



Project Health and Safety Specification

In terms of Construction Regulations 2014

Project Client

KOUGA LOCAL MUNICIPALITY

Description of Project Works

**NEW SEWER PUMP STATION IN HANKEY:
PHASE 3**

Project Location

HANKEY EASTERN CAPE

Preparation Date

JUNE 2022 (rev 2)

Project Health and Safety Specification developed by:

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PROJECT HEALTH AND SAFETY SPECIFICATION

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1.0 SPECIFIC PROJECT INFORMATION

1. 1 INTRODUCTION AND DEFINITIONS

THE REQUIREMENTS OF THE CONSTRUCTION REGULATIONS 2014 (AND GUIDANCE NOTES OF 2017) HAVE BEEN IN EFFECT SINCE 7TH AUGUST 2014. THE REGULATIONS PLACE LEGAL DUTIES UPON PRINCIPAL CONTRACTORS AND CONTRACTORS. ALTHOUGH THIS HEALTH AND SAFETY SPECIFICATION INCLUDES MUCH OF THE CONTENT OF THE REGULATIONS, THE CONTRACTOR WILL BE DEEMED TO BE FAMILIAR WITH THE REQUIREMENTS OF THESE REGULATIONS, AND OTHER ASSOCIATED HEALTH AND SAFETY REGULATIONS, AND TO HAVE FACTORED IN ALL THE DUTIES PLACED UPON CONTRACTORS AND PRINCIPAL CONTRACTORS IN THE TENDER. A COPY OF THE REGULATIONS CAN BE VIEWED ON THE DEPARTMENT OF LABOUR'S WEBSITE.

PLEASE NOTE THAT THE TERMS "CONTRACTOR" AND "PRINCIPAL CONTRACTOR" HAVE THE SAME MEANING AS THAT IN THE CONSTRUCTION REGULATIONS AND ARE USED INTERCHANGEABLY IN THIS DOCUMENT, I.E., REFERENCES TO "CONTRACTOR" REFER TO PRINCIPAL CONTRACTOR AND/OR CONTRACTOR AS THE REGULATIONS PERTAIN TO THEIR FUNCTIONS.

This Health and Safety Specification contains clauses that are generally applicable to construction activities, as well as imposing pro-active controls associated with activities that impact on Health and Safety as it relates to work on site. Compliance to the requirements of the Occupational Health and Safety Act 1993 is an additional requirement of this Health and Safety Specification and is part of the Contractor's responsibility. The Client, and/or their agents, will monitor that all Contractors comply with the requirements of such legislation.

ALL REFERENCES TO CLIENT IN THIS HEALTH AND SAFETY SPECIFICATION ALSO REFER TO SAFETY AGENT, WHERE SO APPOINTED.

Definitions (as per the Construction Regulations 2014) applicable to this Health and Safety Specification:

"agent" means a competent person who acts as a representative for a Client;

"angle of repose" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

"bulk mixing plant" means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

"client" means any person for whom construction work is being performed;

"competent person" means a person who has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act;

"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 vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work;

"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;

"construction work permit" means a document issued in terms of regulation 3;

"contractor" means an employer who performs construction work;

Note:

a) Includes organisations and or self-employed person that contracts with a client, principal contractor, or a contractor to carry out construction work.

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications;

"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;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter, or landscape architect;

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimise human well-being and overall system performance;

"excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails, and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines, or similar equipment;

"falsework" means a combined system of formwork and support work;

"formwork" means temporary or permanent shutters used to form wet concrete into elements of a structure, and includes both horizontally and vertically placed shutters;

"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 guard-rails, screens, barricades, anchorages or similar equipment;



"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 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 these Regulations;

"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;

"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

"medical certificate of fitness" means a certificate contemplated in regulation 7(8);

"mobile plant" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"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;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the Client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003;

"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"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;

"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;



"support work" means the temporary structure erected to support the formwork before the casting of a concrete element of a structure.

"suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support;

"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;

"the Act" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

"tunnelling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

Reference should be made to the following documentation in conjunction with this Safety Specification (including existing surveys, drawings, and reports):

Tender documents Drawings

IMPORTANT NOTE:

This Health and Safety Specification has been prepared to comply with the requirements of the Construction Regulations 2014.

1.2 BACKGROUND TO THE HEALTH AND SAFETY SPECIFICATION
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Historically, the Construction Industry has had a poor health and safety record. Due to the complex and potentially dangerous operations being undertaken, there is a high risk of incidents, accidents, and injuries. In many instances poor adherence to the Act and Regulations has resulted in severe consequences for Health and Safety performance. The Client is determined that the highest Health and Safety standards will prevail throughout the Contract and that there will be full commitment from all parties involved.

To achieve this goal the Client has arranged for the preparation of this Health and Safety Specification. The Health and Safety Specification sets out guidelines and minimum levels of awareness and guidance for Health and Safety requirements for the project. Contractual responsibility for adhering to these requirements rests with the Contractors. All employees are encouraged to be pro-active in compliance.

The Client is committed to ensuring the highest Health and Safety standards for all work undertaken within the Contract.

Contractors as employers are fully responsible and accountable for compliance with all Health and Safety requirements.

IMPORTANT NOTE:

Compliance with the Occupational Health and Safety Act and Regulations shall not be limited to this Health and Safety Specification and definitions contained in this document.
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Contractors shall be conversant with the requirements and effects of Health and Safety legislation upon their activities, in particular the Construction Regulations, 2014, and the Occupational Health and Safety Act, 1993, and to have made adequate resource in their tender submission to comply with all legislative requirements.

Failure to comply with the requirements of this Safety Specification will result in severe sanction and the severity of the sanction will depend on the severity of the noncompliance.



The Contractor's personnel will be responsible for the auditing of the implementation of the Health and Safety Specification and maintaining the document control and record systems associated with the Health and Safety Specification. The Client will arrange for Health and Safety audits to be conducted on site on their behalf to monitor health and safety compliance by contractors.

1.3 PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

The purpose of this site-specific Health and Safety Specification is to comply with legal requirements and to provide health and safety information about specific project risks known by the Client, Designer and Safety Agent to be applicable to this project. This document also provides minimum health and safety requirements, standards, and expectations that the contractor must adhere to.

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resource and competence to deal with the matters detailed herein so that all relevant contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons affected by the construction activities. Please note that a detailed OHS bill of quantities must be provided by the contractor on all Construction Work Permit projects. The Bill of Quantities will form part of the Construction Work Permit appellation presented to Department of Labour for approval.

The Health and Safety Specification will be implemented during construction of the works and any construction activity that the Client has control over.

This will also assist in ensuring that all the costs related to the compliance with Occupational Health Act 85 of 1993 and the Construction Regulations 2014, as well as this Health and Safety Specification, are taken into consideration at Tender stage.

No advice, approval of any document required by the Health and Safety Specification such as hazard identification and risk assessment action plans or any other form shall be construed as an acceptance by the Client of any obligation that absolves the Contractor from achieving the required level of performance and compliance with legal requirements.

Further, there is no acceptance of liability by the Client which may result from the Contractor failing to comply with the Health and Safety Specification unless the Client has issued an instruction to any requirement, i.e. the Contractor remains responsible for achieving the required performance levels.

1.4 IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification forms an integral part of the Contract, and Contractors shall make it an integral part of their Contracts with other Contractors and Suppliers. Contractors employed by the Client are to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off site activities relating to the project, in particular in transport activities and project dedicated off site fabrication works.

The Contractor shall enforce the provisions of the Health and Safety Specification amongst all Contractors and suppliers for the project.

The Contractor shall sign the acknowledgment on the last page of this safety specification that he/she has familiarized him/herself with the content of the Health and Safety Specification and shall comply with all obligations in respect thereof.

The successful Contractor will be required to compile a Health and Safety Plan based on the requirements of the Occupational Health Act 85 of 1993 and these Specifications, which will need to be approved by Client (or their appointed safety agent) prior to commencement with construction work.



1.4.1 Client Duties

In terms of the Construction Regulations 2014 the Client (or their Agent, where appointed) has legal duties. Where an Agent (refer to “definitions” section of this document) is appointed in terms of this project, these Health and Safety duties assigned will also apply.

All references to “Client” will apply to their appointed “Safety Agent”, where so appointed, in this Health and Safety Specification.

The Client must:

- Prepare a baseline risk assessment for the construction work
- Prepare a suitable, sufficiently documented, and coherent site specific Health and Safety specification for the intended construction work, based on the baseline risk assessment
- Include the health and safety specification in the tender documents
- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely
- Take reasonable steps to ensure co-operation between all contractors appointed by the Client to enable each of those contractors to comply with the regulations
- Ensure, before work commences, that every principal contractor is registered and in good standing with the compensation fund, or with a licensed compensation insurer as contemplated in the Compensation for Occupational injuries and Diseases Act, 1993 (Act no 130 of 1993)
- Appoint each principal contractor in writing for the project, or part thereof
- Discuss and negotiate with the principal contractor the contents of the principal contractor’s safety plan and thereafter finally approve that plan for implementation
- Ensure that a copy of the principal contractor’s health and safety plan is implemented and maintained
- Ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days
- Ensure that a copy of the health and safety audit report is provided to the principal contractor within 7 days after the audit
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the principal contractor’s health and safety plan for site
- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely
- Ensure that the health and safety file is kept and maintained by the principal contractor.
- Where the Client requires additional work to be performed as a result of a design change or error in construction due to the actions of the Client, the Client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.
- Where more than one principal contractor is appointed, the Client must take reasonable steps to ensure co-operation between all principal contractors and contractors to ensure compliance with the Regulations
- Where the Client has appointed a Safety Agent for the project, their details for this project are contained in the Project Directory section of this health and safety specification.

1.4.2 Designer Duties

It must be noted that the Designer also has Health and Safety duties assigned in terms of the Construction Regulations. Where the contractor fulfils a design function in terms of this project (refer to “definitions” section of this document), these duties will also apply. Please refer to Regulation 6 of the Construction Regulations 2014.

Please note that the designer of temporary works must ensure that:



- all temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- the designs of temporary works are done with close reference to the structural design drawings issued by the contractor, and in the event of any uncertainty consult the contractor;
- all drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- the loads caused by the temporary works and any imposed loads are clearly indicated in the design.



1.5 PROJECT DIRECTORY		
Project Client	Kouga Local Municipality	Tel: 042-200-2200 e-mail: jdutoit@kouga.gov.za
Contact Person	Mr Jacques du Toit	Cell: n/a
Project Manager	For tender purposes only	Tel: 042-200-2200 e-mail: jdutoit@kouga.gov.za
Contact Person	Mr Jacques du Toit	Cell: n/a
Consulting Engineer	J G Afrika	Tel: 041 390 8700 e-mail: SchutteS@jgafrika.com
Contact Person	Stephan Schutte	Cell: 082 888 4474
Construction Safety Agent	Safe Working Practice	Tel: 021 856 4181 e-mail: dawid@safepractice.co.za
Contact Person	Dawid Naude	Cell: 071 686 5436

OTHER PARTIES DIRECTORY	
Department of Labour for submission of Annexure 2: Notification of Construction Work Eastern Cape – Adel Bezuidenhout	Tel: 041 506 5000 e-mail: adel.bezuidenhout@labour.gov.za
Department of Labour 1162134 Govan Mbeki Ave Port Elizabeth	Tel: 041 506 5000 e-mail: adel.bezuidenhout@labour.gov.za



Telecommunications Contractor to refer all queries on location and nature of existing services to the Project Manager / Client, etc. OR Contractor to apply for and refer to wayleave information from service providers for the nature and location of services. Refer all queries Project Manager. Telkom	Tel: 10210
Water Company: Kouga Local Municipality Contact Name: Pieter Felix	Tel: 042 200 2200 e-mail: pfelix@kouga.gov.za Cell: n/a
Electricity: Company: Kouga Local Municipality Contact Name: Theo Madatt	Tel: 042 200 2200 e-mail: tmadatt@kouga.gov.za Cell: n/a
Gas: n/a	
COVID-19 Hotlines National Coronavirus Hotline Provincial Coronavirus Hotline	Tel: 0800 029 999 Tel: 043 707 6300

1.6 PROJECT DETAILS

Description of works:

New Sewer Pump Station in Hankey Phase 3, including:

A - New Sewer Pump Station in Hankey:

- Construct new concrete structure for sewer pump station:
- Wet Sump: 6,6m x 2,3m footprint (approx. 4m deep below NGL)
- Pump House: 8,2 x 6,3 m footprint (approx. 3,2m above NGL)
- 2x Electrical pumps / 1x Diesel pump
- Electrical MCC, Inverter Stand-by power, telemetry, mechanical ventilation & lighting.
- Installation of new Sewage Grinder manhole – approx. 4m deep
- New Sewage Emergency Over Flow Pond with sloped sides – concrete lined: 16m x 20m footprint (approx. 3,8m deep below NGL)
- Security fence and paving around Pump Station site

B – Upgrade Existing Sewer Pump Station in Centerton:

- Construct new concrete structure for sewer pump station:
- Wet Sump: 6,6m x 2,3m footprint (approx. 4m deep below NGL)
- Pump House: 8,2 x 6,3 m footprint (approx. 3,2m above NGL)
- 2x Electrical pumps / 1x Diesel pump
- Electrical MCC, Inverter Stand-by power, telemetry, mechanical ventilation & lighting.



• Installation of new Sewage Grinder manhole – approx. 4m deep • Demolish existing 4m deep sewage MH-sump pump station; • Relocate existing electrical poles & transformer; • Upgrade existing SW Retention Pond into an Emergency Over-Flow Sewage Pond with sloped sides – concrete lined: 800m² footprint (approx. 1,6m deep below NGL) • Security fence and paving around Pump Station site.
Anticipated Construction Duration 8 Months
Provisional Start Date Start July 2022
Provisional Completion Date Mid April 2023
Construction Work Permit Required for the Project? n/a
1.7 EXISTING ENVIRONMENT
Hazards particular to this project by virtue of location: Community unrest Residents safety Weather – Dust / Heat / Cold / Rain Venomous snakes and insects Working with sewerage
Overhead, Above Ground and Underground Services crossing the site: Overhead: Electrical / Telcom lines Underground: Water / Sewerage / Electrical / Telcom infra structure Ground level: Housing and road ways Service Drawings available: Yes Wayleaves required: To be determined Permits required: Yes, for entering excavations Isolations required: Yes, for tie ins to and isolation of existing services
Existing structures on site and surrounding land use (with a significant impact on Health & Safety): Housing Dirt roads Sewerage Overhead infrastructure Near railway line
Existing ground conditions and ground survey report: Not available



Existing Traffic Systems

Condition: Roads in poor condition

Restrictions to access: During possible community unrest

Speed restrictions: 60 km/ph.

1.8 AVAILABLE DRAWINGS

Refer to tender documentation.

1.9 PROJECT HEALTH AND SAFETY REQUIREMENTS

Significant health and safety hazards identified by Client, Designer and Safety Agent:

Confined Spaces
Contaminated Land
COVID-19
Demolition
Deep Excavations
Fire
Flammable Liquids / Gas
Hazardous Substances
Members of Public
Night Work possibility
Overhead Services (Working near)
Road Working – in or next to (including Traffic Management)
Snakes
Underground Services
Working at Height
Work over or next to Water
Working with Effluent

Other construction hazards that the contractor can reasonably expect are as follows:

Bricklaying
Brush cutting
Chainsaw Use
Compacting and Filling
Compactor Operations
Cutting Off Disc
Electric Tools and Electrical Installations
Hand tools
Lifting Operations
Manhole Rings and Pipes Storage
Manual Handling of General Items
Mobile Crane
Noise and Dust
Painting
Paving (Laying)
Plant/Vehicle and Equipment Operation
Plastering
Scaffold Erection / Dismantling
Site Strip
Temporary Work (include False Work, Formwork, Support Work Scaffold and Shoring)



NOTE: Please refer to end of this Health and Safety Specification for the baseline risk assessment for these hazards and risks.

ACTIVITIES REQUIRING APPROVED METHOD STATEMENTS (FOR HEALTH AND SAFETY & COVID-19)

Site establishment
Demolition Works
Confined Spaces
Working at Height
Deep Excavations

ACTIVITIES REQUIRING PERMITS (FOR HEALTH AND SAFETY PURPOSES)

Permit to Dig: Yes

Permit to Enter Excavations: Yes

Road Works Permit: Yes

Permit to Work with Electricity: Yes

Confined Space Permit: Yes

Hot Works Permit: Yes

Permit to Work under Power Lines: Yes

Blasting: Yes, if blasting is required

Client issued permit for work in restricted areas: Yes, if needed

Temporary Works: Yes

CONTRACTOR SAFETY OFFICER PROVISION

Records of safety audits undertaken by the Contractor's Safety Officer must be kept on site in the safety file and nonconformances reported by the Safety Officer to the Contractor's management team. All nonconformances identified by the Safety Officer and client's safety agent must be investigated and corrective action taken by the Contractor to prevent re-occurrence.

Please note that as from 7th August 2018 the safety officer must be professionally registered with the SACPCMP. Proof of registration with the SACPCMP must be provided.

If registered as a Candidate proof of mentorship and weekly visits by mentor must be available on site.

The requirement for this site is that a part time Safety Officer be appointed by the Contractor. Part time Safety Officer must visit site at least fortnightly

MEDICAL CERTIFICATE OF FITNESS (ANNEXURE 3)

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template.



MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate competent person must be appointed by the principal contractor. Proof of an all-inclusive assessment by the Principal Contractor of the Construction Manager's Competency in construction management and health and safety competency must be available in the Safety File.

The Construction Manager, Alternate Construction Managers, Assistant Construction Managers, and designated construction supervisor/s must, as a minimum, have training in Legal Liability, Construction Regulation 2014 and the OHS Act and Regulations.

TRAFFIC MANAGEMENT AND TRAFFIC SAFETY OFFICER PROVISION

The Traffic Management Plan must be approved by the Project Manager and, as required, the Traffic Chief as per the National Road Traffic Act, No. 93 of 1996. The Traffic Safety Officer must have training as per Unit Standard 14561 or similar.

ENVIRONMENTAL CONDITIONS

Contractor must take into account adverse weather conditions on site activities and implement control measures to mitigate risk. This includes risk of exposure to excessive heat, cold, rain, lightning and wind. The open nature of the site works will not preclude any of the above.

ARRANGEMENTS FOR ACCESS, PARKING, DELIVERIES, ETC.

Access to site by Construction Vehicles: Via available road networks

Access to site by Construction Workers and Visitors: Via available road networks

All service providers must sign a 37.2 Mandatory Agreement and must be inducted before they can be allowed on site.

ARRANGEMENTS FOR SITE CAMP, ABLUTIONS AND YARD, INCLUDING FOR COVID-19

Site camp location and set up

- | | | |
|---------------------------------------|---|--------------------------------------|
| • Restrictions / requirements: | } | |
| | } | |
| • Storage areas: | } | Contractor to advise in consultation |
| | } | with Engineer / Professional Team |
| | } | |
| • Security: | } | |

Ablutions and Welfare Arrangements

Contractor to supply ablutions and facilities in line with the Construction Regulations 2014, refer to section 2.31 of this health and safety specification regarding the below. Toilets should be provided with built in facilities for hand washing. Please note further that COVID-19 control measures form an important part of ablutions provision on site ref soap and water/hand sanitiser, signage, etc:

- | | | |
|------------------------------|---|--|
| • Toilets: | } | |
| | } | |
| • Washing facilities: | } | Contractor to provide as per Regulations |
| | } | |
| • Drinking Water: | } | |
| | } | |
| • Shelter: | } | Contractor to provide as per Regulations |
| | } | |
| • Showers: | } | |



Mobile site facilities requirements:

A camping toilet/mobile toilet will be required for sites that cannot facilitate a permanent location for ablution units and must be available for each gender per location.

The use of a camping toilet must be prepared and setup correctly with additional anchors and available toiletries prior to each working day and to be first priority when changing location of works along a set working path.

Teams are to ensure that the toilets are cleaned correctly and suitable for easy and hygienic uses and recorded on a daily register.

PROTECTION OF SITE AGAINST UNAUTHORISED ACCESS BY PUBLIC

Excavation Fencing: Note that excavations accessible to public, or adjacent to public roads / thoroughfares, must have (1) barrier / fence of at least 1m in height, and (2) warning illuminants at night or when visibility is poor, or have other suitable precautionary measures if of both these are not practicable.

General Fencing of Site: Note that construction sites in built up areas adjacent to public walkway must be fenced off and have controlled access points with the correct signs to indicate the site office for any relevant enquiries.

Warning Notices: tba

Look Outs: tba

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The Client requires the Contractor to ensure that employees (and others under his/her control) wear the following minimum PPE:

Overalls: Yes

Safety Harnesses: Yes, when working at height

Hard Hats: As and when required

Reflective Vests: Yes

Goggles / gloves / ear defenders / respiratory protection: As per task specific requirements

Safety Footwear: Yes

Specialist Equipment (e.g. for confined Spaces): Yes

COVID-19 PPE:

Disposable Gloves: Yes

Disposable Overall: Yes

Respiratory Protection (i.e. any face mask endorsed by Department of Labour): Yes

Eye Protection (i.e. goggles or face shield that fully covers the front and side of the face):
Yes



HAZARDOUS SUBSTANCES

The following materials and substances have, or may have, to be used in the works and are identified as potentially posing special health and / or safety hazards during the project. Appropriate measures will need to be specified for their control:

- Cementitious products
- Petrol
- Diesel
- Adhesives for pipe work
- Cleaning products for pipe work
- Paints
- Thinners
- Turps
- Oils
- Hand Sanitizer

Any other chemicals that may be required during the contract

1.10 INTERFACE AND RESTRICTIONS BY CLIENT

Contractor must note that the following Client activities will continue during construction:

n/a

The following Client safety rules and/or requirements are to be observed:

All workers are to receive induction prior to commencement of work on site.

Other safety rules and requirements to be advised at induction.

Please also refer to tender document.

Restrictions on times, access or other restrictions by Client

Please refer to tender document.

Other restrictions may be advised at induction.



1.11 Project Close Out

The Health and Safety files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project in the form of a consolidated safety file. The following list is an example of what should be included but is not exhaustive. The Safety Agent or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are responded to. Documentation would include all health and safety related records from the start of the project. All records to be in hard copy or electronic format and submitted to the Safety Agent for approval in adequately formatted lists and folders. Layout should be logical and in the same order as in the site files.

Consolidated Health and Safety close out file requirements include:

- Health and safety specification (most recent version)
- Principal Contractor's health and safety plan/s
- Site safety organograms
- Legal appointments
- Notification to Department of Labour of commencement of work / Construction Work Permit
- Workman's Compensation Letters of Good Standing for the project
- Full safety files for all contractors as well as their close out reports
- List of all contractors who worked on site
- Letters of safety plan approval of contractors by the Principal Contractor
- Mandatory agreements (section 37.2 agreements)
- Incident and accident records / Occupational Disease records
- Contractor Nonconformance records
- Safety agent's audit reports
- Safety Officer reports
- Method Statements
- Risk assessments
- Safe work procedures
- Medical surveillance certificates of fitness. Medical records are to be kept according to the Occupational Health and Safety Act, as amended.
- All temporary works drawings (suspended beams/scaffolds, etc.)
- Copies of test results, policies, and procedures for environmental monitoring (silica, noise, dusts, etc.)
- Detailed registers of all material used
- Copies of all Checklists completed

1.12 SAFETY FILE RETURN TO CLIENT

The consolidated Health and Safety Files for the Project is to be handed over by the Principal Contractor to the Client upon Project Completion in either hard copy or electronic format.



2.0 FURTHER REQUIREMENTS

2.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014

A Principal Contractor must:

- provide and demonstrate to the Client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the Client's documented health and safety specifications, *which* plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the Client, the Client's Safety Agent, or a Contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
 - provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
 - ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
 - ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
 - ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
 - appoint each contractor in writing for the part of the project on the construction site
 - take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
 - ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
 - stop any contractor from executing construction work which is not in accordance with the Client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely;
- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;
- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the Client, or the Client's Safety Agent;



- hand over a consolidated health and safety file to the Client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

A contractor must prior to performing any construction work-

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the Client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the Client, the Client's Safety Agent or the principal contractor;
- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act;
- as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor will apply to the contractor as if he or she were the principal contractor.

A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

No contractor may allow or permit any employee or person to enter any site unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the Client, the Client's Safety Agent or the Principal Contractor.

A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3 (a template of which can be found in the Construction Regulations, 2014).

2.2 Management and Supervision of Construction Work

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor. Proof of all-inclusive assessment of the Construction Manager's Competency in construction management and H & S competency must be available in the Safety File. The Construction Manager must, as a minimum, have a Construction Regulation course. No contractors may be left unsupervised on site by the principal contractor.

A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers, or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed.

No construction manager appointed in terms of the Regulations may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

A contractor must, after consultation with the Client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor

A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site. Proof of all-inclusive assessment of the Construction Supervisor's competency in construction supervision and H&S competency must be available in the Safety File. The Construction Supervisor must, as a minimum, have a supervision course as per Unit Standard 262845 (Civil Engineering), 119080 (Building Construction) and 262884 (Civil Engineering).

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor, and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties.

Where the contractor has not appointed such an employee, or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector.



No construction supervisor appointed may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

2.3 Notification of Intention to Commence Construction Work

The Contractor shall notify the Provincial Director of the Department of Labour of the intention to commence construction work at least 7 days prior to the works commencing if the intended construction work will:

- Include excavation work
- Include work at height where there is a risk of falling
- Include the demolition of a structure, or
- Include the use of explosives to perform construction work.

If the construction work involves construction of a single storey dwelling for a Client, and such Client will be residing in such dwelling upon completion, the contractor must also notify the Provincial Director of the Department of Labour at least 7 days before the works commence.

This must be done on a form similar to an Annexure 2 (template of which can be found in the Construction Regulations, 2014). A copy of the notification letter to the Provincial Director shall be forwarded to the Client for record purposes.

2.4 Construction Work Permit

A client who intends to have construction work carried out, must at least 30 days before that work is to be carried out apply to the provincial director in writing for a construction work permit to perform construction work on projects that will –

1. exceed 365 days and will involve more than 3600 person days of construction work; or
2. the tender value limit is grade 7, 8 or 9 of the Construction Industry Development Board (CIDB) grading.
 - Grade 7 = R60 000 000
 - Grade 8 = R 200 000 000
 - Grade 9 = No limit

A client may appoint a Construction Health and Safety Agent or Construction Health and Safety Manager to apply for this permit from the Provincial Director and construction work may not commence until the permit has been issued by the Provincial Director.

A copy of this permit will be required to be kept in the principal contractor's safety file, and the site specific number issued by the Provincial Director must be displayed at the site entrance.

A client may appoint a Construction Health and Safety Agent, or Construction Health and Safety Manager based on the scope and risk profile of construction work to represent him/her on matters of health and safety. Provided that, where the question arises as to whether a Construction Health Safety Agent or a Construction Health and Safety Manager is necessary, the decision of an inspector is decisive.

The following minimum documentation will be required during the permit application process:

- Principal Contractor's Health and Safety Plan CR 5(1)(m)
- Baseline Risk Assessment CR 5(1)(a)
- Appointed Principal Contractor's Letter for Good Standing as per CR 5(1)(j)
- Issue Register signed by Designer CR 5 (1)(c)
- Issue Register signed by Principal Contractor
- Declaration signed by Designer CR 5(1)(d) and CV



- Principal Contractor made adequate provision for the cost of health and safety measures (Bill of Materials) CR 5(1)(g)
- Proof of Principal Contractor's competency and resources to carry out the construction work safely CR 5(1)(h)
- Appointment Letter for Construction Manager, CV, Certificates and List of projects
- Appointment Letter of Safety Officer & Safety Officer's Registration for SACPCMP
- Principal Contractor's Appointment Letter CR 5(1)(k), Company Profile and CIDB grading

After approval of the Construction Work Permit any changes made to the appointed persons on the annexure 1 must be submitted to Department of Labour for approval before the appointed persons are allowed to commence with their tasks.

PLEASE NOTE THAT THE CONSTRUCTION MANAGER (8(1)) NAMED ON THE CONSTRUCTION WORK PERMIT MUST BE THE SAME PERSON THAT ACTS AS THE CONSTRUCTION MANAGER ON SITE. IF THIS WILL NOT BE THE CASE FOR SOME REASON THEN THE SAFETY AGENT MUST BE NOTIFIED OF THE CHANGE BY THE PRINCIPAL CONTRACTOR AT LEAST 7 DAYS BEFORE THE CHANGE IS MADE SO THAT THE SAFETY AGENT CAN AMEND THE CONSTRUCTION WORK PERMIT APPLICATION AND ADVISE THE DEPARTMENT OF EMPLOYMENT AND LABOUR ACCORDINGLY.

2.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site

The Contractor shall submit management and supervisory appointments as well as any relevant appointments in writing (as stipulated by the Construction Regulations 2014 and the Occupational Safety and Health Act 1993), prior to commencement of work (refer to **Annexure B** at the end of this Health and Safety Specification).

2.6 Competency for Contractor's Responsible Persons

The Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent health and safety courses attended by such persons will be required to be presented to the Client.

2.7 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The successful Contractor shall submit to the Client a valid letter of good standing with the Compensation Insurer prior to appointment.

2.8 Occupational Health and Safety Policy

The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the company operations. The Policy must be communicated to all employees and proof thereof must be available in the Safety File.

2.9 Health and Safety Organogram

The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Site Team that will be assigned to the project, if successful with the tender. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated when there is a change in the site team.



2.10 Risk Assessments

Baseline Risk Assessment

The Client shall cause a baseline risk assessment to be conducted by a competent person before the design process and tender process commence, and the assessed risks shall form part of the health and safety specifications.

The Contractor must, before commencement of any construction work, and during construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site and must include:

- The identification of the risks and hazards to which persons may be exposed to;
- An analysis and evaluation of the risks and hazards identified; based on a documented method
- A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- A monitoring plan; and
- A review plan

The Contractor must ensure that, as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated, and addressed in a risk assessment.

The Contractor must ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and/or control measures **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Principal Contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Contractor must consult with the health and safety committee or with a representative trade union or representative group of employees if no health and safety committee exists, on the monitoring and review of the risk assessments for the site.

The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the Client, Client's Safety Agent, any contractor, any employee, a representative trade union, a health and safety representative or safety committee member.

A Contractor must review the relevant risk assessment where changes are effected to the design and/or construction that result in a change to the risk profile, or when an incident has occurred.

Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk, the equipment or clothing to be used must be SABS approved.

In general, the Contractor must ensure that the Risk Assessment involves identifying the hazards present in a work activity on site. This is followed by an evaluation of the extent of the risk involved taking into account those precautions already being taken.

The following general principle should be followed when conducting a risk assessment:

- All relevant risks and/or hazards should be systematically addressed;
- The risk assessment should address what actually happens in the workplace during the work activity;
- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors, and Contractors;



- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;
- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

2.11 Health and Safety Representative(s)

The Contractor shall ensure that Health and Safety Representative(s) is/are elected and trained to carry out his / her functions. The Safety Representative(s) must be democratically nominated, elected, and appointed in writing. The Health and Safety Representative(s) shall carry out regular inspections, keep records and report to the supervisor to take appropriate action. The Safety Representative(s) shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents, and non-conformances. The Safety Representative(s) must be (a) full time employee(s) who is/are acquainted with conditions and activities at that workplace or section thereof. The Safety Representatives must have Safety Representative training and must be capable of performing their duties.

2.12 Health and Safety Committee

Where two or more health and safety representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept on record. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson. Minutes of these meetings must be available for the employees of the contractor to refer to.

PLEASE NOTE THAT THE SAFETY AGENT MAY REQUIRE THAT THE PRINCIPAL CONTRACTOR CONVENES A SAFETY COMMITTEE MEETING ON SITE IN THE INTERESTS OF HEALTH AND SAFETY ON SITE. SUCH COMMITTEE MEETING MAY REQUIRE ATTENDANCE OF CONTRACTORS SAFETY OFFICERS/SAFETY REPRESENTATIVES, CONSTRUCTION SUPERVISION AND THE SAFETY AGENT.

2.13 Medical Certificate of Fitness

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template (refer to the Construction Regulations 2014 on the Department of Labour website for a sample of this form).

Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

2.14 Health and Safety Training

The Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

2.14.1 Induction

No Contractor may allow or permit any employee or person to enter site unless they have undergone health and safety induction training pertaining to the hazards prevalent on site at the time of entry. This includes visitors to site. The Contractor must ensure that visitors to site have the necessary protective equipment (PPE). A copy of attendance registers of all employees who attend inductions shall be kept.



2.14.2 Awareness

The Contractor shall conduct periodic toolbox talks on site, weekly or before any hazardous work takes place. The talks shall cover the relevant activity and an attendance register must be signed by all attendees. This record of who attended and the content of the topic will be kept on the site health and safety file as evidence of training.

2.15 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on Risk Assessment, he shall send the relevant persons on appropriate courses and keep certificates of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence. All training must be conducted by an accredited training provider and the certificates must display the applicable unit standards and the expiry dates thereof.

2.16 General Record Keeping

The Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specification and the Occupational Health and Safety Act. The contractor shall ensure that all records of incidents, spot fines, training, etc. are kept on site. All documents shall be available for inspection by the Client, or the Department of Labour's Inspectors.

2.17 General Inspection, Monitoring and Reporting

The Contractor shall carry out inspections as required by this Health and Safety Specification, as well as by health and safety legislation.

2.18 Emergency Procedures

The Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials / situations, including each material's hazardous potential impact or risk on the environment or human and measures to be taken in the event of an accident.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, dangers as a result of riot / service delivery protests / intimidation, etc. The Contractor shall advise the Client in writing of any on-site emergencies, together with a record of action taken, within 24 hours of the emergency occurring. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and available to site personnel.

2.19 First Aid Box and First Aid Equipment

The Contractor shall provide first aid box/es and appoint, in writing, First Aider(s) for this project in line with the results of the Contractor's risk assessment for the project, this health and safety specification as well as the provisions of the General Safety Regulations. The appointed First Aider(s) are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on site.

- First Aid box/es must be adequately stocked at all times, accessible and be controlled by a qualified First Aider.
- Perishables to be checked and replaced when expired.
- Stock per content list as per the General Safety Regulations Annexure.
- Signage to be in place.



- To be numbered and sealed with name of first aider on or above the First aid box.
- Dressing logbook to be available in the first aid box.
- If more than 5 employees are present, there must be a first aid box available.
- Register to be checked by a Competent person.

If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.

2.20 Accident / Incident Reporting and Investigation

The Contractor shall, in addition to the prescribed requirements of the Occupational Health and Safety Act and General Safety Regulations, investigate, record, and report all Section 24 reportable incidents to the Client within 24 hours of the incident occurring. Incident investigations shall be conducted by the Contractor's appointed Accident Investigator – this Investigator must be a competent person or persons who have sufficient knowledge to carry out an investigation.

In the event of a fatality or a permanent disabling injury the Contractor must submit proof of reporting of incident to Department of Labour as well as proof of preventative measures to the Client. The Client reserves the right to conduct investigations into any incidents that they deem fit and the Contractor is required to provide full co-operation in this regard.

2.21 Hazards and Potential Situations

The Contractor shall immediately notify other Contractors of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

2.22 Occupational Health and Safety Signage

The Contractor shall ascertain and provide adequate on site health and safety signage. This signage shall include, but shall not be limited to, Hard Hat / Helmet Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear Plugs / Muffs to be worn where there might be noise exposure over 85 dB; Gloves; Safety Goggles; Safety Harness, Workers in Excavation, traffic management, etc. The Contractor shall be responsible to maintain the quality and replacement of signage. Signage must comply with the requirements of SABS.

2.23 Management of Contractors by Principal Contractor

The Principal Contractor shall ensure that all contractors under his control are complying with the respective Health and Safety Plans, as well as Health and Safety Legislation.

2.24 Stacking of Materials

In addition to the provisions for the stacking of articles in the General Safety Regulations, 2003, the contractor must ensure that –

- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and
- storage areas are kept neat and under control.

2.25 Housekeeping and General Safeguarding on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-



- the proper storage of materials and equipment;
- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;
- ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in the regulations;
- ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and
- ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

2.26 Construction Vehicles and Mobile Plant

A contractor must ensure that all construction vehicles and mobile plant-

- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
 - has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
 - has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- are prevented from falling into excavations, water, or any other area lower than the working surface by installing adequate edge protection, which may include guard-rails and crash barriers;
- are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- are equipped with an acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm;
- are equipped with fire extinguishers (2.5 – 4.5 kg); and
- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;
- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms, or similar appendages,



fully lowered, or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set, and ignition secured;

- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material, and equipment are secured and separated by means of a physical barrier in order to prevent movement when transported in the same compartment with employees;
- vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- all construction vehicles or mobile plant travelling, working, or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.
- all plant and vehicles are fitted with amber rotating beacons and reverse alarms.
- ALL construction site vehicles must be inspected daily especially if it has dangerous "items" (fuel, explosives, etc.) on vehicle, completed inspection registers must also be available for inspection.
- the vehicles must resemble the original manufacturer's product. Levers, alarms, and amber lights to be fitted to construction vehicle for notification of vehicle.
- fire extinguishers, signage, and licence disc to be correctly mounted and displayed.
- when the vehicle is stationary no key to be left in or on vehicle or plant.
- Drip tray must be present when stationary.

2.27 Electrical Installations and Machinery on Construction Sites

A contractor must, in addition to compliance with the Electrical Installation Regulations and the Electrical Machinery Regulations, ensure that –

- before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
- all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

2.28 Use and Temporary Storage of Flammable Liquids on Construction Sites

A contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that –

- where flammable liquids are being used, applied, or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;
- no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- only the quantity of flammable liquid needed for work on one day is taken out of the store for use;
- all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;
- where flammable liquids are decanted, the metal containers are bonded and earthed; and
- no flammable material, including cotton waste, paper, cleaning rags or similar material is stored



- together with flammable liquids
- proper containers are to be used for fuel. Marked and labelled as per the content.
- diesel on site; more than 800 litres must have a certificate, fire safe certificate. Locked in a ventilated, secure area with a drip tray and have a designated, responsible person to use it.

2.29 Water environments

A contractor must ensure that where construction work is done over or in close proximity to water, provision is made for –

- preventing persons from falling into water; and
- the rescuing of persons in danger of drowning.

A contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

2.30 Fire precautions on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that –

- all appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids, and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
 - only suitably protected electrical installations and equipment, including portable lights, are used;
 - there are no flames or similar means of ignition;
 - there are conspicuous notices prohibiting smoking;
 - oily rags, waste, and other substances liable to ignite are without delay removed to a safe place; and
 - adequate ventilation is provided;
- combustible materials do not accumulate on the construction site;
- welding, flame cutting, and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- the fire equipment contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- a sufficient number of workers are trained in the use of fire-extinguishing equipment;
- where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- the means of escape is kept clear at all times;
- there is an effective evacuation plan providing for all -
 - persons to be evacuated speedily without panic;
 - persons to be accounted for; and
 - plant and processes to be shut down; and
- a siren is installed and sounded in the event of a fire.

2.31 Construction Employees' Facilities

A contractor must, in terms of the Construction Regulations 2014, provide:

- Shower facilities after consultation with the employees or employees' representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers;
- Toilets to be within walking distance
- Hygiene registers to be completed



- Proof of safe disposal of effluent waste disposal certificates to be obtained
- changing facilities for each sex;
- and sheltered/shaded eating area.
- Protection from the Elements and raised off the ground.
- Every employer shall provide sanitary facilities at the workplace in accordance with the provisions of Parts F, P and Q of the National Building Regulations.
- Sufficient clean water for all employees. 500ml to each employee every hour.

A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

2.32 Fall protection

The Contractor must:

- designate a competent person to be responsible for the preparation of a fall protection plan
- ensure that the fall protection plan contemplated above is implemented, amended where and when necessary and maintained as required; and
- take steps to ensure continued adherence to the fall protection plan.

A fall protection plan contemplated above must include-

- a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
- the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;
- a programme for the training of employees working from a fall risk position and the records thereof;
- the procedure addressing the inspection, testing, and maintenance of all fall protection equipment; and
- a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

A contractor must ensure that a construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

A contractor must ensure that all unprotected openings in floors, edges, slabs, hatchways, and stairways are adequately guarded, fenced, or barricaded or that similar means are used to safeguard any person from falling through such openings;

Also that no person is required to work in a fall risk position, unless such work is performed safely as contemplated in above and fall prevention and fall arrest equipment are approved as suitable and of sufficient strength for the purpose for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and securely attached to a structure or plant, and the structure of plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and person who could fall, and fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

2.33 Temporary works

A contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.

A contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.

A contractor must ensure that-

- all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that



may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;

- all temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted;
- detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, the Client, the Client's Safety Agent, or any employee;
- all persons required to erect, move, or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;
- all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;
- all temporary works structures are inspected by a competent person immediately before, 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 structure has been removed and the results have been recorded in a register and made available on site;
- no person may cast concrete, until authorization in writing has been given by the competent person contemplated above;
- if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;
- adequate precautionary measures are taken in order to-
 - secure any deck panels against displacement; and
 - prevent any person from slipping on temporary works due to the application of release agents;
- as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;
- upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person
- the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.
- provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;
- a temporary works drawing, or any other relevant document includes construction sequences and methods statements;
- the temporary works designer has been issued with the latest revision of any relevant structural design drawing;
- a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and
- the temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

No contractor may use a temporary works design and drawing for any work other than its intended purpose.

2.34 Excavation

A contractor must-

- ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and
- evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

A contractor who performs excavation work-

- must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;
- may not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where-



- the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or
- such an excavation is in stable material: Provided that-
 - permission has been given in writing by the appointed competent person contemplated above upon evaluation by him or her of the site conditions; and
 - where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person and the professional engineer or technologist, as the case may be;
- must take steps to ensure that the shoring or bracing contemplated above is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;
- must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
- must ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons;
- must cause convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six metres from the point where any worker within the excavation is working;
- must ascertain, as far as is reasonably practicable, the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved;
- must ensure that every excavation, including all bracing and shoring, is inspected-
 - daily, prior to the commencement of each shift;
 - after every blasting operation;
 - after an unexpected fall of ground;
 - after damage to supports; and
 - after rain,by the competent person, in order to ensure the safety of the excavation and of persons, and those results must be recorded in a register kept on site and made available on request to an inspector, the Client, the Client's Safety Agent, any other contractor or any employee;
- must cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –
 - adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and
 - provided with warning illuminants or any other clearly visible boundary indicators at night or when visibility is poor, or have resort to any other suitable and sufficient precautionary measure where this is not practicable;
- must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation;
- must, where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosive's legislation; and
- must cause warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.



2.35 Demolition Work

A contractor must appoint a competent person in writing to supervise and control all demolition work on site.

A contractor must ensure that before any demolition work is carried out, and in order to ascertain the method of demolition to be used, a detailed structural engineering survey of the structure to be demolished is carried out by a competent person and that a method statement on the procedure to be followed in demolishing the structure is developed by that person.

During a demolition, the competent person contemplated in above must check the structural integrity of the structure at intervals determined in the method statement contemplated in above, in order to avoid any premature collapses.

A contractor who performs demolition work must with regard to a structure being demolished, take steps to ensure that-

- no floor, roof or other part of the structure is overloaded with debris or material in a manner which would render it unsafe;
- all reasonably practicable precautions are taken to avoid the danger of the structure collapsing when any part of the framing of a framed or partly framed building is removed, or when reinforced concrete is cut; and
- precautions are taken in the form of adequate shoring or other means that may be necessary to prevent the accidental collapse of any part of the structure or adjoining structure;
- ensure that no person works under overhanging material or a structure which has not been adequately supported, shored, or braced;
- ensure that any support, shoring, or bracing contemplated above, is designed and constructed so that it is strong enough to support the overhanging material;
- where the stability of an adjoining building, structure or road is likely to be affected by demolition work on a structure, take steps to ensure the stability of such structure or road and the safety of persons;
- ascertain as far as is reasonably practicable the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of demolition work that may affect any such service, take the steps that are necessary to render circumstances safe for all persons involved;
- cause every stairwell used and every floor where work is being performed in a building being demolished, to be adequately illuminated by either natural or artificial means;
- cause convenient and safe means of access to be provided to every part of the demolition site in which persons are required to work; and
- erect a catch platform or net above an entrance or passageway or above a place where persons work or pass under or fence off the danger areas if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe where there is a danger or possibility of persons being struck by falling objects.

A contractor must ensure that no material is dropped to any point, which falls outside the exterior walls of the structure, unless the area is effectively protected.

No person may dispose of waste and debris from a high place by a chute unless the chute-

- is adequately constructed and rigidly fastened;
- if inclined at an angle of more than 45 degrees to the horizontal, is enclosed on its four sides;
- if of the open type, is inclined at an angle of less than 45 degrees to the horizontal;
- where necessary, is fitted with a gate at the bottom end to control the flow of material; and discharges into a container or an enclosed area surrounded by barriers.

A contractor must ensure that every chute used to dispose of rubble is designed in such a manner that rubble does not free-fall and that the chute is strong enough to withstand the force of the debris travelling along the chute.



A contractor must ensure that no equipment is used on floors or working surfaces unless such floors or surfaces are of sufficient strength to support the imposed loads.

Where a risk assessment indicates the presence of asbestos, a contractor must ensure that all asbestos related work is conducted in accordance with the Asbestos Regulations 2001.

Where a risk assessment indicates the presence of lead, a contractor must ensure that all lead related work is conducted in accordance with the Lead Regulations, 2001.

Where the demolition work involves the use of explosives, a method statement must be developed in accordance with the applicable explosives legislation, by an appointed person who is competent in the use of explosives for demolition work and all persons involved in the demolition works must adhere to demolition procedures issued by the appointed person.

A contractor must ensure that all waste and debris are as soon as reasonably practicable removed and disposed of from the site in accordance with the applicable legislation.

2.36 Tunnelling

Not thought to be applicable at this stage

2.37 Scaffolding

A contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work as per the SANS 10085 of 2004.

A contractor using access scaffolding must ensure that such scaffolding, when in use, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act and SANS 10085. Scaffold must be;

- Level and balanced upon the correct footing such as base jacks, U-Jacks, and mobile wheels
- Have the correct Ledgers and bracing methods to secure the frames and Standards
- To be fully boarded with the correct edge protection on both the 0.500m and 1 metre height per working platforms.
- Working platforms to be in accordance with the Tables 4 and 5 of the SANS 10085 for weight restrictions
- Have the correct access that is fitted within the scaffold and grants access to the working platforms and must be fitted with a trap door system.
- Secured with fastening methods such Reveal and fixed ties according to table 7 of SANS 10085. Buttresses to be used when required.
- signage must be displayed to indicate if the scaffold is safe or unsafe to use.
- Trestles to be built in accordance to section 10.16.1 of the SANS 10085 and safety requirements to be met by the scaffolding inspector and scaffold supervisors on site.

2.38 Bulk mixing plant

A contractor must ensure that the operation of a bulk mixing plant is supervised by a competent person who has been appointed in writing and is –

- aware of all the dangers involved in the operation thereof; and
- conversant with the precautionary measures to be taken in the interest of health and safety.

No person supervising or operating a bulk mixing plant may authorize any other person to operate the plant unless that person is competent to operate a bulk mixing plant.



A contractor must ensure that the placement and erection of a bulk mixing plant complies with the requirements set out by the manufacturer and that such plant is erected as designed.

A contractor must ensure that all devices to start and stop a bulk mixing plant are provided and that those devices are placed in an easily accessible position and constructed in a manner to prevent accidental starting.

A contractor must ensure that the machinery and plant selected is suitable for the mixing task and that all dangerous moving parts of a mixer are placed beyond the reach of persons by means of doors, covers or other similar means.

No person may remove or modify any guard or safety equipment relating to a bulk mixing plant, unless authorized to do so by the appointed person.

A contractor must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with when entering any silo.

A contractor must ensure that a record is kept of all repairs or maintenance to a bulk mixing plant and that the record is available on site to an inspector, the Client, the Client's Safety Agent, or any employee.

2.39 Rope Access Work

Not thought to be applicable at this stage

2.40 Hazardous Chemical Substances (HCS)

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the Health and Safety Plan that:

- Material Safety Data Sheets (MSDS's) of the relevant materials / hazardous chemical substances are available prior to use by the contractor. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are done at least once every 6 months.
- Exposure monitoring is done according to OESSM and by an Approved Inspection Authority (AIA) and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How the relevant HCS's are being/going to be controlled by referring to:
 - Limiting the amount of HCS
 - Limiting the number of employees
 - Limiting the period of exposure
 - Substituting the HCS
 - Using engineering controls
 - Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.
- Training with regards to these regulations was given.

The Health and Safety plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

The First Aider must be made aware of the MSDS and trained in how to treat HCS incidents appropriately.

2.41 Noise Induced Hearing Loss

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.



- That monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
- Engineering methods considered
- Admin control (number of employees exposed) considered
- Personal protective equipment considered/decided on
- Describe how records are going to be kept for 40 years.

2.42 Explosives and Blasting

Not thought to be applicable to this project

2.43 Personal Protective Equipment (PPE)

The Contractor shall carry out PPE or clothing needs analysis in accordance with his risk assessment, to determine the necessary PPE or clothing to be used during construction. The Contractor shall make provision to keep adequate quantities of appropriate, SABS approved PPE or clothing on site at all times.

The Contractor must ensure that personnel are trained in the correct use of PPE to be used.

The Contractor must ensure that lost, stolen, worn out or damaged PPE is replaced as required and receipt signed for by employees on site.

2.44 Asbestos

Not thought to be applicable at this stage

2.45 Pressure Vessels (Including Gas Bottles)

The Contractor shall comply with Pressure Vessel Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing;
- Providing and maintain appropriate signage in areas where pressure vessels are used, as applicable;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate firefighting equipment (Fire Extinguishers).
- Under pressure vessels to have the following in place;
 - Service date
 - Seals on valves with no leaks and not broken
 - flash arrestors
 - Should be stored and chained together
 - Oxygen / Acetylene bottles to have clips
 - Signage to be visible
 - Gauges in working condition and be visible
 - Permits for use
 - Pressure equip Regs 6. (1) The user shall ensure that the pressure equipment is operated and maintained within its design and operating parameters.

2.46 Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers. The Contractor shall have adequate persons trained or competent to use the Fire Fighting Equipment.



Safety signage shall be posted up in all areas where fire extinguishers are located.

2.47 Lifting Machinery and Tackle

The Contractor shall ensure that lifting machinery and tackle is inspected before use and on a monthly basis. The Contractor shall have lifting machinery and tackle inspector who will inspect the equipment at intervals required by the Driven Machinery Regulations, taking into account that:

- All lifting machinery and tackle have a safe working load clearly indicated
- Regular inspection and servicing is carried out
- Records are kept of inspections and of service certificates
- Thorough examinations are carried out by competent personnel at the frequencies required by legislation
- There is proper supervision in terms of guiding the loads which includes a trained banks man to direct and check lifting tackle if it is safe for use
- Forklift to be inspected every year and lift plan every 2 years
- Load test certificate to be no older than 6 months
- Sufficient props to be used and max weight to be displayed
- Slings to be checked with regard to integrity, chains, serial numbers, checked for tears, cuts links and all other materials
- Hooks to be oiled, not in a fixed position and closed to prevent materials from slipping/falling off
- Lifting equipment must be used for the scope of work carried out

2.48 Ladders and Ladder work

The Contractor shall ensure that all ladders are numbered and inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

2.49 General Machinery

The Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

2.50 Portable Electrical Tools

The Contractor shall ensure that use and storage of all explosive actuating fastening devices and portable electrical tools are in compliance with relevant legislation.

The Contractor shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

2.51 High Voltage Electrical Equipment

The Contractor shall ensure that, where the work is under, on or near high-voltage electrical equipment the Electrical Installation Regulations, together with safety instructions (Regulations of the Owner of the Equipment) are complied with. Such equipment includes:

- Eskom and the Local Authority equipment
- The Contractor's own power supply; and
- Electrical equipment being installed but not yet taken over from a Contractor by The Client.



2.52 Public Health and Safety

The Contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from onsite activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times.

2.53 Night Work

The Contractor shall not undertake any night work without prior arrangement and a written permit from the Client. The Contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped.

2.54 Environmental Conditions and Flora and Fauna

The Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions. The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc). The Contractor's risk assessment process must take these risks into account.

2.55 Occupational Health

Exposure of workers to occupational health hazards and risks are quite common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks.

The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust;
- Ingestion through swallowing maybe through food intake;
- Absorption through the skin (pores) e.g. painting or use of thinners.

The contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.

All Contractors should ensure that Occupational Hygiene surveys are conducted as per the Occupational Health and Safety Act to ensure employees are not exposed to hazards. Risk Assessments should identify areas where surveys are to be conducted.

2.56 Suspended Platforms

Not thought to be applicable at this stage

2.57 Material Hoists

A contractor must ensure that every material hoist and its tower have been constructed in accordance with the generally accepted technical standards and are strong enough and free from defects.

A contractor must ensure that the tower of every material hoist is -

- erected on firm foundations and secured to the structure or braced by steel wire guy ropes, and extends to a distance above the highest landing to allow a clear and unobstructed space of at least 900 mm for over travel;
- enclosed on all sides at the bottom, and at all floors where persons are at risk of being struck by



moving parts of the hoist, except on the side or sides giving access to the material hoist, with walls or other effective means to a height of at least 2100 mm from the ground or floor level; and

- provided with a door or gate at least 2100mm in height at each landing, and that door or gate must be kept closed except when the platform is at rest at such a landing.

A contractor must cause -

- the platform of every material hoist to be designed in a manner that it safely contains the loads being conveyed and that the combined mass of the platform and the load does not exceed the designed lifting capacity of the hoist;
- the hoisting rope of every material hoist which has a remote winch to be effectively protected from damage by any external cause to the portion of the hoisting rope between the winch and the tower of the hoist; and
- every material hoist to be provided with an efficient brake capable of holding the platform with its maximum load in any position when power is not being supplied to the hoisting machinery.

No contractor may require or permit trucks, barrows or material to be conveyed on the platform of a material hoist and no person may so convey trucks, barrows or material unless those articles are secured or contained in a manner that displacement thereof cannot take place during movement.

A contractor must cause a notice, indicating the maximum mass load which may be carried at any one time and the prohibition of persons from riding on the platform of the material hoist, to be affixed around the base of the tower and at each landing.

A contractor of a material hoist may not require or permit any person to operate a hoist, unless the person is competent in the operation of that hoist.

No contractor may require or permit any person to ride on a material hoist.

A contractor must ensure that every material hoist-

- is inspected on daily basis by a competent person appointed in writing by the contractor and such competent person must have the experience pertaining to the erection and maintenance of material hoists or similar machinery;
- inspection contemplated above, includes the determination of the serviceability of the entire material hoist, including guides, ropes and their connections, drums, sheaves or pulleys and all safety devices;
- inspection results are entered and signed in a record book by a competent person, which book must be kept on the premises for that purpose;
- is properly maintained and the maintenance records in this regard are kept on site.

2.58 Explosive Actuated Fastening Device

No contractor may use or permit any person to use an explosive actuated fastening device, unless-

- the user is provided with and uses suitable protective equipment;
- the user is trained in the operation, maintenance and use of such a device
- the explosive actuated fastening device is provided with a protective guard around the muzzle end, which effectively confines any flying fragments or particles; and
- the firing mechanism is so designed that the explosive actuated fastening device, will not function unless-
 - it is held against the surface with a force of at least twice its weight; and
 - the angle of inclination of the barrel to the work surface is not more than 15 degrees from a right angle.

A contractor must ensure that-



- only cartridges suited for the relevant explosive actuated fastening device, and the work to be performed, are used;
- an explosive actuated fastening device is cleaned and examined daily before use and as often as may be necessary for its safe operation by a competent person who has been appointed for that purpose;
- the safety devices of an explosive actuated fastening device are in good working order prior to use;
- when not in use, an explosive actuated fastening device and its cartridges are locked up in a safe place, which is inaccessible to unauthorized persons;
- an explosive actuated fastening device is not stored in a loaded condition;
- a warning notice is displayed in a conspicuous manner in the immediate vicinity wherever an explosive actuated fastening device is used; and
- the issuing and collection of cartridges and nails or studs of an explosive actuated fastening device are-
 - controlled and done in writing by a person having been appointed in writing for that purpose; and
 - recorded in a register by a competent person and that the recipient has accordingly signed for the receipt thereof as well as the returning of any spent and unspent cartridges.

2.59 Confined Spaces

Confined space work must be closely monitored by a competent person appointed by the contractor, to include, but not restricted to, ensuring that the confined space is sufficiently ventilated prior to entry. Oxygen levels to be tested in confined space to ensure that it is safe for entry. Permit system to be in place to declare confined space safe for entry prior to entry. PPE must be worn (such as proper masks) if air supply is insufficient or not of sufficient quality.

Sufficient training must take place in use of all confined space monitoring and access equipment prior to any works commencing in such confined space. It is strongly recommended that a tripod and winch system be in place to afford easy access and egress and for emergency evacuation from the confined space (manholes and chambers). Please also refer to GSR5 on safety requirements for Work in Confined Spaces.

General safety Regulations 5.

(1) An employer or a user of machinery shall take steps to ensure that a confined space is entered by an employee or other person only after the air therein has been tested and evaluated by a person who is competent to pronounce on the safety thereof, and who has certified in writing that the confined space is safe and will remain safe while any person is in the confined space, taking into account the nature and duration of the work to be performed therein.

(2) Where the provisions of sub regulation (1) cannot be complied with the employer or user of machinery, as the case may be, shall take steps to ensure that any confined space in which there exists or is likely to exist a hazardous gas, vapour, dust or fumes, or which has or is likely to have, an oxygen content of less than 20 per cent by volume, is entered by an employee or other person only when-- (a) subject to the provisions of sub regulation (3), the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken; and (b) the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks.

(3) Where the provisions of sub regulation (2)(a) cannot be complied with, the employer or user of machinery shall take steps to ensure that the confined space in question is entered only when the employee or person entering is using breathing apparatus of a type approved by the chief inspector and, further, that—

(a) the provisions of sub regulation (2) (b) are complied with;



- (b) any employee or person entering the confined space is using a safety harness or other similar equipment, to which a rope is securely attached which reaches beyond the access to the confined space, and the free end of which is attended to by a person referred to in paragraph (c);
- (c) at least one other person trained in resuscitation is and remains in attendance immediately outside the entrance of the confined space in order to assist or remove any or persons from the confined space, if necessary; and
- (d) effective apparatus for breathing and resuscitation of a type approved by the chief inspector is available immediately outside the confined space.

(4) An employer or user of machinery shall take steps to ensure that all persons vacate a confined space on completion of any work therein.

(5) Where the hazardous gas, vapour, dust or fumes contemplated in sub regulation (2) are of an explosive or flammable nature, an employer or user of machinery shall further take steps to ensure that such a confined space is entered only if –

- (a) the concentration of the gas, vapour, dust or fumes does not exceed 25 per cent of the lower explosive limit of the gas, vapour, dust or fumes concerned where the work to be performed is of such a nature that it does not create a source of ignition; or
- (b) such concentration does not exceed 10 per cent of the lower explosive limit of the gas, vapour, dust or fumes where other work is performed.

2.60 Alcohol and drugs (GSR 2)

1. A contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a site.
2. No employee shall be under the influence of or have in his or her possession or partake of or offer any other person intoxicating liquor or drugs.
3. An employer or a user, as the case may be, shall, in the case where a person is taking medicines, only allow such person to perform duties at the site if the side effects of such medicine do not constitute a threat to the health or safety of the person concerned or other persons at such site.

2.61 COVID-19 (PLEASE NOTE THAT THIS SECTION IS CONSTANTLY UNDER REVIEW)

This section is based on the requirements of Government Gazette No 43257 dated 29th April 2020, and the latest Disaster Management Act 2002.

The importance of the management and control of this virus by contractors on site is paramount.

For this reason no work is permitted on site until the contractor has submitted proposals in their safety plan to the safety agent and professional team on how the risk of COVID-19 transmission on site will be managed by the contractor (monitoring and implementation of control measures through administrative, physical and other control measure).

DEFINITIONS (Disaster management Act of 2002)

‘adequate space’ means not more than one person per one and a half metres of floor space;

‘Alert Level’ means the determination made under sub regulation 3(2);

‘clinical case’ means a patient that presents with clinical signs and symptoms of COVID-19;

‘COVID -19’ means the Novel Coronavirus (2019- nCov2) which is an infectious disease caused by a virus that has previously not been scientifically identified in humans, which emerged during 2019 and was declared a global pandemic by the WHO in 2020;



'Criminal Procedure Act' means the Criminal Procedure Act, 1977 (Act No 51 of 1977);

'enforcement officer' includes a member of the South African Police Service, the South African National Defence Force, metro police, traffic officers, immigration inspectors; and a peace officer as defined in section 1 of the Criminal Procedure Act;

'essential services' means the services listed in Annexure D;

'face mask' means a cloth face mask or homemade item that covers the nose and mouth, or another appropriate item to cover the nose and mouth;

'gathering' means any assembly, concourse or procession in or on -
(a) any public road, as defined in the National Road Traffic Act, 1996 (Act No. 93 of 1996); or
(b) any other building, place or premises, including wholly or partly in the open air, and including, but not limited to, any premises or place used for any sporting, entertainment, funeral, recreational, religious, or cultural purposes; but excludes a workplace and a place of residence for those persons ordinarily residing at the residence;

'health protocols' means the COVID-19 health protocols determined by the Director General of Health;

'head of an institution' means the accounting officer of a public institution and the chief executive officer or the equivalent of a chief executive officer of a private institution;

'institution' means any public or private institution, including a sole practitioner and any other business owned and operated by a single person, that is engaged in the supply or distribution of a good or service as set out in the Table 1, or which regulates such supply or distribution, including professional regulatory bodies designated in directions made in terms of regulation 4 of the Regulations;

'isolation' means separating a sick individual with a contagious disease from healthy individuals that are not infected with such disease in a manner that aims to prevent the spreading of infection or contamination;

'national state of disaster' means the national state of disaster declared by Government Notice No. R. 313 of 15 March 2020;

'quarantine' means the restriction of activities or separation of a person, who was or may potentially have been exposed, to COVID-19 and who could potentially spread the disease to other non-exposed persons, to prevent the possible spread of infection or contamination to healthy individuals;

'the Act' means the Disaster Management Act, 2002 (Act No. 57 of 2002); and

'WHO' means the World Health Organisation.

Coronaviruses are a large family of viruses which may cause illness in animals or humans. In humans, several Coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered Coronavirus causes Coronavirus disease COVID-19.

COVID 19 is a viral pandemic that has and is causing a great deal of damage to human health, countries' economies and health systems and has led to lock downs, work stoppages and restriction of movement that threatens the existence of many jobs, as well as the way we conduct our normal working and social lives.



In response to the pandemic the government has passed legislation and guidance for employers and employees in the work environment.

People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, then touching their eyes, nose or mouth. People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales droplets. This is why it is important to stay more than one meter away from a person who is sick.

Please refer to Annexure A for details on the criteria that must be considered in the contractor's safety plan response.

2.62 General Practices when Working at Heights

- No Homemade structures or ladders will be permitted on the project.
- Trestle tables are not to be fully extended and must be fully boarded, no drums to be used.
- Surroundings to be clear of rubble.
- Fall protection, fall prevention, and fall rescue plans to be in place and communicated to site employees.
- Ladders to be structurally sound and not broken and in accordance to GSR 13A.
- Only competent persons may be allowed to work at heights
- Correct personal protective equipment to be used (safety harness and lanyard) and edge protection / life lines to be used.
- Anchor points to be in place and determined by an engineer. Anchor points must be pull tested prior to use.
- GSR (6) 6. No employer shall require or permit any person to work in an elevated position and no person shall work in an elevated position, unless such work is performed safely from a ladder or scaffolding, or from a position where such person has been made as safe as if they were working from scaffolding.
- Construction regulation 10 of 2014 to be implemented when working at heights and to prevent any person from falling from heights.
- Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

2.63 Traffic Accommodation

All traffic signs must be displayed as per the traffic management plan drawings.

Size of signs used must be as per the traffic management drawings and all signs to be visible and in good condition.

- Traffic management Plan issued per Road and Traffic act (chapter 13). Must be approved by the Traffic Chief and professional team.
- Plans for signage deployment must be in order and must be placed correctly.
- Traffic management plan must be submitted and must be suitable for the tasks being performed.
- Traffic plan must be implemented and controlled by the sites Traffic safety officer and flag persons.
- Jersey barriers, where used, to be linked.
- No signs to be obstructed.
- STOP/GO structures must be protected against being struck by vehicles (e.g. new jersey barriers)
- Road marking buggies/vehicles must be protected by escort vehicles front and rear.
- Displayed traffic signs must be maintained in a daily register to be checked morning and evenings after works have been finalised.



Night work:

- Signage, traffic accommodation and personnel must be visible (reflective / illuminated).
- Certified, competent traffic officer and flag persons to be used during night operations.

Traffic Safety Officer must check signage daily and Engineer must sign it off daily.

2.64 Ventilation and Lighting in the Work Place

Every employer shall cause every workplace in his undertaking to be lighted in accordance with the illuminance values specified in the Schedule to the General Safety Regulations:

Provided that where specialised lighting is necessary for the performance of any particular type of work, irrespective of whether that type of work is listed in the Schedule or not, the employer of those employees who perform such work shall ensure that such specialised lighting is available to and is used by such employees.

The Contractor must ensure that:

- the average illuminance at any floor level in a workplace within five meters of a task is not less than one fifth of the average illuminance on that task;
- glare in any workplace is reduced to a level that does not impair vision;
- lighting on rotating machinery in such that the hazard of stroboscopic effects is eliminated; and
- luminaires and lamps are kept clean and, when defective, are replaced or repaired forthwith.

With a view to the emergency evacuation of indoor workplaces without natural lighting or in which persons habitually work at night, every employer shall, in such workplaces, provide emergency sources of lighting which are such that, when activated, an illuminance of not less than 0.3 lux is obtained at floor level to enable employees to evacuate such workplaces: Provided that where it is necessary to stop machinery or shut down plant or processes before evacuating the workplace, or where dangerous materials are present or dangerous processes are carried out, the illuminance shall be not less than 20 lux.

The contractor must ensure that the emergency sources of lighting prescribed above:

- are capable of being activated within 15 seconds of the failure of the lighting prescribed by subregulation (1);
- will last long enough to ensure the safe evacuation of all indoor workplaces;
- are kept in good working order and tested for efficient operation at intervals of not more than three months; and
- where directional luminaires are installed, these are mounted at a height of not less than two meters above floor level and are not aimed between 10° above and 45° below the horizontal line on which they are installed.

The contractor must ensure that all rooms, stairways, passageways, gangways, basements, and other places where danger may exist through lack of natural light, to be lighted such that it will be safe.

The contractor must ensure that every workplace in his undertaking is ventilated either by natural or mechanical means in such a way that –

- the air breathed by employees does not endanger their safety;
- the time-weighted average concentration of carbon dioxide therein, taken over an eight-hour period, does not exceed one half per cent by volume of air;
- the carbon dioxide content thereof does not at any time exceed three per cent by volume of air;
- the prescribed exposure limits for airborne substances therein are not exceeded; and
- the concentration therein of any explosive or flammable gas, vapour or dust does not exceed the lower explosive limit of that gas, vapour, or dust.



2.65 Nuclear Density Gauge (Troxler)

The use of a Troxler on site must be in line with the SANS 3001 of March 2014. The SANS consists of 5 sections

The in-situ density of road construction materials is only determined in civil engineering using indirect methods such as the nuclear density gauge and sand replacement methods.

This method forms part of a set of methods used to operate nuclear gauges, and includes the following:

- a) administration, handling, and maintenance (see SANS 3001-NG1);
- b) validation of standard calibration blocks (see SANS 3001-NG2);
- c) calibration of a nuclear gauge (see SANS 3001-NG3);
- d) verification of a nuclear gauge (see SANS 3001-NG4);
- e) in situ density determination using a nuclear gauge (see SANS 3001-NG5)

When used Troxlers must be:

- Stored in a dedicated, lockable area and must have a warning signage displayed.
- Must only be transported in a dedicated vehicle with the required signage displayed and by an authorised employee that has been appointed in writing.
- Must have a Troxler Calibration Certificate in place.
- Must have a Troxler Technician Appointment on file and signed and proof of competency within the safety file.

2.66 Ergonomics Regulation of 2019

"competent person" in relation to ergonomics, means a person who– (a) has in respect of the work or task to be performed the required knowledge, training and experience in ergonomics and, where applicable, qualifications specific to ergonomics: provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2008 (Act No. 67 of 2008), those qualifications and that training must be regarded as the required qualifications and training; and (b) is familiar with the Act and the applicable regulations made under the Act;

"ergonomic risk" means a characteristic or action in the workplace, workplace conditions, or a combination thereof that may impair overall system performance and human well-being;

"ergonomic risk assessment" means a programme, process, or investigation to identify, analyse, value and prioritise any risk from exposure to ergonomic risks associated with the workplace;

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimise human well-being and overall system performance;

The ergonomics regulations will apply to any employer or self-employed person who carries out work at the workplace who may expose any person to an ergonomic risk in the work place and any designer, manufacturer, importer or supplier of machinery, plant, or work systems for the work place.

An employer must, before the commencement of any work that may expose employees to ergonomic risks, have an ergonomic risk assessment performed by a competent person.

The ergonomic risk assessment must be done at intervals not exceeding two years and must include the following;

- a complete hazard identification and all persons who may be affected by the ergonomic risk.
- how employees may be affected by the ergonomic risks;



- the analysis and evaluation of the ergonomic risks;
- the prioritisation of ergonomic risks.

An employer must review the relevant ergonomic risk assessment if:

- such assessment is no longer valid;
- control measures are no longer effective;
- technological or scientific advances allow for more effective control methods;
- there has been a change in –
 - the work methods;
 - the type of work carried out; or
 - the type of equipment used to control the exposure; and
 - an incident occurs or medical surveillance reveals an adverse health effect, where ergonomic risks are identified as a contributing factor.

An employer must ensure that an employee is placed under medical surveillance, which is overseen by an occupational medicine practitioner, if–

- the ergonomic risk assessment referred to in regulation 6 indicates the need for the employee to be placed under medical surveillance; or
- an occupational health practitioner recommends that relevant employees must be under Medical surveillance, in which case the employer may call upon an occupational medicine practitioner to ratify the appropriateness of such recommendation.

An employer must ensure that the medical surveillance consists of–

- in the case of a new employee, an initial health examination before the employee commences employment or within 30 days of commencement of such employment;
- a periodic health examination informed by the ergonomic risk assessment, at intervals specified by an occupational medicine practitioner, but not exceeding two years; and
- an exit health examination informed by the ergonomic risk assessment.

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Both the Client and the Contractor have a duty in terms of health and safety legislation to do all that is reasonably practicable to make members of the public and others being affected by the construction processes aware of possible risks and put preventative measures in place to mitigate the risks. The public and/or visitors shall go through a brief health and safety induction detailing hazards and risks they may be exposed to and what measures are in place to control these hazards and risks.



OTHER HEALTH AND SAFETY SPECIFICATION REQUIREMENTS

The contractor must be aware of the following additional requirements:

What	When	Output
Awareness training (Toolbox Talks)	At least weekly and before hazardous work is carried out	Attendance Register
Health and Safety Committee Meetings	Monthly	Minutes signed by the employer (Contractor) covering: a) Health and Safety Representative Checklist b) Safety report from Safety Officer and Safety Agent
Health and Safety Reports	Monthly	Report covering: a) Incidents/Accidents and Investigations b) Non-conformance c) Health and Safety Training d) HIRA Updates e) Internal and External Audits
General Inspections	As per Health and Safety Specification and OHSA	Report on Health and Safety Specification and OHSA compliance: a) Scaffolding b) Lifting Machinery c) Excavation
General Inspections	Monthly	Covering: a) Firefighting Equipment b) Portable Electrical Equipment c) Ladders
Record keeping	Ongoing	Covering: a) General complaints b) Fines c) General incidents d) MSDS e) Surveillance Medicals f) Inspection Register g) Dept of Labour Notices
Permits	Before commencement with certain activities	As stipulated by the Health and Safety Specification and the OHSA / Construction Regulations

Key:

OHSA – Occupational Health and Safety Act, 1993



ANNEXURE A – REQUIREMENTS FOR THE SAFETY PLAN ASSESSMENT (INCLUDING COVID 19 REQUIREMENTS)

The Contractor must note that the information below is pertinent to the compilation of their safety plan response to this site-specific safety specification and it would be preferred if the Safety Plan is written in the order of the assessment documented below.

No	Item	Notes
1	Project Directory	Please state details of Project Client, Project Manager/Principal Agent, Safety Agent, Consulting Engineer, etc. (Name, address, contact details).
2	Contractors Directory	Please indicate if you will be using Contractors on this project, if yes, include their details, trade, and FEM details.
3	Other Parties Directory	Please indicate contact details for any services applicable (electricity, water, etc.) as well as Department of Labour and Emergency Services.
4	Project Safety Statement	The Project Safety Statement must be included in the Safety Plan.
5	Health and Safety standards for the project (OHS Act, construction regulations, basic conditions of employment, etc.)	Health and Safety standards must be included in the Safety Plan.
6	Project Particulars	Scope of works must be included in the Safety Plan. This is critical.
7	Existing environment – Structures and Surroundings, Services (Electrical, Water, Sewerage, etc.), Traffic Arrangements, Parking, Access to Site, Storage of Plant and Materials	Please include these items in the plan. The items must be Site Specific, the location of services and services that will be affected must be mentioned.
8	Management Structure for safety on the Project	A structured organogram with names of the responsible people must be included.
9	Appointed Persons, Supervision	The required appointments must be identified. A list of the appointed persons must be included in the Safety Plan.
10	Security Procedures	Please indicate if a security company will be appointed and include the contact information in the Safety Plan.
11	Registers list and inspection frequency	A list of the Inspection Registers that will be on file must be included in the Safety Plan.
12	Design Co-ordination	Please indicate your procedure for implementation of design changes by designer on the project, and the procedures for liaison and implementation of temporary works design on the project.
13	Contractor Co-ordination	Mention must be made of how Contractors will be co-ordinated on site to ensure that they work together and not adversely affected health and safety.



No	Item	Notes
14	Housekeeping, stacking and storage	Housekeeping policies and procedures must be included in the Safety Plan.
15	Waste Disposal Arrangements	Waste disposal arrangements procedures must be included in the Safety Plan.
16	Noise and dust control	Please indicate if any noisy operations (more than 85 decibels) will be carried out and what measures will be used to reduce noise exposure to workforce.
17	Training Requirements	Training requirements must be identified and recorded.
18	Plant and Equipment	A list of plant and equipment to be used on site must be included in the Safety Plan.
19	Safety Monitoring Arrangements	The name, contact details and SACPCMP registration status of the Safety Officer must be included in the Safety Plan. State how often the Safety officer will be on site (note safety specification requirement in section 1.7).
20	Information for Contractors	State how information will be given to Contractors on site.
21	Consultation/communication arrangements with Employees	State how information will be given to employees e.g. notice board.
22	Selection of Contractors Procedures	Principal contractor must state what health and safety procedures they will use to assess the competence and resources of their contractors on site.
23	Activities with risk to Health and Safety (Risk Assessment)	A Baseline Risk Assessment must be included in the Safety Plan, it must address the Risks identified in the Safety Specification as well as the risk of any other hazards that the Principal Contractor is aware of that are relevant to the site.
24	Hazardous Substances	Must be listed in the Safety Plan and addressed in the Risk Assessment.
25	First Aid and Medical Procedures	Please indicate name of first aider, position of first aid box, location of nearest medical facility and emergency numbers.
26	Fire and Emergency Procedures	List of emergency telephone numbers must be drawn up and included in the Safety Plan. The position of Fire Extinguishers, Assembly Point location, fire drill frequencies, numbers of fire marshals, etc.
27	Accident and Incident Reporting and investigation	State the Accident and Incident Reporting and investigation procedures of your company.
28	Welfare and Site Facilities	Elaborate on toilets and eating areas, water provision, COVID-19 ablution provision, how will workers be protected during wet weather conditions etc.
29	Site Rules	The Site Rules must be included in the Safety Plan.
30	Personal Protective Equipment	The necessity must be identified by Risk Assessments, the required PPE for site risks and COVID-19 control measures.
31	Health & Safety File arrangements	Please indicate arrangements for the return of the Health and Safety File to the safety agent at the end of the project.



No	Item	Notes
32	Method Statements/Safe System of Works	A list of Method Statements/Safe System of Works must be included in Safety Plan for all High-risk activities. PLEASE NOTE THAT THIS IS PARTICULARLY RELEVANT FOR COVID-19. NO WORK MAY COMMENCE UNLESS COVID-19 RISKS AND CONTROL MEASURES HAVE BEEN APPROVED BY THE PROFESSIONAL TEAM. REFER TO SECTION 2.61 OF THIS SAFETY SPECIFICATION.
33	Permits and wayleaves	List of activities that Principal Contractor anticipates will require permits and wayleaves (including those stated in the safety specification) to be included.
34	Fall Prevention and Protection Plan and Fall Rescue Plan	A copy of the Fall Prevention and Protection Plan, fall rescue plan and fall risk assessment must be included in the Safety Plan.
35	Demolition method statement	A copy of the Demolition Method Statement must be included in the Safety Plan.
36	Confined spaces	The Principal Contractors' procedures for managing access, egress and work in confined spaces must be specified in the Safety Plan. Includes permit procedures, air monitoring, PPE, etc.
37	Safety Representatives and Safety Committees	When a project has more than 20 employees a designated employee must be chosen by the labourers to represent them. A safety committee must be established if 2 or more safety representatives are appointed. Please note Safety Specification requirements regarding this section (section 2.12).
38	Have the significant hazards from the safety specification been addressed?	See section 1.9 of the Specifications and ensure practical measures have been detailed in the safety plan.
39	Safety File - Safety Policies in File and Signed by 16(1) CEO.	Safety Policies must be signed and explained to employees.
40	Safety File - A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.	A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.
41	Safety File - Signed copy of the 37.2 Mandatary Agreement	A 37.2 Mandatary Agreement needs to be signed between the Client and the Principal Contractor.
42	Safety File - Appointment letter from Client (as well as 5.1.K)	The Client must appoint the Principal Contractor in writing.
43	Safety File – Notification / Permit	A copy of the Annexure 2 Notification (and proof of submission) to Department of Labour must be available. This can be in the form of a Department stamp, email, or copy of Construction Work Permit.



CONTROL MEASURES THAT MUST BE INCLUDED FOR SAFETY PLAN SUBMISSION PURPOSES:

Issues that must be included by the contractor in their COVID-19 safety plan response should include arrangements for the following (please note that reference to contractors' employees / staff / workers / personnel on site must include control of their (sub)contractors, visitors and suppliers):

Workplace Plan - A plan must be developed by the contractor for the phased in return of employees to site. Please refer to the latest regulations and amendments, all persons who are able to work from home should do so.

Coordination on Site Relating to COVID-19 matters - The contractor must appoint a **manager** to address employees concerns and keep them informed re COVID-19.

Additionally, the contractor must **designate a COVID-19 compliance officer** (required of all industries, businesses, entities, both private and in the public sector). This compliance officer is responsible for overseeing the following:

- implementation of the workplace plan; and adherence to the standards of hygiene and health protocols relating to COVID-19 at the workplace;
- developing a plan for the phased in return of their employees to the workplace, prior to reopening the workplace for business, which plan must correspond with Annexure E of the Disaster Management Act 2002 (as amended April 2020) and be retained for inspection and contain the following information:
 - which employees are permitted to work;
 - what the plans for the phased-in return of their employees to the workplace are;
 - what health protocols are in place to protect employees from COVID-19; and
 - the details of the COVID-19 compliance officer;
 - phase in the return of their employees to work to manage the return of employees from other provinces, metropolitan and district areas; and
 - develop measures to ensure that the workplace meets the standards of health protocols, adequate space for employees and social distancing measures for the public and service providers, as required.

Transportation to Site - Procedures for Transportation of Workers to Site – employees should be advised that if using transport, passengers must wear a cloth mask to be allowed entry into the vehicle. Hand sanitisers must be made available, and all passengers must sanitise their hands before entering. Public transport vehicles must be sanitised on a daily basis. Please note that the government mandated limit on passengers per vehicle must be strictly adhered to.

Site access - Entry to site may only be through pre-arranged security controlled access points. Contractor must detail how will members of public be prevented from accessing site (risk of cross contamination between persons working on site and members of public).

Provision of Visitors Book for signing in and out of site. Records of all personnel entering site and their contact details must be kept.

Screening on Site - Contractor to advise how will personnel on site be screened on a daily basis for symptoms of COVID-19, including a symptom check as well as temperature assessment (digital thermometer). The contractor must describe their procedure for employees on site, suspected of having COVID-19 symptoms, refusing to undergo **medical** examination, prophylaxis, treatment, isolation, and quarantine. Sites with more than 500 employees must have testing facilities.

Risk assessment and safety procedure - Contractor must provide a written policy concerning the protection of it staff from COVID-19. Contractor must compile a COVID-19 risk assessment and safety procedures for the site. How will it be communicated to all on site and records kept thereof. The Risk



Assessments must include the identification of exposure levels, identification of “high contact” activities, the identification of vulnerable workers and special measures for their protection, including protection against unfair discrimination or victimization.

Safety Signage and Hotline Number - Contractor to implement placement of COVID-19 safety signage and hotline number at site entrance and on site, warning of hazards and advising control measures (see samples in Annexure to this document). Please note that signage must be representative of the local languages.

Communication Procedures - Contractor to describe comprehensive induction and toolbox talk procedures to include COVID-19. Toolbox talks should be conducted weekly on COVID-19 control measures and risks on site, include personal hygiene - manner of controlling coughing and sneezing on site - in elbow.

Emergency Procedure - Contractor must describe communication of COVID-19 symptoms and protocol that must be followed if person demonstrates symptoms, or is thought to have COVID-19 - symptoms of COVID-19 include cough, sore throat, shortness of breath or fever/chills (or $\geq 38^{\circ}\text{C}$ measured temperature), redness of eyes, also additional symptoms – body aches, loss of smell or loss of taste, nausea, vomiting, diarrhoea, fatigue, weakness or tiredness. Contractor must advise personnel on site of the symptom reporting procedure to site management of COVID-19 symptoms, and referral protocol for screening or testing if showing symptoms.

Emergency COVID-19 protocol that must be put in place by Principal Contractor must include:

- Sick workers may not enter workplace.
- If sick worker already on site then worker must be isolated in designated area for isolation on site, provided with FFP1 surgical mask and transported for self-isolation or for medical examination or testing at identified testing site.
- Worker placed on sick leave.
- On receiving their results, the employee and/or health professional supporting the employee should notify their workplace so that the employee is managed accordingly. The workplace should proactively take steps to obtain this information to avoid any delays in reporting.
- Assess the risk of transmission, disinfect area and workers workstation, refer exposed workers for screening, etc.
- Lodge claim with Workman's Compensation if infection occupationally acquired.
- Worker may only return to work after undergoing a medical evaluation confirming worker has tested negative for COVID-19.
- Worker must be closely monitored for symptoms on return to work.
- If worker has been diagnosed with COVID-19 the employer must notify Dept of Health and Dept of Employment and Labour

NOTE THAT: personnel on site, or presenting themselves to site who appear sick, or have symptoms associated with COVID-19 may not be allowed on site.

Welfare and Washing Facilities, Sanitising and Disinfection - Contractor must describe provision of soap and clean running water and sanitisers at site entrance and at other locations on site. Correct manner of washing / disinfecting hands, 20 second rule. Use of paper towels only. Disinfection of work surfaces and equipment control procedures required - carried out before work begins, regularly during day and after work ends. Toilets, common areas, door handles, shared electronic equipment and any other shared equipment must be regularly cleaned and disinfected, biometric systems disabled or made COVID-19 safe.

Hand sanitiser must contain 70% alcohol.

Employees working away from home should be provided with hand sanitiser by the employer.



COVID-19 PPE on Site - Contractor must describe controls for wearing of PPE on site, including wearing of cloth masks on site - people working and visiting site must be instructed on the correct way of wearing cloth masks, procedure for maintenance and replacement of cloth masks. Surgical masks and N95 masks should only be worn by frontline health workers, not site staff. Note that some surgical masks should be kept on site to give to persons exhibiting COVID-19 symptoms prior to being taken away for testing.

Employer is required to provide each employee with at least 2 cloth masks and must make appropriate arrangements for washing, drying and ironing of cloth masks.

Supervision and Monitoring on Site - Monitoring systems must be in place by Contractor to ensure compliance with safety protocols and identify infections among employees - supervision monitoring and enforcement - how will it be done by the contractor?

Ventilation on Site - How will ventilation and air quality be made safe on site.

Waste Management - Sufficient refuse bins must be on site for disposal of tissues, used PPE. Procedure for safe removal of contents of bins; used PPE, other detritus should be made in contractors safety plan.

Social Distancing Measures - Contractor must describe, so far as practicable how can numbers of workers be minimised on site at any one time (e.g.: through staff rotation, staggered working hours, shift systems, remote working arrangements or similar to achieve social distancing? (1.5m). Note that contractor must minimise contact between workers themselves and workers and public.

Depending on what is reasonably practicable, site must be arranged so that there is distance of at least 1.5m between workers and members of public or put physical barriers in place or provide workers with face shields or visors.

COVID-19 Investigation procedure - Contractor must describe how will they investigate the cause of COVID-19 infection (including control failure and risk assessment review, checking of PPE requirements, admin support to contact tracing implemented by Dept of Health).

Important notes:

If more than 500 employees in contractors employ the employer must submit this risk assessment and written policy re health and safety of employees from COVID-19 to Safety Committee and Department of Employment and Labour.

Monitoring by the Safety Agent will be strict - noncompliance with COVID-19 control measures will be reported immediately to the principal contractor for action purposes. If necessary, transgressors will be removed from site for re-induction, or a recommendation for permanent barring from site will be made.

As this is an ongoing medical crisis it is likely that control measures to prevent the spread of the virus will be updated by the government on a regular basis. Hence the measures in this section of the safety specification will be reviewed on an ongoing basis, as we receive updated information from the government.



ANNEXURE B – LEGAL APPOINTMENTS

The contractor shall make the following appointments, as required:

Chief Executive Officer (OSH Act 16(1))
Contract Director/Manager (OSH Act 16(2))
Construction Manager (CR 8(1))
Construction Supervisor (CR 8(7))
Assistant Construction Supervisor (CR 8(8))
Construction Safety Officer (CR 8(5))
Traffic Safety Officer
Safety Representative (where > 20 employees on site)
Temporary work Designer (CR 12(1))
Temporary work Supervisor (CR12(2))
Construction risk assessor (CR 9(1))
Excavation Supervisor (CR13(1)(a))
Demolition Supervisor (CR14(1))
Scaffold Supervisor (CR16(1))
Suspended Platform Supervisor (CR17(1))
Material Hoist Inspector (CR19(8)(a))
Material Hoist Operator (CR19(6))
Bulk Mixing Plant Supervisor (CR20(1))
Bulk Mixing Plant Operator (CR20(2))
Controller of Explosive Actuated Fastening Devices Nails, Cartridges or Studs Issue and Collection (CR21(2)(g)(1))
Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))
Controller of Temporary Electrical Installations (CR24(c))
Stacking Supervisor (CR28(a))
Fire Extinguishing Equipment Inspector (CR29(h))
Fall Protection Plan Developer (CR 10(1)(a))
Incident Investigator (OSH Act 9(2))
Competent Person – Confined Spaces (GAR 5(1))
COVID 19 – Compliance Officer and COVID 19 – Manager (to address employees concerns and keep them informed re COVID-19)



ANNEXURE C - BASELINE RISK ASSESSMENT FOR PROJECT

Irrespective of the risk presented on site, it will be ensured that sufficient supervision is in place on site, that personnel are trained in accordance with legislation, including the requirement for site specific inductions on site to inform personnel on site of the risks and hazards applicable to the site. Site supervision is responsible for ensuring that the control measures required below are implemented on site.

	HAZARD	RISK	MINIMUM CONTROL MEASURES
1.	Bricklaying	Caustic contamination with mortar Contact with sharp bladed tools	• Use only trained personnel • Safe means of access to be provided • Safe/Suitable working platform required where working at height • PPE for mortar to include gloves where practicable and goggles/ masks where there is a risk of contamination
2.	Brush cutting	Injury from contact with blade/nylon Fire (where petrol used) Electrocution (where electrical tool used)	• Person using brush cutter must be trained and competent • Use personal protective equipment (PPE) such as goggles, safety boots, ear protection, gloves, hard hat • Brush cutter must be in good condition and maintained • Adequate supervision on site at all times. • No smoking when refuelling, fire extinguisher to be on hand (where petrol used as fuel source)
3.	Chainsaw Use	Falling tree or branches causing injury to persons Incorrect use of chainsaw causing injury	• Person using chainsaw must be trained and competent • Use personal protective equipment (PPE) such as goggles, safety boots, ear protection, gloves, hard hat, chainsaw trousers and jacket • Chainsaw must be in good condition including guards. • Clear area below area of chainsaw use and where tree felling. • When using chainsaw at height practice safety procedures.
4.	Compacting and Filling	Contact with tipping materials Contact with moving plant Vehicles/personnel falling into excavations Contact with underground services	• Trained banksman to control vehicles movement • Only trained personnel use plant • Personal Protective Equipment to be worn • Personnel to stand clear as materials are being tipped • Use stop blocks and signs to warn vehicles of excavations, where applicable • Stand clear of plant whilst materials are being compacted • Establish position of underground services and protect services from damage
5.	Compactor Operations	Crushing of feet	• Only trained and competent personnel to use the machine • Ensure operative wears steel toe cap shoes or boots at all times
6.	Confined Spaces	Suffocation Fumes	• Ensure that confined space is sufficiently ventilated • Wear personal protective equipment such as proper masks if air supply insufficient or not of sufficient quality • Test oxygen levels in confined space to ensure that is safe for entry • Ensure that emergency procedures in place



	HAZARD	RISK	MINIMUM CONTROL MEASURES
7.	Cutting Off Disc	Noise Cuts from machine Fire (particularly at refuelling) Flying debris Blade shattering Contamination by fume created or exhaust fume	- Use competent personnel. - Hot works control- fire extinguisher, fire watchman. (Permit may be required) - PPE to include gloves, eye protection, hearing protection - Solid working position. - Clear working area - Correct grade of blade must be used. - Good ventilation to be provided (forced if necessary). - Changing of wheels to be by competent persons only - Cut off discs must not be used for grinding (grinding disc thicker) - Bystanders to wear hearing protection, as applicable
8.	Demolition	Falling materials Premature collapse of structure	- Ensure there is a current method statement in place - Ensure all emergency procedures are in place and all details are displayed - Ensure that structural demolition has been approved by the designer and site management - Personnel must be competent - Ensure at all times there is a safe means of access and egress - All personnel must wear suitable and sufficient Personal Protective Equipment, including head, eye and skin protection
9.	Electric Tools and Electrical Installations	Electric shock Fire	- Electric tools and installations to be in good condition - Inspect electric tools before use - Do not use electric tools in wet/damp conditions - Use personal protective equipment such as insulated gloves - Electrical installations register to be maintained, inspected by competent person
10.	Excavations (Working in and around)	Toxic fumes Collapse of trench walls/trapping Falling into excavation Collapse of adjacent structures	- Deep excavations / monitor air for toxic fumes - Prevent collapse by battering back sides to a safe angle or install temporary support - Protect vehicles from falling into excavations – provide barriers, signage, etc. as necessary - Beware of undermining of other structures (e.g. buildings, scaffolds) - Record excavation inspections by competent person on daily basis - Provide suitable means of access/egress in case of emergency. - Excavations formed by explosives must be accompanied by method statement approved by Client
11.	Fire	Injuries to workers, pedestrians, residents, road users, damage to property through fire	- No littering on site which could become fire hazard, maintain site in clean condition. - No fires to be lit on site. Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices
12.	Flammable Liquids and Gases (Use of)	Fire Explosion	- No littering on site which could become fire hazard, maintain site in clean condition. - Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices - Equipment must be in good condition, maintained - Personnel using substances must be trained in safe use and risks



	HAZARD	RISK	MINIMUM CONTROL MEASURES
13.	Fragile Materials	Persons or items falling through fragile materials	- All fragile materials to be identified and protected prior to work commencing. - Protection to include either covering the fragile materials or excluding activity. - Any coverings to be secured in place - The location of the fragile materials to be indicated by signage
14.	Hand tools	Injuries caused by use of hand tool Impact with the tool Falls due to access problems Contamination with substance being worked	- Ensure: - Tool is correct for job - Tool is in good order and suitably sharp - Personnel must be competent/instructed in tool usage and tool safely - Lighting is sufficient - Access is safe, working platform is secure, leading edge is guarded - Operative is wearing all necessary PPE
15.	Hazardous Substances	Injuries to workers through use of hazardous substances, e.g. injuries to eyes, skin, etc.	- Use substances in accordance with data sheet, particularly reference protective clothing required (example: gloves, goggles, etc.) - Know what First Aid measures are - Have welfare facilities available for washing of hands, etc.
16.	Hot Works	Burns to eyes or other parts of the body	- Personal Protective Equipment to include eye, skin, and hearing protection - Respirator maybe be required where cutting galvanized steel or anywhere else toxic fumes and gases arise. Dust can also be a problem and forced ventilation may be required.
17.	Lifting Operations	Falling material Crushing by materials Hand injuries to the slinger Toppling crane	- Check test certificate - Check examination certificate - Check inspection have been carried out - Check certificates for lifting equipment (chains, slings, shackles, etc.) - Ensure lifting gear is rated to carry load (SWL) - Ensure materials being lifted are properly packaged and slung. - Be aware that there should be a minimum clearance of 600mm between any slewing parts of a crane and any fixed installation to prevent being trapped. - Access to the work area during lifting operations is to be restricted to those involved with and trained in the work in hand. Do not allow members of the public to gain access to the area. - Only trained banksmen to be used. - The crane driver and the banksmen are to ensure that the signals given are clearly understood.
18.	Manhole Rings and Pipes Storage	Rolling of rings Collapse of pipes Crushing of persons Stock pile collapse	- Manhole rings must be stored flat to prevent them being rolled. - Banks of pipe stock piles are not to be broken until they are ready for use. - Personnel must stand to the side when breaking bands so as not to be hit by falling pipes. - Pipes must be wedged to prevent rolling



	HAZARD	RISK	MINIMUM CONTROL MEASURES
19.	Manual Handling of General Items	Muscular skeletal injuries if the load is too heavy or awkward Operative falling/ tripping Contamination from the substance being carried Fall of material being carried	- Personnel should be aware of safe manual handling techniques - Personnel to wear Personal Protective Equipment when carrying items, e.g. safety footwear and gloves. - Ensure good housekeeping against tripping/fall hazards. - Operative to get assistance if load too heavy- team lift if necessary. - Utilise mechanical lifting and carrying aids where possible. - Personnel to ensure access equipment, ladders will take weight of operative and load being carried. - Personnel to ensure item being carried is properly bonded or is not be liable to break apart whilst being manually handled.
20.	Material Hoist	Mechanical failure Overloading Hoist gateway being left open at landings	- Safe working limit to be indicated on hoist. - Hoist operator to be trained/ competent. - Regular maintenance and inspection of hoist by competent person - Records of maintenance and inspection to be maintained. - Hoist gate should be fitted with mechanical and electrical interlocking devices.
21.	Members of Public – Protection of	Injury to member of public and road users from site works	- Barriers and signage to be in place - Workers must warn away any members of public from the works - Footpaths and bridges which are open to public must be closed off if in area of works or otherwise made safe so that no injury occurs to members of public - Traffic turning into site – traffic management and signage as required. - Signage to be on road at site entrance warning motorists that construction traffic turning into/out of site access. Keep roads free of mud where possible - Refer to plant risk assessment for details on plant safety precautions - NOTE: SIGNAGE TO BE POSTED ON SITE TO WARN OF CONSTRUCTION TRAFFIC MOVEMENTS. SAFE MEANS OF ACCESS FOR BOTH CONSTRUCTION TRAFFIC TO SITE AND PRIVATE HOMEOWNERS MUST BE AGREED.
22.	Mobile Crane Erection and Dismantling and Use	Collapse of structure Overturning of structure Falling materials	- Ensure emergency procedures are in place and all operative are aware of the details - Only use trained and competent operators for the erection and dismantling and use of cranes - Ensure crane driver is trained and holds certification as proof. Must have valid medical certificate of fitness. - Ensure there is safe means of access available at all times - Ensure the mobile crane driver has 360° vision if not ensure a fully trained banksman is used - Banksman to wear reflector vest to identify himself to the crane driver - Ensure all personnel wear suitable and sufficient personal protective equipment - Consider creating exclusion areas
23.	Night Work	Security Lighting	- The Contractor shall not undertake any night work without prior arrangement and a written permit from the Client. - The Contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped.



	HAZARD	RISK	MINIMUM CONTROL MEASURES
24.	Noise and Dust	Breathing in dust can cause long term health problems, noise can damage hearing	- Wear respiratory and hearing protection - Dampen down and minimise dust where possible.
25.	Overhead Services (Working near)	Contact with live services causing injury to personnel Damage caused to services	- Maintain safe clearance levels - Establish presence of any services via proper walk through survey of site and/or means of service drawings - Wear personal protective clothing - Ensure height of plant/vehicles does not compromise or exceed clearance levels for overhead services - Obtain information on clearance levels from service provider
26.	Painting	Contact with paint	- Refer to safety data sheet for usage instructions, hazards and precautions required. - When working at height, refer to risk assessment addressing this hazard below.
27.	Plant or Vehicles and Equipment Operation	Workers injured by passing traffic Road users and pedestrians at risk from plant operation Noise	- Implement traffic protection measures - Trained and competent operators must be used - Check plant and vehicles on daily basis before use and record inspections. Maintain vehicles in safe condition. - Medical certificates of fitness required for construction plant. - Crossing of road by construction vehicles or machines must be limited to the practical minimum - Plant and vehicles must be fitted with amber rotating beacons and reverse alarms. - Wear appropriate protective clothing/equipment, e.g. goggles, gloves, ear defenders, etc. as appropriate.
28.	Plastering	Falling materials Fall from height Contact with materials	- Ensure standard safety procedures are followed - Ensure there is a safe working area - Ensure safe access and egress - Ensure competent personnel are used
29.	Scaffold Erection/ Dismantling	Personnel falling from a height Items of scaffold falling onto personnel Scaffold collapsing onto those below	- Ensure - scaffold is designed to take the imposed loads - scaffolding is constructed properly - scaffold is not overloaded - scaffolders are fully trained - scaffolding is regularly checked by competent person and record of inspection retained. Written inspections to be recorded on weekly basis - scaffolders must adhere to the safe systems of work. - all fall arrest equipment to be checked and certified in good working order - that ALL understand the safe system of work
30.	Site Strip	Overturning Vehicles	- Follow standard safety procedures - Only use trained and competent personnel - Ensure there is a suitable and safe means of access and egress - Ensure banksman used when required - Ensure all personnel wear suitable reflector vests as required
31.	Snakes	Snake bite	- Qualified first aider required for site who can treat snakebite - Snake bite kit to be on hand - Check area before working - Find out nearest hospital and get emergency telephone numbers.



	HAZARD	RISK	MINIMUM CONTROL MEASURES
32.	Temporary Works – shoring, scaffold, falsework, formwork	Collapse of form work	- Wear personal protective equipment such as gloves and goggles - Formwork must be built by trained person and also be inspected by competent person and results entered into register on site
33.	Tower (Mobile Aluminium Tower) Scaffold	Over Turning Falls	- Tower to be on firm level ground with wheels or feet properly supported. - Height not to exceed 3 times the base dimension. i.e. 2x3m Base Tower not exceed 6m. - Erection by competent person - Inspection before first use - Weekly record of inspection required - Guard rails and Toe boards as per normal scaffolds - Beware when moving of overhead obstructions, such as power lines - Never move in strong winds
34.	Underground Services	Striking of buried services	- Make all necessary enquiries to establish what services are in the area. Consult drawings and advice from service provider (e.g. Municipality or ESKOM) when planning work. - Assume all service to be live (Unless confirmation is received to confirm that services are isolated or otherwise made safe). Do not work near live services without authorisation from site management. - Comply with the requirements of the safe system of work for underground services. - Where available, locate services with a locator - Hand dig around services
35.	Working at Height	Personnel falling form height Falling debris Those beneath being injured	- All access equipment is properly constructed (inspections record must be maintained) - Only trained personnel construct, dismantle or control the access equipment - All access equipment must have full toe boards and guardrails - comply with SANS 10085 on erection, use and dismantling of scaffolding - No access equipment may be loaded above the level of the guardrail - No access equipment to be loaded above its safe working load - Where work involves leaning out on an open leading edge, then all personnel are to be fitted with full body harness. The harness must be connected at all times - All fall arrest equipment to be correctly maintained - Ensure if ladders are being used for access, they are either footed or tied. Also, the ladder must be set at the correct level of 1 in 4 or approximately 75°
36.	Work over or next to Water	Drowning	- Evaluate depth of water, height above water that work takes place, whether workers can swim or not and then determine safety precautions required: these may include such measures such as barriers, signage, life belts, safety harnesses, etc. - When working on river/harbour/dam edge - erect life saving devices and barriers to protect workers and vehicles (stop blocks may also be required). Only trained and competent persons to be used.
37.	Working with Effluent	Contact with effluent causing sickness or disease	- ensure good hygiene facilities - personnel to be competent in work activity - personnel to wear appropriate personal protective equipment such as goggles, overall, gloves and goggles



	HAZARD	RISK	MINIMUM CONTROL MEASURES
38.	Include any other items not included in above into this section	Include any other items not included in above into this section	Include any other items not included in above into this section



ANNEXURE D - BASELINE RISK ASSESSMENT FOR PROJECT – COVID-19

It must be ensured that sufficient supervision is in place on site, that personnel are trained in accordance with legislation, including the requirement for site specific inductions on site to inform personnel on site of the COVID 19 risks and hazards applicable to the site. Site supervision is responsible for ensuring that the control measures required below are implemented on site.

No.	HAZARD	MINIMUM CONTROL MEASURES
1.	COVID-19 - Contracting COVID-19, person to person transmission	- Do not share tools / equipment, crockery/cutlery/towels/bedding or anything that can facilitate the spread of the virus. - Masks have not been proven to definitively protect against every contagion. However, masks prevent a person from unconsciously touching their eyes, nose and mouth, so they may offer a measure of protection. Masks are for single use only, not to be worn two days in a row. - Avoid touching your eyes, nose, and mouth and shaking hands with others. - Cough or sneeze into a tissue and dispose thereof safely into a bin provided. - Wash your hands frequently with soap and running water for no less than 20 seconds. If you have none available use a hand sanitizer with at least 70% alcohol. - Apply social distancing principles, stay at least 1.5m away from people/employees where possible. - Avoid crowds and gatherings. - Clean frequently touched objects/surfaces. - The following cleaning products can be used: Hypochlorite (e.g. Household Bleach) Alcohol (70%) Hydrogen Peroxide Phenolic Compounds Quaternary Ammonium Compounds

No.	ACTIVITY	HAZARD	MINIMUM CONTROL MEASURE
2.	Site Preparation	Site might be infected with COVID-19 contagion during lock down	- Inspect the site to assess conditions. Revise any policies, method statements for risks and hazards identified for review. - Decontaminate the site, in affected areas, ensure the availability of hand washing facilities and sanitizers, throughout the site, and at entrances. Ensure sanitising and hand washing facilities are available at ablution areas, common eating areas, offices, canteens, security
3.	Occupational Health	Older workers of 60+, workers with underlying auto-immune or chronic diseases are at increased risk of infection (note that workers may be symptom free but infected with COVID-19)	All workers are to be screened and have a valid certificate of fitness on return to work. A full questionnaire to be completed daily before entry on site, and those identified as high risk, or exhibiting flu like symptoms, must be separated and refused entry to site until declared symptom free by a medical practitioner.
4.	Labour	Underlying auto-immune or chronic diseases, socio-economic status, having to use public transport to get to work	- A full questionnaire to be completed daily before entry on site, and those identified as high risk, or exhibiting flu like symptoms, must be separated and refused entry to site until declared symptom free by a medical practitioner. - Daily temperature readings to be taken on entry to site; Induction, toolbox talks to be done daily on topics relating to COVID-19, personal hygiene and PPE. Strict enforcement on use of PPE - Public traffic must comply with government guidelines re wearing of masks and sanitising requirements.

No.	ACTIVITY	HAZARD	MINIMUM CONTROL MEASURE
5.	Transportation (Public and on Site)	Maximum allowed capacity exceeded; No facilities for sanitising vehicles and passengers; No additional protective measures available, e.g. face masks; Unlicensed drivers and operators	Selection and provision of transport services compliant with gazetted requirements; Policy and procedures and rules for travel, where possible to limit the use of public transport, or to arrange selective methods of transport, ongoing toolbox talks and supply of cloth masks to be worn when travelling or moving on and off site. Vehicle occupancy maintained at 70% capacity or less; Vehicles sanitised between trips; hand sanitiser provided for passengers.
6.	Social Distancing	Many construction tasks require more than 1 worker that will be required to work within the limit of 1,5m Access/Egress to and off site; Welfare facilities, Meeting areas	- Demarcation and spacing of queueing areas; segregation of queueing areas and public outside site perimeters; Meeting/eating areas large enough to maintain 1.5m distance at maximum occupancy. - Only essential workers to spend time on site, Staggered meeting/eating times, use of Zoom, Skype, Microsoft Teams for meetings where necessary. Individual, segregated facilities for safe keeping.
7.	Waste Management	Spreading of virus and contact with virus causing infection from handwashing, drying hands, cleaning equipment, disposal of contaminated waste and other related aspects	Establish and follow protocols for disposal of potentially infected waste (receptacles). Awareness through notices (posters) regarding correct procedures of waste disposal. Competent supervision and adequate awareness training required. Provide adequate supplies of material and consumables, provision of sealable disposal containers/bags through appropriate waste removal company. Provide adequate supply of paper towels. If contractors used ensure appropriate management.
8.	Signage	Unauthorised entry to site and work areas compromising workers health (contamination). Acts and behaviour that compromises worker	Installation of posters and signage with the site rules and protocols that need to be maintained at strategic points. Competent supervision and adequate awareness training required. Disciplinary steps to be taken against transgressors.
9.	Welfare Facilities	Spreading of virus and contact with virus causing infection	- Limiting of personnel on site to minimum number required to maintain control and management. Implement and maintain cleaning and disinfecting programme. - Site rules for social distancing to 1.5m. Use technology to avoid proximity between individuals where possible
10.	Use of Personal Protective Equipment	Risk of spread of droplet infection through coughing, sneezing when in close contact with other people	- No employee/ visitor will be allowed on site without a cloth mask. Adequate training must be provided in the correct use and disposal of these masks. Cloth masks must be washed and ironed. Where possible face shields should be used to protect mouth, nose and eyes. Regular cleaning of face shields required. - No sharing of PPE will be permitted. Adequate supervision required. COVID PPE does not replace conventional PPE.

ANNEXURE E - COVID-19 SITE SAFETY SIGNAGE





ANNEXURE F – GUIDELINES TO HEALTH AND SAFETY BILL OF QUANTITIES

DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				R	C
Preparation of principal contractor's site specific health and safety plan, safety file, risk assessments, fall prevention/protection plan, Annexure 2 notification to Dept of Labour, demolition method statement, other method statements requested to be prepared for safety reasons, permits, amendments to safety plan during course of project, traffic management / accommodation plans, and any other legally required health and safety documentation	Lump sum	Lump sum			
Provision of safety documentation required of the principal contractor for Construction Work Permit application by the safety agent of Dept of Labour, if applicable (note section 2.4 of this safety specification document)	Lump sum	Lump sum			
Provision of current workman's compensation cover for employees for the project, and ensuring that contractors appointed have such cover too	Lump sum	Lump sum			
Health and safety management of principal contractor's employees, visitors and contractors' employees on site.	Lump sum	Lump sum			
Provision of full time Construction Manager for site, provision of Alternate Construction Manager in absence of Construction Manager and provision of sufficient safety supervision on site	Lump sum	Lump sum			
Provision of full time/ part time SACPCMP registered Construction Health & Safety Officer for site (refer to safety specification for full time / part time requirement) and preparation of safety reports after each safety inspection	Lump sum	Lump sum			
Competence assessment, appointment and required competence and safety training of all principal contractor's legally required appointments for site	Lump sum	Lump sum			
Maintenance of principal contractor's plant and equipment on site so as to be in safe condition, including inspection registers, inspections by competent persons, thorough examination certificates, hand over certificates and related documentation	Lump sum	monthly			
Provision of general safety signage (e.g. first aid, firefighting, traffic safety, excavations, PPE, Assembly Point, noise zones, etc.)	Lump sum	monthly			



DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				R	C
Provision of medical certificates of fitness for employees on site (Annexure 3)	Lump sum	Lump sum			
Provision of personal protective equipment (PPE) by principal contractor to employees and, as applicable, visitors to site, incl. • reflective vests • hard hats • protective foot wear • hearing protection • respiratory protection • safety eyewear • gloves • overalls • Safety harnesses and lanyards • Sunblock • UV Protective clothing / hats / eye wear • Protective thermal wear (heat / wind / cold / rain) • Protective firefighting clothing • Arc flash and electrical protective clothing	Lump sum	Lump sum			
Provision of Fall Prevention and Protection Equipment including. • Rope • Lifelines & Self-Retracting Lifelines (SRL) • Anchor Points • Warning Lines & Area demarcation • Fall Arrest Accessories • Fall Rescue Equipment • Passive Fall Protection Equipment • Confined Space Rescue and Retrieval (In elevated work situations) • Etc.	Lump sum	Lump sum			
Provision of Confined Space work equipment & Training • Training • Air Monitoring Equipment • Ventilation Equipment • Entry Equipment • Personal Protective Equipment • Confined Space Rescue and Retrieval Equipment • Communication Equipment • Etc.	Lump sum	Lump sum			
Holding of safety meetings with safety representatives and safety officers on site on at least monthly basis	Lump sum	monthly			



DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				R	C
Principal contractor construction safety management attendance at health and safety meetings called by client, professional team or safety agent	Lump sum	monthly			
Provision of site specific health and safety induction training for all on site	Lump sum	Lump sum			
Conducting of toolbox talks to employees on health and safety issues on a weekly basis	Lump sum	Lump sum			
Provision of sufficient First Aiders for site as per legal requirements	Lump sum	Lump sum			
Provision of First Aid Boxes for site as per legal requirements	Lump sum	Lump sum			
Provision of sufficient fire extinguishing equipment for site	Lump sum	Lump sum			
Fire drills on site at least 6 monthly basis for duration of project	Lump sum	Lump sum			
Provision of welfare facilities for site (drinking water, toilets, soap, means of drying hands, toilets paper, sheltered eating areas, etc.)	Lump sum	Lump sum			
Provision for safe disposal of waste, spill kits, safe housekeeping and storage practices	Lump sum	Lump sum			
Provision of leading edge protection, covers to prevent falls	Lump sum	Lump sum			
Provision of fencing at site camp and to protect excavations	Lump sum	Lump sum			
COVID 19 measures – provision of hand sanitiser, respiratory protection (as required), safety signage, formal and informal communication to all on site and any other measures necessary to contain and detect COVID 19 on site (refer to safety specification)	Lump sum	Lump sum			
Compilation of consolidated Safety File at Close Out stage and handover of file to safety agent in hard copy or digital format	Lump sum	Lump sum			
Supply of safety caps on all exposed re-bar	Lump sum	Lump sum			
Any other compliance item in site specific safety specification issued by project client/ safety agent with potential cost implication	Lump sum	Lump sum			
• Item 1					
• Item 2					
• Item 3					
• Item 4					
• Item 5					
Principal contractor's general compliance with respect to the Occupational Health and Safety Act, Construction and other health and safety Regulations apart from other provisions in this bill.	Lump sum	Lump sum			
SUMMARY TOTAL OHS COST PROVISION					



**ANNEXURE G – SAFETY SPECIFICATION AND BASELINE RISK ASSESSMENT
ISSUE REGISTER**

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06 October 2020	Dawid Naude	08 October 2020

Revision Summary	Revised By	Revision Date
Rev 1	JG Afrika / SWP	May 2021
Rev 2	JG Afrika / SWP	June 2022

Acknowledgement:

I, _____ representing
_____(Contractor), have satisfied myself with the content of this Health and Safety Specification and shall ensure that our employees and contractors on site comply with the requirements of this document, our safety documentation and health and safety legislation.

Signature of Contractor

Date

Comments:
