wet/damp/metal container conditions, it must be protected. 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 Gas cylinders when in use to be safely stored and to be secured, when not in use, in a cool place, upright position and locked storeroom. 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. Firefighting equipment must readily be available at the designated area								

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK						
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR
S5-23																			
	Poor illumination during construction activities at night	Poor illumination at night / Poor Visibility	Conducting work activities at night could result in serious bodily injuries due to being unable to see hazards associated with the work activities.																
		Unauthorized Work at Night	Poor visibility could cause Construction Plant and equipment accidents resulting in financial losses.	5	5	3	3	3	3	21									
		Poor Quality work	Unauthorized work at night could result in poor quality standards resulting in loss of production and financial costs																
S5-24	Lack of communication between various parties involved.	Instructions not adequately followed through	Unable to identify instructions or delays could lead to loss of production																
		Information not transmitted as supposed to	Information not transmitted to the relevant parties could result in loss of information	1	2	2	2	4	4	15									
		Schedule slippage due to rework																	
S5-25	Temporary structure (Temporary works) – Formwork	Inadequate designs	Poor Temporary designs could cause structures to collapse resulting in multiple fatalities																
		Incompetent formwork erectors and inspectors	Hand and finger injuries from being pinched when installing props	5	5	4	3	3	4	24									
		Temporary structure collapse due to poor design	Employees falling from heights could result in serious bodily injuries,																
		Unsafe access to elevated areas																	

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK							
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR	
		Poor stacking and storage of Form work materials	disability and even fatality								during and after the placement of concrete. 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.	• Issue-based Risk Assessment • Approved drawings for temporary works								
		Manual handling	Collapse of structures could result in financial losses due to loss of production, damages to property and surrounding facilities								All temporary works to be carried out as per Construction regulations 12.									
		Pinch points									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.									
		Work at Fall Positions									No load to be imposed onto a structure that the structure is not designed to carry.									
		Medically unfit for work at height	Employees not medically fit to work at height could result in fainting, dizziness or even a seizure that could cause serious bodily injuries, disability or even a fatality if employee fell from height								Temporary work to be erected in accordance with the structural design drawings for such temporary work and if there is any uncertainty, the designer must be consulted before proceeding with the erection/use of the temporary work									
											The foundation or base upon which the temporary work is erected to be able to bear the weight and keep the structure stable.									
											Employees erecting temporary work to be trained in the safe work procedures for the erection, moving and dismantling of the temporary work.									
											Safe access and emergency escape to be provided for employees.									
											Only employees trained to work at height with a valid medical fitness to work allowed to erect temporary works									
S5-26	Steel Work – Steelfixing	Manual handling and lifting of rebar at ground level and to elevated level.	Manual lifting and handling of heavy steel reinforcing could cause	3	2	2	2	3	3	15	Employees to be provided with proper walkways during steel erection and never to walk on erected rebar	• SOP/SWP • Issue-based Risk Assessment	2	2	2	1	2	3	12	

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK							
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR	
		Transportation of rebar on trailers	employees to lift with poor ergonomics resulting in back strains								Workers to be supplied with the required PPE for Steel fixing and cutting of steel rebar.	• Checklist • PPE issue register • Ergonomics training • Toolbox talks • DSTI's								
		Sharp & pointed objects	Unprotected edges of steel reinforcing could cause cuts to the body of employees when walking past or handling the steel								Truck drivers to ensure loads are sufficiently secured before transporting materials to site									
		Cutting of Rebar - causing sparks and fire									Workers to ensure to use correct lifting procedure when lifting steel rebar. SWP for manual handling / ergonomics to be communicated to workers.									
		Use of unsafe or damaged pliers	Handling of steel rods or reinforcing when lifting and moving materials could cause pinch points leading to injuries to hands and fingers								Cutting of Steel rebar to be conducted in a designated safe hot work area.									
		Handling of steel rods or reinforcing without the required hand protection	The use of unsafe or damaged handtools could result in hand and finger injuries								All tools and equipment to be used must be inspected and registered on a checklist, deviations must be recorded and reported to appointed supervisor.									
			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																	
S5-27	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	4	3	3	2	2	2	16	Client to ensure that contractor is well aware of current scope definition as well as the requirements stipulated in the tender specifications.	• Approved Programme of works • Issue-based Risk Assessment • Basic Conditions of Employment Act	3	2	2	1	2	2	12	
		Schedule and cost over run on project	Lack of resources could cause employees to overwork that would make them tired								Contractor to ensure compliance on set specifications from client									
											Contractor to ensure workers comply to working hours guided by the Basic Conditions of Employment Act									

S34-BRA-0001-00
Baseline Risk Assessment

ACTIVITY (Work to be performed)		POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK											
				I	C	D	E	P	F	R			I	C	D	E	P	F	RR					
											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);													
S5-29	Emergency Preparedness (Fire Prevention, First aid)	Inadequate emergency planning Inadequate first aid. Inadequate fire prevention and protection measures Incompetent First Aider or Fire fighters appointed	Emergency services unable to respond to emergencies could cause serious injuries to lead to disabling injuries or even fatalities								Emergency Preparedness The principal contractor to appoint a competent person to act as emergency controller and/or coordinator.													
			No first aid equipment could cause infections to minor injuries such as cuts if not cleaned immediately. This could increase the severity of any injury									The principal contractor to conduct an emergency identification exercise and establish what emergencies (such as health, safety, environmental, third party or community related actions etcetera) could possibly develop. Contractor must then develop detailed contingency plans and emergency procedures, considering any emergency plan that the project/site may have in place.	• Emergency Plan / Preparedness Plan • Emergency Evacuation Procedure • Checklists • Competencies / training records											
			Incompetent First Aider could cause injured employees' severity of an injury to increase when applying incorrect treatment	5	5	3	2	3	3	21	The principal contractor and the other contractors must hold regular practice drills of contingency plans and emergency procedures to test them and familiarize employees with them. Emergency evacuation points must be available, and signage displayed	• Appointment letters • Emergency Contact details • Inductions • Communication records • Toolbox talks • Issue-based Risk Assessment	4	3	2	2	2	2	15					
			Incompetent Fire Fighter could cause fires on site to become uncontrolled resulting in serious injuries, or even multiple fatalities. This will also have an impact on property damaged.								First - Aid The principal contractor to provide first-aid equipment and has qualified first-aider(s) on site as required by General Safety Regulation 3 of the OHSACT.													
			No firefighting equipment available on site could cause a fire to become uncontrolled resulting in								The contingency plan of the principal contractor to include arrangements for the speedily and timeously transportation of injured and/or ill person(s) to a medical													

ACTIVITY (Work to be performed)	POTENTIAL HAZARD (Injury / Damage / Loss)	POSSIBLE RISK (Type injury/damage/loss)	RISK EVALUATION							PREVENTATIVE MEASURES	CONTROLS (Registers, Policies, Procedure)	RESIDUAL RISK																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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		serious injuries, property damage or even multiple fatalities								facility or getting emergency medical support to person(s) who may require it. The principal contractor has firm arrangements with his contractors in place regarding the responsibility of these contractors' first-aid arrangements as well as treatment of injured and/or ill employees. Fire Prevention and Protection The principal contractor to ensure that a) Sufficient and suitable storage of flammables is provided. b) employees are trained in the use of the 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. c) A sufficient number of employees are appointed and trained to act as an emergency team to deal with fires and other emergencies. d) Employees are informed regarding emergency evacuation procedures and escape routes this must be included in the induction of all workers and visitors. e) Emergency escape routes are always kept clear and clearly marked. 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. 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. All emergency procedures / plans must be communicated to all employees onsite																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

S5-30	Site security and public protection	Public gaining access to the construction site.	Unauthorized members or children entering the construction site could result in serious injuries and even fatality if children are unattended.	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.	- Site Rules posted - Signages	3	2	3	2	2	3	15
		Theft	Unsecured Construction site could cause materials, equipment and machinery to be stolen or damaged during strikes resulting in time delays and financial losses								Security should be available due to valuable materials and equipment that might be stored on site. Security will also be responsible for monitoring site access by unauthorized people / children								
S5-31	Ablution and welfare facilities	Inadequate provision of toilet facilities for each sex	Insufficient toilet facilities result in overuse of existing facilities leading to unhygienic conditions that could cause disease transmission to all employees on site.								Principal Contractor to provide toilets for each sex as required in terms of the National Building Regulations and Construction Regulation 30.	- Checklists - Waste Disposal Certificates - Issue-based Risk Assessment - Signages	2	2	2	2	2	3	13
		No hand washing stations available	Not providing toilet facilities for each sex is a legal offence and could result in DoEL to issue sanctions, fines or even site closure	3	3	3	2	3	3	18	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)	Poor designed or provided ergonomically toilet facilities could cause injuries to employees such as trip and falls resulting in bodily injuries								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.								
		No sheltered eating area with tables and chairs provided	Drinking of unsafe water could lead to various health problems, including diarrheal								Daily inspections to be done to ensure toilets are cleaned on a daily								
		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								
		No safe to drink water available																	

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S/N	Activity	Hazard	Consequence	Likelihood					Severity	Risk Rating	Control Measures	Residual Risk						
				5	4	3	2	1				4	3	2	1			
			Poor planning for concrete trucks not to dump concrete in time could result in delays of production and financial losses if concrete could not be used due to hardening															
S5-34	Electrical Installations – New Infrastructure, replacing or installing of temporary electrical supply	Unsafe electrical installations and open wires could result in employees and other persons being electrocuted with subsequent injuries or even fatalities as well as asset damage due to fire Illegal connections Substandard equipment Poor cable management Incompetent Installer Unauthorized Access to DB's Fires and Explosions Improper grounding Contact with live open wires Overloads and short circuits Overloading of electrical installations could cause wires to generate heat resulting in fires. This can also cause the	Any electrical work undertaken as part of the project, including the installation of temporary electricity for construction use shall be in accordance with Construction Regulation 24 and the Electrical Installation Regulations The principal contractor to ensure that: - Existing services are to be located and clearly marked before construction commences and during the progress thereof. - Electrical installations and -machinery are sufficiently robust to withstand normal working conditions on site. - Temporary electrical installations must be inspected at least once per week by a competent person and a record of the inspections kept on the occupational health and safety file. Electrician with a Wireman's License must install, commission and inspect all electrical installations. Employee to be authorized, competent and appointed. COC must be available for electrical connections done. All DB's to be locked. Key register to be established and proof of key use to be evident. Lock out procedure to be communicated to all employees exposed. Issue -based Risk assessments and method statement to be communicated to the relevant employees conducting or assisting with installations	5	5	4	3	3	4	24	• Issue-based Risk Assessment • SOP/SWP • Method Statement • Wireman's License • Competencies • Appointment letter • Medical Fitness to work • DSTI's • Checklists • LOTO procedures	4	4	3	2	2	2	17

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S5-35			continues tripping of electrical supply that would result in production delays and financial costs to repair								All electrical components / parts to be used must be SABs approved.									
			Incompetent person conducting electrical installation will have inadequate knowledge of electrical codes, improper installation techniques, and failure to follow safety protocols, this could result in serious injuries even fatalities																	
	Demolition work – Demolishing of existing structures (Infrastructure)	No Competent person appointed to supervise all demolition of building works	Supervision by incompetent person could cause team and supervisor being unable to identify hazard and risks associated with demolition, this could result in serious injuries and even fatalities	5	5	5	4	3	3	25	All Demolition work to be carried out under the supervision of a competent person who has been appointed in writing.	• SOP/SWP • Issue-based Risk Assessment • Method Statement • DSTI's • Checklists • Competencies • Appointment letter • Signages • Toolbox talks • Medical fitness to work • Inductions • Structural engineer to approval/survey to demolish	4	4	3	3	2	2	18	
		Unsafe removal / demolition of walls / structures									A detailed structural engineering survey of the structure to be demolished to be carried out and a method statement on the procedure to be followed in demolishing the structure to be developed by a competent person, before any demolition to be commenced.									
		Dust																		
		Falling debris / bricks / walls	Unsafe removal or breaking of walls or supporting walls could cause building to collapse unplanned, this could result in serious damages to mobile plant, surrounding building and serious injuries to operators or surrounding employees. If employees are crushed or trapped when a wall falls over this could result in fatalities								As demolishing progresses the structural integrity of the structure to be checked at intervals as determined in the method statement by the appointed competent person to prevent any premature or uncontrolled collapse									
		Public entering demolition work area																		
		Incompetent TLB or excavator operator																		
		TLB or excavator used to demolish structure not in good condition									Steps to be taken to ensure that where a structure is being demolished: - precautions are taken to prevent the collapse of the structure when any frame, support or reinforcement is cut or removed. - no employee is required or allowed to work under unsupported overhanging material; and - the stability of an adjacent building must not be compromised.									
		Structural integrity compromised of other existing buildings																		
		Excessive Noise	Excessive exposure to dust can lead to various health problems,																	

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ID	Topic	Hazard	Consequence	Risk Rating							Control Measures	Residual Risk								
				3	5	4	4	3	3	22										
		Uncontrolled Access to heights	heights, confined areas, noise, dust, trip and falls, moving objects and plant etc. 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 Uncontrolled access to heights by members of the public and children could cause individuals to fall from unprotected edges resulting in serious injuries and even fatality 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									- Public bystanders 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. All non-employees entering the site must receive site applicable induction into the hazards and risks and the control measures for these. 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 Safe demarcated walkway to be erected / conducted or displayed for visitors Pedestrian crossings to be conducted and utilized No Construction work near public vehicles. Construction area must be barricaded (No Danger tape) or fenced to prevent Public from entering work area.								
S5-38	Safeguarding of existing structures	Damages to existing services and structures.	Damages to existing structures or services could cause loss of productivity with cost implications	3	5	4	4	3	3	22	Ensure identification of all existing services and structures before commencing with construction activities. Site drawings to be reviewed to identify any services If drawings are not available, request assistance from end-user or property owner to identify potential services	• Drawings • Detailed Scope of works • Risk Assessments • Services survey • Conditional Assessments	3	3	3	3	2	2	16	

S5-39	Construction of overhead pedestrian link bridge and associated structural works	Work at height, structural instability, temporary works and falling objects during bridge construction	Serious injury or fatality, structural failure, damage to property and project delays	5	4	4	2	3	3	21	Ensure construction activities are planned, coordinated and supervised. Identify significant health and safety risks associated with bridge construction and temporary works	- Approved Design documentation - Temporary works design(where applicable) - Construction Regulations 2014	3	3	3	2	2	2	15
S5-40	Lifting and installation of bridge components	Suspended loads, lifting equipment and movement of heavy structural components	Serious injury or fatality, damage to infrastructure, equipment failure and project delays	5	5	4	2	3	3	22	Identify lifting risks during planning and ensure lifting activities are appropriately coordinated and supervised	- Construction Regulations 2014 - Lifting Machinery Regulations - Approved Lift Planning documentation	3	3	3	2	2	2	15
S5-41	Public interface, traffic management and construction adjacent to existing roads/public areas	Interaction between construction activities, pedestrians, road users and operational facilities	Injury to members of the public, vehicle collisions, disruption of operations, damage to property and reputational impact	4	4	4	2	3	3	20	Identify public interface risks during planning and ensure suitable traffic and pedestrian management measures are incorporated into construction activities	- Traffic Management Plan - Site layout plan - Public protection measures - Construction Regulations 2014	3	3	3	2	2	2	15
S5-42	Testing and commissioning of bridge, PV lighting, fire reticulation and associated infrastructure	Energisation of systems, testing of installed infrastructure and commissioning activities	Electrical injury, equipment failure, damage to infrastructures, operational failure and delays to handover	4	4	3	2	3	2	18	Ensure testing and commissioning activities are planned, coordinated and undertaken prior to handover. Confirm compliance with applicable standards before acceptance	- Commissioning Procedures - Test certificates - Certificates of Compliance - Construction Regulations 2014	2	3	2	2	2	2	13
Stage 6 – Project Close-out																			
S6-01	Site Demobilization	Unsafe disconnection of temporary services Improper loading of materials, equipment, offices and storage containers Improper loading of Mobile Plant on to trucks 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 Improper loading of items could cause the load to fall from the truck	4	4	3	3	3	3	20	All disconnections to be done by a competent person appointed for the specific activity. Lifting operations to be conducted by Competent operator, with assistance of a competent rigger to assist with the rigging and loading of items. Risk Assessment and Method Statements must be available and communicated to team conducting the demobilization. Only roadworthy trucks or vehicles to be used for transportation of items removed from site. Driver must have a valid driver's	- SOP/SWP - Issue-based Risk Assessment - Method Statement - DSTI's - Toolbox talks - Checklists - Appointment letter - Competencies / Driver's license / PDP - Medical Fitness to work - SWL/COC for lifting equipment - CoC - Registration (Electrical	4	4	2	2	2	2	16

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ID	Activity	Control Measure	Potential Consequence	Likelihood						Severity	Risk Rating	Mitigation Measures	Residual Risk Rating					
				1	2	3	4	5	6									
S6-03	Construction Activities at Practical Completion, Works Completion and Final Completion		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								materials							
											All bushes and grass must be cut around construction area to ensure a clean site is handed over to end-user							
											All flammable materials must be disposed of or removed from site, may not be left unattended for the end-user							
		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.							
		No Health and Safety Resources on site									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	3	3	3	3	3	3	18	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	• Inductions • SOP/SWP • Issue-based Risk Assessment • Method Statements • Medical Fitness to work. • Appointment letter • Competency • Checklists	2	2	2	2	2	12
		Notification of Construction Works or Construction Work permit expired									Issue-based Risk Assessment for maintenance works must be available and communicated to the team conducting snags							
		Unsafe working practices									All tools and equipment must be inspected, and defects recorded before use.							
S6-04	Consolidated Health and Safety file and Close-out report submitted to DBSA	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.	• Approved Extension of time • Approval for night work or weekend works						
		Unsafe tools and equipment used									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								All works required after hours need approval by project manager, DBSA and client representative							
	Non-Submission of close-out report	Close-Out Report not submitted could result in the project not to be closed out and would	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	• Consolidated Health and Safety file • Close-out Report	1	1	1	1	2	2	8
	Non-Submission or Health and																	

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Risk ID	Risk Category	Risk Description	Impact	Likelihood							Risk Score	Mitigation Measures	Residual Risk Score						
				1	2	3	4	5	6	7									
S6-05	As-built documentation and O&M manuals	Safety file lost	remain open with the end-user. This will lead to cost implications as the end-user will not pay for the final payment certificate. 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.																
		Incomplete project records, inaccurate as-built information and inadequate operational control information	Unsafe operation or maintenance of completed infrastructure, inability to manage future risks, operational failures and contractual disputes	3	4	3	2	2	2	16	Ensure all project documentation, operation and maintenance manuals, test certificates and as-built drawings are reviewed and submitted before proect handover	- Health and Safety file - As-built drawings - Operation & Maintenance Manuals - Commissioning records - Handover documentation	2	2	2	2	2	2	12
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 examination to ensure the employee has not contracted any illnesses or health concerns from working on the project. Records of Exit Medicals must be submitted to DBSA in the copy of the Consolidated Health and Safety file	- Consolidated Health and Safety file - Exit Medicals	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) (*DESIGN AND BUILD CONTRACTOR*)