

Client: South African National Space Agency	Construction Project Health and Safety Specifications	Form: FRM-SPEC-004 Date: 01.04.2024 Rev.no. #3
Project: Matjiesfontein Ground Station		



CONSTRUCTION HEALTH AND SAFETY SPECIFICATION

October 2024

SOUTH AFRICAN NATIONAL SPACE AGENCY
MATJIESFONTEIN GROUND STATION

Rev1: SANSA Amendments (16 March 2025)

SCOPE OF WORK SUMMARY:

NEW BUILD STRUCTURES
CIVIL INSTALLATION GREENFIELD

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CONSTRUCTION HEALTH AND SAFETY SPECIFICATION

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1. Introduction & Background

1.1 Objective

- 1.1.1 The objective of this Health and Safety Specification is to provide an outline for achieving compliance with specific health and safety controls, the requirements of the Occupational Health and Safety Act 85 / 1993 and associated Regulations, with specific reference to the Construction Regulations (GNR.84 of 7 February 2014). The Principal Contractor is to commit to maintaining excellence in their activities to the benefit of the Client/s, employees, communities, the environment and is to utilise Health and Safety management principles as part of their normal operations.

1.2 Scope

- 1.2.1 Compliance with this document does not absolve the Principal Contractor from complying with minimum legal requirements and the Principal Contractor remains responsible for the health and safety of his employees and those of his Mandataries.
- 1.2.2 This Health & Safety Specification shall act as the basis for the drafting of the construction phase Health & Safety plan.
- 1.2.3 This Health and Safety specification is designed to assist in the development of a Health and Safety program addressing all aspects of Occupational Health and Safety as affected by this project.
- 1.2.4 It provides the requirements Principal Contractors and other Contractors shall comply with in order to reduce the risks associated with this project which may lead to incidents causing injury and/or ill health or pose any danger to the environment.
- 1.2.5 The scope addresses legal compliance, hazard identification and risk assessment, risk control and promoting a health and safety culture amongst those working on the project.
- 1.2.6 The specification makes provision for the protection of those persons other than employees.
- 1.2.7 All Contractors engaged by the Principal Contractor are to receive and acknowledge receipt of the relevant sections and adhere to this Health and Safety specification.
- 1.2.8 Principal and other Contractors should therefore insist this part of the Specification form part of any contract they may have with other Contractors and/or Suppliers.

1.3 Definitions

- 1.3.1 The definitions as listed in the Occupational Health and Safety Act 85 / 1993 and Relevant Regulations shall apply unless otherwise stipulated.
- 1.3.2 Any reference to "The Contractor" includes - the Principal Contractor and Contractor unless otherwise stipulated.

1.4 Application

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- 1.4.1 This Health & Safety Specification is as far as is reasonable practicable based on the applicable legislative requirements as required.
- 1.4.2 The Client or his/her duly appointed representative reserves the right to stop any contractor from working whenever Safety, Health or Environmental requirements are being violated.
- 1.4.3 Any resultant costs of such work stoppages will be for the Contractor's account.
- 1.4.4 The requirements as specified by the Client or his/her duly appointed representative, in this document must not be deemed to be exhaustive and the Client or his/her duly appointed representative reserves the right to make changes as may be required from time to time.
- 1.4.5 Any such changes shall be communicated to the Principal Contractor as soon as is reasonable practicable in any recognised manner possible.
- 1.4.6 The Client will not entertain any claim of any nature whatsoever which has resulted in costs incurred or delays being experienced due to the Contractor not complying with the requirements of this document or any other applicable legislative requirements imposed on the Contractor.

1.5 Incentives and Penalties

- 1.5.1 Any incentive scheme/s are left to the discretion of the Principal Contractor / Contractor.
- 1.5.2 Non-compliance with this Health & Safety Specifications may result in work stoppages and possible expulsion from site until the required remedial action has been affected.
- 1.5.3 Costs of any work stoppage being issued will be for the account of the Principal Contractor / Contractor.
- 1.5.4 Non-Conformance Reports (NCR) will be issued by the Client to the Principal Contractor for ongoing non-compliance findings during the monthly site OHS audits and document review i.e. to the provisions of the construction-phase Health and Safety Plan as submitted by the Principal Contractor. The Principal Contractor will be required to show evidence within **7 days** that these have been addressed in the form of a Corrective Action report (CAR).
- 1.5.5 *It is the at the discretion of the Client as/when penalties will be imposed. The scope of this will be agreed upon at project outset in consultation with the Principal Contractor*

1.6 Legal requirements

1.6.1 The Principal Contractor shall, as a minimum, comply with:

- 1.6.1.1 The Occupational Health and Safety Act 85/1993 and the Construction Regulations, the latest up-to-date copies thereof shall be available on site at all times
- 1.6.1.2 Hazardous Substances Act, Act No 85 of 1973
- 1.6.1.3 National Road Traffic Act, Act No 93 of 1996
- 1.6.1.4 Prevention of Environmental Pollution Ordinance 21 of 1981
- 1.6.1.5 Water Services Act, Act No 108 of 1997
- 1.6.1.6 Or any other Act passed in substitution of the abovementioned
- 1.6.1.7 All Contractors shall comply with the "Integration Labour Law Act" and regulations
- 1.6.1.8 All relevant Municipal bylaws and National Building Regulations

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- 1.6.1.9 The Immigrations Act 2002 as amended and shall further ensure that no illegal aliens are employed on the construction site.
- 1.6.1.10 The Compensation for Occupational Injuries and Diseases Act (Act 130 of 1993).
 - 1.6.1.10.1 The Principal Contractor warrants his and all his workmen are fully covered in terms of the Compensation of Occupational Injuries and Diseases Act 130 of 1993 and such cover shall remain in force for the duration of the contractual relationship with the Client or whilst working on the Client's premises or premises under the Client's control.
 - 1.6.1.10.2 The Principal Contractor shall supply proof of such insurance cover to the Client with his / her tender submission.
 - 1.6.1.10.3 Proof of Good Standing will be maintained in the onsite Health & Safety file by means of a duplicate letter from the relevant insurer
 - 1.6.1.10.4 The Principal Contractor undertakes to ensure all Contractors appointed by him / her will be fully covered in terms of the Compensation of Occupational Injuries and Diseases Act 130 of 1993 and such cover shall remain in force for the duration of their contractual relationship with the Contractor
 - 1.6.1.10.5 The Principal Contractor shall ensure he / she has additional insurance cover which will adequately make provisions for any losses and / or his / her employee's acts and / or omissions whilst working on the Client's premises or on premises under the Client's control?
- 1.6.1.11 Relevant National and or Provincial Environmental Legislation as applicable to the project and scope of work.
- 1.6.1.12 Relevant Municipal bylaws and or other requirements which are applicable.
- 1.6.1.13 All other requirements as may be applicable from time to time.

1.7 Principal Contractor

The Principal Contractor carries prime accountability & responsibility for the health and safety of his/her employees & his/her contractors within his/her working area, as contemplated by Section 37(2) of the OHS Act. None of the additional safety requirements specified by the Client/Agent reduces the Principal Contractor's accountability and responsibility for the health and safety of his employees and Sub-contractor employees within his working area. The Principal Contractor remains an employer in their own right and consequently responsible for the implementation and management of all requirements as per the applicable legislations.

1.8 Principal Contractor and Contractor Supervision

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 contemplated in regulation 5(1)(b), 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 Agent or a Contractor; and

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- 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 contemplated in regulation 5(1)(b) 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 under CR 5(1)(k) or CR 7(1)(c)(v);
- Take reasonable steps to ensure that each Contractor's health and safety plan contemplated in sub-regulation (2)(a) 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 Specification 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; and
- Discuss and negotiate with the Contractor the contents of the Health and Safety Plan contemplated in sub-regulation (2)(a), and must thereafter finally approve that plan for implementation;
- Ensure that a copy of his or her health and safety plan contemplated in paragraph (a), as well as the Contractor's Health and Safety Plan contemplated in sub-regulation (2)(a), is available on request to an employee, an inspector, a Contractor, the Client or the Client's Agent;
- Hand over a consolidated health and safety file to the Client upon completion of the construction work and must, in addition to the documentation referred to in sub-regulation(2)(b), 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 in terms of paragraph (c)(v) and sub-regulation (2)(b), 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; and
- 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.

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- Any specific task which poses a high risk such as ropes access, mobile plant e.g.: cranes, cherry pickers, scissor lifts, scaffold erecting, excavation, lifting operations etc, provide competencies and are retained in the health and safety file for the duration of the project.

The appointed 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 contemplated in regulation 5(1)(b) and provided by the Principal Contractor in terms of sub-regulation (1)(a), 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 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; and
- 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.
- (3) Where a Contractor appoints another Contractor to perform construction work, the duties determined in sub-regulation (1)(b) to (g) that apply to the Principal Contractor apply to the Contractor as if he or she were the Principal Contractor.
- A 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 contemplated in sub-regulation (6) and such records must be made available on request to an inspector, the Client, the Client's 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.
- Description of the objective / scope of work
- Sequence of work / safe work method statements
- Hazard identification & risk assessment (prior to commencement of work)
- Precautionary / preventative measures that are to be taken.
- Identification of sensitive features that may be impacted upon by the project.

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Management and Supervision for this Project

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.

(2) 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.

(3) Where the construction manager has not appointed assistant construction managers as contemplated in sub-regulation (2), 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 under sub-regulation (2).

(4) No construction manager appointed under sub-regulation (1) 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.

(5) 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.

(6) 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

(7) A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.

(8) 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 contemplated in sub-regulation (7), 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 any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties in terms of this regulation.

(9) Where the Contractor has not appointed an employee as contemplated in sub-regulation (8), 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, and those employees must be regarded as having been appointed under sub-regulation (8).

(10) No construction supervisor appointed under sub-regulation (7) 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 under sub-regulation (7) on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

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Principal Contractor and Contractor Safety Officer

The contractor shall appoint a full-time Health and Safety Officer for the duration of the contracted work.

The Contractor's Health and Safety Officer shall be in possession of a valid registration certificate with the Regulatory Body –South African Council for the Project and Construction Management Professions (SACPCMP) as a CHSO–, hold a Diploma/Degree/Btech in Safety Management/Environmental Health and have 5 years' experience as a construction Health & Safety Officer. CV & formal qualification certificates and a valid SACPCMP certificate should be provided and copies to be retained thereof in the Contractor's health and safety file and made available on request by the client.

The Contractor's Health and Safety Officer shall assist and support the Contractor's Construction Manager as well as Construction Supervisor to ensure that the Contractors Health and Safety responsibilities are fulfilled and compliance to the Health and Safety specifications and OHS Act 85 Of 1993 and regulations.

Principal Contractor / Contractor - Competency

The Principal Contractor must demonstrate that it has a suitable and sufficiently documented OHS Plan and that its Contractors have the necessary competencies and resources to perform the construction work safely.

The Principal Contractor and Contractors must therefore submit the following documentation for verification by the Client and Principal Contractor respectively:

- Organogram (Site Specific)
- Registration with the Compensation Commissioner or FEM;
- Proof of management training on the Occupational Health & Safety Act and other related training;
- Any previous convictions under the OHS-Act;
- Your Company's previous two years injury claims as reported to your workman's compensation insurer;

The Principal Contractor and all Trade Contractors' competent persons for the various risk management portfolios will provide proof of competencies, attached to the appointment letter. A short CV is a good example of proof of competency.

The Principal Contractor as well as subcontractors shall ensure that all their appointees are made aware of their accountabilities & responsibilities in terms of their appointment, and to advise and assist these appointees in the execution of their duties.

Costs for OHS -Compliance (CR 7) All parties bidding to work on this construction project must ensure that they have made adequate provision for the cost of complying with these specifications as well as with the OHS-Act 1993 and incorporated Regulations as a minimum requirement in their tender documentation. It must also be taken into consideration that time is money. That implies that sufficient time must be allowed for the implementation of the minimum OHS standards. No additional claims will be entertained at a later stage if a compliance requirement was prescribed in the OHS-Act, 1993 and incorporated regulations or this specifications document. Refer to OHS Bill of Quantities template herewith for a breakdown of possible safety costs. This is to be submitted with tender.

1.9 Contractors and their contractors Written Agreements

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- 1.9.1 All contractors and service providers are employers in their own right and must therefore comply with all relevant legislation.
- 1.9.2 The Principal Contractor shall ensure all Contractors under their control comply with this Health & Safety Specification, the Occupational Health & Safety Act 85 / 1993 and associated Regulations and all other relevant legislation relating to their activities directly or indirectly.
- 1.9.3 **A letter of approval in terms of Construction Regulation 7(1)c MUST be submitted to the Client prior to the sub-contractor coming onto site.**
- 1.9.4 The Contractor, when appointing other Contractors as 'Sub-contractors', shall *mutatis mutandis* ensure compliance.
- 1.9.5 The Principal Contractor shall ensure written agreements are in place which shall ensure both parties comply with terms and conditions of all relevant legislation.
- 1.9.6 The written agreement will include the requirements of Section 37(2) of the Occupational Health & Safety Act 85 / 1993 and the Construction Regulations 7(1)(c)(v) contained within the Occupational Health & Safety Act 85 / 1993; ensuring both parties fully understand their obligations under the terms of the legislation.
- 1.9.7 The agreements will be in writing and signed by both the Competent person/s of the organisations or their appointed representatives.
- 1.9.8 The agreements will be kept on record at the location where the work is to be carried out.
- 1.9.9 No work may commence until a written agreement and associated documentation is in place.
- 1.9.10 On completion of the project copies of all agreements will be included in a consolidated Health and Safety File to be submitted to the client.
- 1.9.11 Originals will be returned to the Offices of The Principal Contractor, and stored for a period as stipulated by contractual conditions.

1.10 General Occupational Health & Safety provisions

- 1.10.1 As required by Construction Regulation 7(1)(b) & 7(2)(b), the Principal Contractor and other Contractors shall each keep an OH&S file on site.
- 1.10.2 The following list is not exhaustive and shall only be used as a guide to ensure all applicable documentation is available in the site OH&S file:
 - Notification of construction work (Construction Regulation 4)
 - Proof of registration and good standing with COLD Insurer (Construction Regulation 5(1)(j))
 - OH&S plan and Fall Protection/Rescue Plan agreed with the Client including the underpinning risk assessment/s and safe work method statements (Construction regulation 7(1)(a))
 - Copies of OH&S committee and other relevant minutes
 - Approved Designs/drawings (Construction Regulation 6(1) & 6(2))
 - A list of Contractors including copies of the agreements between the parties and the scope of work being done by each Contractor (Construction Regulation 7(1)(f))
 - Appointment/designation forms together with all relevant competencies.
 - Compliance registers or inspection checklists.
 - SDS's for relevant hazardous chemical substances.
 - Hand over certificate after any scaffold declared safe for use (according to the SANS 10085 standards).

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- Pull or load test certificates of anchor points.
- Hot works permit (Client and PC agreement).
- Pavement Permit (as required).
- Detailed Load chart for lifting operations.

2. Minimum Administrative Requirements

2.1 Notification of Construction Work (CR 4)/Construction Work Permit (CR 3)

- 2.1.1 The Principal Contractor shall, where the contract meets the requirements, notify the Department of Labour in the area in which this work will be conducted, of the intention to carry out construction work.
- 2.1.2 A copy of said Notification (Annexure 2 in the Construction Regulations) shall be made available in the on-site Health & Safety file together with proof of transmission and receipt to the local Department of Labour.
- 2.1.3 A copy shall be forwarded to the Client for record keeping purposes.
- 2.1.4 Where the Client has provided for a Construction Work Permit, a copy must be retained in the Principal Contractor's site safety file and the number as issued by the DoEL must be displayed conspicuously at the main entrance to the site for which the number is assigned.

2.2 Occupational Health and Safety Policy

- 2.2.1 The Principal Contractor and all Sub Contractors shall submit a Health and Safety Policy signed and dated by their Chief Executive Officer.
- 2.2.2 The Policy must outline objectives and how they will be achieved and implemented by the Company / Contractor.
- 2.2.3 A copy of such policy must be included in the Site Safety Plan and the Site Health and Safety File.
- 2.2.4 This Policy must be communicated with the staff and is to be signed by everyone as proof of training and retained in safety file on site.

2.3 Alcohol and other Drugs Policy

- 2.3.1 The Principal Contractor and all Sub Contractors shall submit a Policy signed by their Chief Executive Officer outlining the stance on alcohol and other drugs.
- 2.3.2 No alcohol and / or any other drugs will be allowed on site. No person may be under the influence of alcohol or any other drugs while on the construction site.
- 2.3.3 Any person on prescription drugs must inform his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suffering from any illness/condition which may have a negative effect on his/her safety performance must report this to his/her superior, who shall in turn report, this to the Principal Contractor forthwith.
- 2.3.4 Any person suspected of being under the influence of alcohol or other drugs must immediately be removed from site. A full disciplinary procedure may be conducted by the Principal Contractor or Sub Contractor in terms of the necessary Labour Legislation and a copy of the disciplinary action must be forwarded to the Principal Contractor for his records.

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- 2.3.5 This Policy must be communicated with the staff and is to be signed by everyone as proof of training and retained in safety file on site.

2.4 HIV / AIDS Policy

- 2.4.1 The Principal Contractor and all Contractors are to outline their Policy as regards the understanding and support offered to all employees who may be affected by HIV / AIDS.
- 2.4.2 This Policy is to be signed by their Chief Executive Officer.
- 2.4.3 This Policy must be communicated with the staff and is to be signed by everyone as proof of training and retained in safety file on site.

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

- 2.5.1 The Principal Contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations to assist in the management of Health, Safety and Environmental control.
- 2.5.2 These appointments are to form part of the onsite Health & Safety file.
- 2.5.3 Any appointments shall be in writing and the responsibilities clearly stated. This information shall be communicated to and agreed to with the appointees. All changes shall also be communicated to the Client or the duly appointed Agent.
- 2.5.4 In the absence of a mandatory appointment, appointments will be made to ensure Health, Safety and Environmental control is effectively maintained.
- 2.5.5 Contractor's competent persons for the various Health, Safety and Environmental management portfolios shall fulfil the criteria as stipulated under the definition of "competent person" as outlined in the Construction Regulations 2014.
- 2.5.6 Proof of competency as required by the Act and Regulations shall be included in the Principal Contractor's H&S file.
- 2.5.7 The Principal Contractor shall be responsible for ensuring all relevant training is undertaken. Only accredited Service Providers shall be used for OH&S training.
- 2.5.8 In the event of there being no requirement in terms of the definition of "competency" the employer will issue a certificate / letter confirming the appointee is competent based on knowledge, training and experience specific to the work or task being performed.
- 2.5.9 It is acknowledged the Contractor may need to allocate more than one appointment to certain staff members. This is acceptable only if Safety, Health and Environmental Standards would not be negatively affected.
- 2.5.10 The Principal Contractor shall ensure his and other Contractors' appointed personnel are competent and all training required to do the work safely and without risk to health, has been completed before work commences. The Principal Contractor shall ensure follow-up and refresher training is conducted as the contract work progresses and the work situation changes.
- 2.5.11 The Principal Contractor shall provide an organogram, outlining the Health and Safety Site Management Structure including the relevant appointments / competent persons.
- 2.5.12 In cases where appointments have not been made, the organogram shall reflect the intended positions. The organogram shall be updated when there are any changes in the Site

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Management Structure.

This organogram shall form part of the onsite Health & Safety file.

- 2.5.13 The Principal Contractor shall, furthermore, provide an organogram of all Contractors who have been appointed or intends to appoint and keep this list updated and prominently displayed on site.

2.6 Health and Safety Representative(s)

- 2.6.1 The Principal Contractor and all Contractors shall ensure Health and Safety Representative(s) are appointed under consultation, and trained to conduct their functions.
- 2.6.2 Legislative requirements as applicable to the nomination and election of Health and Safety Representative(s) shall apply.
- 2.6.3 The appointed Health and Safety Representative must have completed a recognized Health and Safety Representative course.
- 2.6.4 The appointment must be formalised in writing.
- 2.6.5 The Health and Safety Representative shall carry out regular inspections, keep records and report all findings to the Responsible Person forthwith and at Health & Safety Committee meetings.

2.7 Health and Safety Committees (Where more than one Health and Safety Representative is Appointed)

- 2.7.1 Legislative requirements as applicable to the Health and Safety Committee (s) shall apply.
- 2.7.2 The Principal Contractor shall ensure project Health & Safety Committee meetings are held monthly and minutes are kept on record.
- 2.7.3 Meetings must be organised and chaired by the Principal Contractor's Responsible Person.
- 2.7.4 All Contractors' Responsible Persons and Health & Safety Representatives shall attend the monthly Health & Safety Committee meetings.
- 2.7.5 Other Contractors shall also have their own internal Health & Safety Committee in accordance with the Occupational Health & Safety Act 85 / 1993 and minutes of their meetings shall be forwarded to the Principal Contractor on a monthly basis.
- 2.7.6 These minutes will be made available for review by the Client or his/her duly appointed representative.
- 2.7.7 Contractors may form part of the Principal Contractors Health & Safety Committee.
- 2.7.8 Minutes of each meeting are to reflect such.

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2.8 First Aid Boxes and First Aid Equipment – General Safety Regulations 3

- 2.8.1 The Principal Contractor and all Sub Contractors shall where applicable, appoint in writing a competent person as a First Aider(s).
- 2.8.2 The appointed First Aider(s) will have undergone training with a recognised first aid training institution as specified in the General Safety Regulations 3 of the Occupational Health & Safety Act 85 / 1993.
- 2.8.3 A copy of the valid competency certificates are to be maintained on the site Health & Safety file.
- 2.8.4 The Principal Contractor shall provide an on-site First Aid Station with first aid facilities, including first aid boxes which are to always remain maintained – first aid signage to be displayed at designated area/established site office or store.
- 2.8.5 Over and above GSR 3, all Contractors shall supply their own first aid box, and shall have a trained, certified first aider on site at all times. Where Contractors are not able to comply, they can enter into a written agreement with the Principal Contractor, allowing the Contractors to use the PC's facilities and trained first aiders.
- 2.8.6 In the event of hazardous chemical substances being present on site, first aiders shall be trained to address any incidents of accidental exposure and their first aid kits stocked accordingly.
- 2.8.7 In the event of any work at height taking place on-site, first aiders shall be trained to address any resultant incidents or injuries, and their first aid kits must be stocked accordingly and recorded on a first aid kit register that will be maintained in the site health and safety file.

2.9 Accident / Incident Reporting and Investigation – Section 24

Injuries are to be categorized into first aid; medical; lost time injury (LTI); and fatal injuries. When reporting injuries to the Client, these categories shall be used.

The Principal Contractor must investigate all injuries, with an annexure 1 report being completed and filed. All Contractors must report on the 4 categories of injuries to the Principal Contractor at least monthly. Contractors must investigate injuries and incidents involving their employees and forward a copy of the annexure 1 investigation report to the Principal Contractor forthwith. The Principal Contractor must report all injuries to the Client in the form of an injury report, at least monthly. The contractor must submit his incident reporting and investigation protocols for review by the client.

All incidents reportable in terms of the provisions of Section 24 of the OHS Act, 1993 must be reported to the local Dept. of Labour in the prescribed manner within 14 days. (Note: No reports will be made to third parties without the client being notified of such intentions)

All Contractors must immediately report all incidents where an employee is injured on duty to the extent that he/she

- dies
- becomes unconscious

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- loses a limb or part of a limb
- is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

Or where:

- an environmental incident occurred
- a security incident occurred
- a major incident occurred
- the health or safety of any person was endangered
- where a dangerous substance was spilled
- the uncontrolled release of any substance under pressure took place
- machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
- machinery ran out of control
- exposed to ionising radiation
- inhalation of airborne solids hazardous to health

The Contractor is required to within 12 hours of an incident/accident onsite provide the client with a “flash report” detailing a summary of what is known to have occurred and subsequently copies of all internal and external accident/incident investigation reports including the reports contemplated above within 7 days of the incident occurring.

2.10 Hazard Identification and Risk Assessment

- 2.10.1 Every Principal Contractor performing construction work shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, cause a risk assessment to be performed by a competent person, appointed in writing, and the risk assessment shall form part of the OH&S plan and be implemented and maintained.
- 2.10.2 All risks identified by the Principal Contractor will be transferred into the necessary Risk Assessment profile.
- 2.10.3 The risk assessment shall include, at least:
 - 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 monitor and review plan
 - CR8.1, CR8.7, SHE Rep, CR9.1 and SHE Representative all to form part of the risk assessment team
 - The above mentioned appointees to sign and date the risk assessment
 - 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
- 2.10.4 Based on the risk assessment, the Principal Contractor shall develop a set of site-specific OH&S rules which shall be applied to regulate the OH&S aspects of the construction project.
- 2.10.5 The risk assessment, together with the site-specific OH&S rules shall be submitted to the Client before construction on site commences.

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- 2.10.6 The risk assessment shall further include the standard working procedures and the applicable method statements based on the risk assessments.
- 2.10.7 All variations to the scope of work shall similarly be subjected to a risk assessment process.
- 2.10.8 The Principal Contractor shall ensure all their employees are informed, instructed and trained by a competent person regarding any hazards, risks and related Safe Work Procedures prior to any work commencing and thereafter at regular intervals as the risks change and as new risks develop.
- 2.10.9 Proof of training must be maintained on the relevant Health & Safety file.
- 2.10.10 The Principal Contractor shall be responsible for ensuring all persons who could negatively be affected by its operations are informed and trained according to the hazards and risks and are conversant with the safe working procedures, control measures and other related rules (tool box talk strategy to be implemented).
- 2.10.11 **Daily Safety Task Instructions (DSTI) / continuous Risk Assessments will be conducted by the Principal Contractor and records shall be maintained as to training conducted.**
- 2.10.12 Once all personnel have been made aware of the Risks involved and have received training on the various Risk Assessments and Written Safe Working procedures the employer will conduct regular Planned Job Observation.
- 2.10.13 The purpose of the Planned Job Observation is to ensure employees perform work according to the Work Instructions / Written Safe Working procedures.
- 2.10.14 Records of these Planned Task Observations are to be maintained on the site Health & Safety file.
- 2.10.15 The Principal Contractor shall ensure all Contractors engaged cause a hazard identification to be performed by a competent person before commencement of construction work, and the assessed risks shall form part of the Contractors construction phase Health & Safety Plan submitted for approval by the Principal Contractor or his/her duly appointed representative.
- 2.10.16 The Risk Assessment must include:
- a list of hazards identified as well as potentially hazardous tasks;
 - a documented risk assessment based on the list of hazards and tasks;
 - a set of safe working procedures to eliminate, reduce and/or control the risks assessed;
 - a monitoring and review procedure of the risk assessments as the risks change.
- 2.10.17 The Principal Contractor shall ensure all Contractor's employees are informed, instructed and trained by a competent person regarding any hazards, risks and related Safe Work Procedures prior to any work commencing and thereafter at regular intervals as the risks change and as new risks develop. Proof of training must be maintained on the relevant Health & Safety file.

The Client Agent has Identified the follow Hazards for this Project must be incorporated in the Principal Contractor's site-specific Risk Assessments;

- Excavations
- Wind and dust. (Site is in a built-up area)
- Working in and around the bulk excavation
- Formwork for concrete columns, floors, lift shafts, stair wells, bases, ring beams and other
- Support work for formwork
- Stripping of formwork
- Working with, around and above other Contractors
- Working on and from scaffolding and ladders

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- Working at Heights
- Edge Barricading (Deck Edges and openings)
- Roof work – structural and roof covering. Placement of roof sheeting.
- Tower crane erection and dismantling (Where applicable)
- Lifting operations including mobile plant use, lifting tackle and other fixtures
- Pouring concrete by means of tower or mobile crane
- Electrical installation (temporary and permanent)
- Interface with the public – roads and pavements
- Portable electrical tools and extension leads
- Explosive actuated fastening devices
- Power tools (jackhammers, core drilling, high pressure air and water jets, etc.)
- Operating batch plants
- Hazardous Chemical Agents handled
- Radiation – ionising & non-ionising
- Fire Hazards
- Confined space
- Physical Hazards (Sharps, etc.)
- Ergonomic factors – manual handling of bulk materials or loads

2.11 Permits

2.11.1 The Principal Contractor shall draft and implement where required; permits which may include the following:

- Work for which a fall prevention plan is required – working at elevated positions
- Permits and wayleaves
- Permit to work night shift
- Demolition Permit
- Excavation – (Geotechnical report issued by competent person where required)
- Confined space entry
- Hot work permits

2.11.2 No hot work may be undertaken unless authorised by the Principal Contractor's Construction Manager (CR 8(1) appointed person) or as may be the case the Client or Landlord of the building in-which the work is being undertaken. Hot work will be seen to include arc welding and cutting, gas welding and cutting, grinding / cutting where sparks may result, use of handy gas, any other operation resulting in an open flame or sparking.

The Principal Contractor will ensure where permits are required, they are obtained and adhered to.

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2.12 Health and Safety Training

2.12.1 Induction

- 2.12.1.1 The Principal Contractor shall ensure all site personnel undergo risk-specific Health & Safety induction training prior to commencing work on site.
- 2.12.1.2 A record of attendance shall be kept in the site Health & Safety file.
- 2.12.1.3 A suitable venue must be provided – as far as is reasonable possible - to conduct this training.
- 2.12.1.4 All employees will be in possession of proof of having received induction training.
- 2.12.1.5 All visitors to the site will be subject to site-specific induction training highlighting items such as steps to follow in the event of emergency, restricted areas, use of PPE, etc.
- 2.12.1.6 Proof of such training will be made available.
- 2.12.1.7 Before any commencement of work, all employees, including contracting employees, shall attend mandatory Client Safety, Health and Environmental Induction, prior to Site access.

2.12.2 Awareness

- 2.12.2.1 The Principal Contractor shall ensure, on site, toolbox talks take place at least once per week or more frequently than once per week – risk dependent.
- 2.12.2.2 These talks should deal with risks relevant to the construction work at hand.
- 2.12.2.3 A record of attendance shall be maintained in the site Health & Safety file.
- 2.12.2.4 All Contractors will comply with this minimum requirement.
- 2.12.2.5 At least 2 (two) Toolbox talks shall be on an environmental related issue.
- 2.12.2.6 The Principal Contractor shall conduct toolbox talks upon request by the Client/Client Agent and the proof thereof retained in site safety file.

2.13 Emergency Procedures – ERW 9 / Construction Regulations 29

- 2.13.1 The Principal Contractor shall submit a detailed Emergency Procedure for approval by the Client or his/her duly appointed representative.
- 2.13.2 The procedure shall detail the response plan including the following key elements:
 - List of key competent personnel;
 - Details of emergency services;
 - Method to be made use of to indicate to personnel on site an emergency evacuation is required.
 - This may take the form of a hand-held emergency air horn or a suitable whistle.
 - All personnel on site are to be made aware of the method which may be used to indicate an emergency evacuation.

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- Actions or steps to be taken in the event of the specific types of emergencies;
 - The nearest safe assembly point;
 - Information on hazardous material/situations.
- 2.13.3 Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, major incidents/accidents, etc.
- 2.13.4 The Principal Contractor shall advise the Client or his/her duly appointed representative in writing forthwith, of any emergencies, together with a record of action taken.
- 2.13.5 An Information contact list of all emergency services (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and available to site personnel.
- 2.13.6 A full site emergency evacuation exercise will be required to be conducted no less than within 1 week after site establishment.
- 2.13.7 Further emergency evacuation exercises will be required to be conducted at no less than 3 months intervals as circumstances dictate.
- 2.13.8 Further emergency evacuation exercises may be required to be conducted as indicated by the Client or his/her duly appointed representative.
- 2.13.9 This exercise will be to indicate the state of readiness of personnel on site to react to an emergency situation which may develop.
- 2.13.10 Records of such exercise will be maintained on the site Health & Safety file.
- 2.13.11 Where the project is with a client's buildings, office park, office premises, warehouse or any other area which can be reasonable not viewed as a construction project, it will be the responsibility of the Principal Contractor to ensure all of his / her employees and or contractors are fully informed of the above-mentioned premises.
- 2.13.12 The Principal Contractor shall ensure all such correspondence and or records regarding this Emergency Evacuation Plan/s within the above-mentioned premises is maintained the site Health & Safety file.

2.14 Health & Safety Audits, Monitoring and Reporting – Construction Regulations 5(1)(o)

- 2.14.1 The Client or his/her duly appointed representative shall conduct Health & Safety compliance audits - on an *ad hoc* basis as may be required.
- 2.14.2 The purpose of the audit will be to identify the risk exposures incidental to the building operations and to evaluate progress made with regards to the implementation of previously suggested risk improvement recommendations; to identify risk exposures (both real and anticipated) and to offer additional suggestions for risk improvements where considered applicable.
- 2.14.3 The audit will include a review of the current risk control related documentation and records in addition to an inspection of the respective operation, services and utilities.
- 2.14.4 The Principal Contractor will be required to conduct audits on all Sub Contractors appointed by them.
- 2.14.5 Detailed reports of the audit findings and results shall be reported on at all levels of project management meetings / forums.
- 2.14.6 Copies of the Client or his/her duly appointed representative audit reports shall be maintained in the Principal Contractors Health & Safety File.
- 2.14.7 All contractor audit reports will be acknowledged by the competent person/s and shall be maintained on site.

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2.14.8 Contractors will audit any other contractors appointed and keep records of these audits in their Health & Safety files, which will be available on request.

2.15 Site Safety File (General Record Keeping)

2.15.1 The Principal Contractor and all Sub Contractors shall keep and maintain Health and Safety records to demonstrate compliance with this Specification, the Occupational Health and Safety Act 85 of 1993 and with the Construction Regulations 2014.

2.15.2 The Principal Contractor shall ensure all records of incidents / accidents, training, inspections, audits, etc. are maintained in a site Health & Safety file held in the site office.

2.15.3 The contents of the **Site Safety File** can include:

- Scope and summary of the project as well as any scope changes.
- CR 4(1) - Notification of Construction Work to DoEL / Copy of Work Permit
- Proof of COIDA registration (Letter of Good Standing)
- Contractor Health and Safety Policy statement signed by management.
- Mandatory Agreement – OH&S Act 37.2 (Between Employer and Principal Contractor)
- Signed Client Health and Safety specification.
- Latest copy of the OHS Act and Regulations.
- Company Project Specific Organogram depicting Health and Safety Responsibilities, including subcontractors.
- Employee list including copy of IDs and valid medicals.
- Project specific Health and Safety Management Plan
- Relevant OH&S Legal appointments which includes duties and responsibilities as well as
- competencies (training certificates)
- Copies of minutes of meetings - OH&S committee and other relevant OH&S meeting minutes
- Designs/drawings (Construction Regulation 7(1)e)
- Site specific Fall Protection/Rescue Plan (if applicable)
- Risk Assessments.
- Contractor Induction material.
- Waste management Plan.
- Emergency preparedness (first aid, firefighting, emergency plan, etc.)
- Emergency Contact Telephone numbers.
- HIV Policy, Substance Misuse Policy, HSE Company Policy.
- List of hazardous chemical substances used on site.
- Material Safety Data Sheets of hazardous chemicals on site.
- List of plant & equipment to be used on site.
- Inspection Checklists/Registers of plant & equipment and emergency equipment.
- List of contractors including type of work.
- Contractor 37.2 Mandatory Agreements.
- CR 7(1)c.v - Contractor appointments.
- DSTI's - Pre-task Risk Assessments.
- Permits (Where applicable).

2.16 Inspection of Equipment and Tools

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2.16.1 The following items shall be inspected, and appropriate records maintained as is necessary to this project which shall include, but shall not be limited to the following:

- First Aid dressing registers
- Fire equipment
- Portable electrical equipment and battery operated equipment
- Stacking and storage inspections
- Explosive actuated fastening devices
- Materials hoist (where applicable)
- Pressure Vessels (e.g. Compressors, etc)
- Ladders
- Excavations
- Safety harnesses/ Fall Arrest/Preventative equipment
- Scaffold - static and mobile.
- Pneumatic tools
- Construction vehicles and mobile plant.
- Hand tools
- Generators
- Arc welding/ gas cylinders
- Housekeeping/ Welfare facilities

2.17 Personal Protective Equipment (PPE) and Clothing – General Safety Regulations 2

- 2.17.1 The Principal Contractor shall ensure all personnel required to conduct work on site, are in possession and at all times wear hard hats, safety footwear (e.g.: steel toe boots) and overalls whilst on site.
- 2.17.2 The Principal Contractor and all Contractors shall make provision to ensure adequate quantities of approved PPE is readable available as required.
- 2.17.3 Where it is deemed necessary all persons on site may be expected to wear full reflective vests / bibs whilst on site.
- 2.17.4 A comprehensive, site specific PPE needs analysis for all tasks on site requiring PPE shall be available on site.
- 2.17.5 Employees are to be made conversant with the purpose of PPE and where and when it is required to be used by the employee. A comprehensive record where personnel on site have acknowledged receipt of and indicate they fully understand the need for all the PPE issued, must be maintained in the Site Health & Safety File.
- 2.17.6 The Principal Contractor shall clearly outline procedures to be taken when PPE or Clothing is:
- Lost or stolen
 - Worn out or damaged.
- 2.17.7 No person may enter the Site without the required Personal Protective Equipment:
- 2.17.8 Visitors to the Site are to be provided with the required PPE as required which may include but not limited to hard hats, earmuffs and eye protection.
- 2.17.9 Safety belts are not to be allowed on site due to their associated potential of injury to the user; only double lanyard safety harnesses are permitted.
- 2.17.10 Suitable eye protection must at all times be worn whilst personnel are performing grinding, chipping, chasing and other associated activities.
- 2.17.11 In the event onlookers may be exposed to possible flying objects as a result of work being performed, suitable screens must be erected.

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- 2.17.12 Any person performing welding or brazing work must wear suitable eye protection, gloves (e.g.: leather gauntlets), aprons, and spats.
- 2.17.13 Suitable screens are to be provided to protect onlookers from the harmful exposure associated with such activities.
- 2.17.14 Where employees are required to work with corrosive liquids, suitable eye protection, gloves and acid resistant overalls and impermeable gloves must be provided.
- 2.17.15 Ear protection must be worn in designated noise zones (in excess of 85dB)
- 2.17.16 Suitable respirators must be provided to all employees and visitors required to be working in or entering areas where toxic vapours or dust concentrations could be present or the activities may result in toxic vapours being released. .
- 2.17.17 All staff working where a fall-risk exists; and where the Fall Protection Plan caters for such a requirement, such person/s will be provided with a double lanyard safety harness.
- 2.17.18 Any person refusing to wear Personal Protective Equipment must be instructed to wear such equipment and in the event of such person continuing to not wear such equipment he/she must be removed from the premises.
- 2.17.19 The Principal Contractor shall take the necessary steps in accordance with Hazardous Chemical Agent Regulation – Section 11: Personal protective equipment and facilities.

2.18 Rules of conduct

- 2.18.1 Principal Contractors, their contractors and all employees under their control, including any visitor brought onto site must adhere to the following Rules of conduct on site.
- 2.18.2 No person on site may:
 - Partake, possess or sell dependence producing drugs or alcoholic beverages on site.
 - Any employee or visitor whose action and / or demeanour display symptoms of possible narcosis or intoxication shall be removed from site.
 - Indulge in practical jokes, horseplay, fighting or gambling.
 - Destroy or tamper with safety devices, symbolic signs or wilfully and unnecessarily discharge fire extinguishers.
 - Bring onto site or have in your possession a firearm or lethal weapon.
 - Assault, intimidate or abuse any other person.
 - Operate construction equipment (vehicles or plant) without the necessary training and authorisation.
 - Commit any theft.
 - Display insubordination toward any supervisor, foreman or Manager in respect of carrying out of properly issued instructions or orders as regards Health and Safety.
 - Enter any area unless authorised to do so by the person in charge.
 - Negligently, carelessly or wilfully cause damage to property of others.
 - Refuse to give evidence or deliberately make false statements during investigations.
- 2.18.3 All contractor personnel MUST wear, at all times, ID tag or badge clearly visible for inspection at all times.

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3. Physical Requirements

3.1 Hazards and Potential Situations

- 3.1.1 The Principal Contractor shall immediately notify other Sub Contractors as well as the Client of any hazardous or potentially hazardous situations which may arise during the performance of construction activities.
- 3.1.2 Should a hazardous situation require work stoppages the work must be stopped and corrective steps taken.

3.2 Occupational Health and Safety Signage – General Safety Regulations

2B

- 3.2.1 The Contractor shall provide adequate on-site OHS signage, including but not limited to 'no unauthorised entry', 'report to site office', 'site office', 'beware of overhead work', 'hard hat area', 'no-smoking', 'no open flames', 'Mandatory PPE', 'fire extinguisher', 'first aid', and any relevant signage of hazard concerned in a particular area.
- 3.2.2 Signage shall be posted up at all entrances to the site as well as on site in strategic locations e.g. access routes, stairways, entrances to structures and buildings, scaffolding, and other potential risk areas/operations.
- 3.2.3 Separate vehicle and pedestrian access routes shall be provided, maintained, controlled, and enforced as far as possible.
- 3.2.4 Signage to be SABS approved.

3.3 Plant and Machinery - Construction Regulation 23

- 3.3.1 Construction Plant
 - 3.3.1.1 "Construction Plant" includes all types of plant including but not limited to, cranes, piling rigs, excavators, road vehicles, and all lifting equipment.
 - 3.3.1.2 The Principal Contractor shall ensure all such plant complies with the requirements of the Occupational Health & Safety Act 85 / 1993 and associated Regulations.
 - 3.3.1.3 The Principal Contractor and all relevant Sub Contractors shall inspect and maintain records of inspections of the construction plant used on site.
 - 3.3.1.4 Only authorized / competent persons are to use machinery under proper supervision.
 - 3.3.1.5 Proof of medical testing as required is to be available for inspection by the Client or his/her duly appointed representative.
 - 3.3.1.6 Appropriate PPE and clothing must be provided and maintained in good condition at all times.
 - 3.3.1.7 All earth moving equipment and or mobile plant as required shall be operated in accordance with good safety practice so as to protect the safety of the operator and other workers or persons in the area.
 - 3.3.1.8 All earth moving equipment and or mobile plant as required shall be equipped with a reverse siren and rotating orange warning light.
- 3.3.2 Vehicles shall not enter site with:
 - Defective exhaust systems
 - Serious oil or fuel leaks
 - Unsafe bodywork or loads
 - Nonstandard equipment fitted.
 - Improperly seated passengers

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- Any obvious mechanical defects.
- 3.3.3 Hired Plant and Machinery
- 3.3.3.1 The Principal Contractor shall ensure any hired plant and machinery used on site is safe for use.
- 3.3.3.2 The necessary requirements as stipulated by the Occupational Health & Safety Act 85 / 1993 and Associated Regulations shall apply to any hired plant and machinery.
- 3.3.3.3 The Principal Contractor shall ensure operators hired with machinery are deemed to be competent and valid copies of competency certificates and or medical certificates are made available on site in the Health & Safety file.
- 3.3.3.4 All Sub Contractors are to ensure compliance in this regard.

3.4 Bulk Earthworks and Haulage of Ground

3.4.1 3.4.1 PPE Requirements

- Hardhat
- Overall (non-supervisory)
- Steel cap Safety Boots / shoes
- Dust masks when required
- Dust goggles
- Reflective vest displaying company name
-

3.4.2 Traffic Control

- A points-man / controller shall be placed at all road intersections, with a Stop / Go sign to control traffic.
- Ripple strips shall be placed at all road intersections and railway crossings
- During night driving, flashing lights shall be placed at crossings and intersections
- Adherence to all traffic signs is of vital importance
- All haul trucks, LDV's and Excavation Equipment will be operated with headlights on at all times
- Following distances – 3 truck lengths must be kept between the trucks at all times
- Speed limit on site will be 10 Km per hour.
- Reversing of vehicles will only take place under the guidance of a spotter.
- Heavy vehicles / equipment will always have the right of way.
- A signal system will be in place between driver of haul truck and loader operator.
- To enter : 1 blow of hooter
- To stop : 2 blows of hooter
- To pull off : 3 blows of hooter
- No overtaking will take place on site by haul trucks.
- In case of a vehicle break-down on site road or haul road :
- The vehicle must be removed ASAP
- Warning signs must be placed (during Day time : Red Triangular)
- (During night time : flashing lights)
- Traffic controller in front and back of vehicle
- Pavement permit in place (where applicable)

3.4.3 Haul Roads

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- Pedestrians will not be allowed to access the haul roads unnecessarily; however drivers of Plant and Haul Trucks must be alert for pedestrians.
- Haul roads will be wetted by water cart at regular intervals and if and when required.
- Any large rocks and / or spillages will be removed and cleaned from roads immediately.
- Ground pollution such as oil, diesel and hydraulic fluid will not be tolerated. If it occurs on the haul road or any other portion on the Site, the ground will be dug out, back filled and compacted.

3.4.4 Vehicles and Equipment

- All vehicles will be roadworthy at all times
- Pre-use check will be done against any approved checklist; all faulty items will be attended to.
- Brakes
- Lights
- Air / Hydraulic
- Oil leaks
- The vehicles / Equipment will be withdrawn from service for repairs.
- Brake testing will be done every shift before use (Brake testing method to be submitted)
- No major repairs or services will be carried out on Site.

3.4.2.1 Vehicles and mobile equipment will be supplied with: -

- Sufficient Fire Extinguisher
- Reflector's / Reflective tape:
- Sides
- Front
- Back
- Reversing alarm
- Sufficient lighting

3.4.5 Operators/Drivers

- A relief driver will be available for every 4 dump trucks and operators / drivers will be rotated should the need arise or physical exertion of the operator take place.
- A supervisor or appointed person will drive around from on-loading to off-loading points and ensure that drivers get out of the vehicle and walk around for 5 minutes and if required allow the person to relieve himself or to drink water or cold drink which will be available on the LDV.
- Random alcohol / drug test must be done and results to be submitted.
- All drivers / operators will be appointed under OHS Act Construction Regulation 21, in addition a competent person must also be appointed in writing to inspect the plant, refer to OHS Act Construction Regulation 21
- If driver / operator does not adhere to rules and regulations, his appointment will be cancelled and he will not be able to carry on his duty.
- No driver / operator will be appointed without proof of training, Driver's license and valid medical certificate.
- No training of drivers / operators on site.
- No passengers on Dump trucks, Loaders, TLB's or Excavators

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- No eating or drinking allowed while operating Plant

3.5 Fire Extinguishers and Fire Fighting Equipment – Construction Regulations 29

- 3.5.1 The Principal Contractor and Contractors shall provide adequate, regularly serviced fire-fighting equipment located at strategic points on site, specific to the classes of fire likely to occur.
- 3.5.2 The appropriate notices and signs must be posted up as required to indicate location of fire-fighting equipment.
- 3.5.3 A full Fire risk survey must be conducted by a competent person; proof of survey must be kept in the Site Health & Safety File.
- 3.5.4 Contractors may not utilize fire protection equipment belonging to the Client without prior consent. This will not be applicable in the event of an emergency whereby the non-use of this equipment may result in damage or loss.
- 3.5.5 The Principal Contractor will ensure his/her employees are trained on the minimum required firefighting - PASS methodology and proof thereof kept in the safety file.

3.6 Edge Protection and Penetrations

- 3.6.1 The Principal Contractor will ensure 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; Please note, barricade must be solid.
- 3.6.2 The Principal Contractor's risk assessment shall include items, e.g. protection of decking edges, finished floor slab edges, stairways, floor penetrations, lift shafts, and all other openings and areas where a person may fall.
- 3.6.3 **Barricading tape will not be deemed to be suitable** as a barricade and may only be used to indicate the possibility of an open edge or other.

3.7 Fall Protection / Scaffolding / Working at Heights – Construction Regulation 10 / 16 / General Safety Regulations 6 / SANS 10085/Rope Access.

- 3.7.1 Working at heights includes any work which takes place from an elevated position.
- 3.7.2 For the purpose of these Specifications elevated work shall be determined as any person having to work where a fall-risk exists.
- 3.7.3 All employees working in an elevated position as described shall be in the possession of a medical certificate of fitness as defined in the Construction Regulations 2014.
- 3.7.4 CR 10(1) - The Principal Contractor / Contractors appointed shall ensure a competent person has been designated and is responsible for the preparation of a Fall Protection Plan.
- 3.7.5 The Fall Protection Plan is to be implemented, amended where and when necessary and maintained as required.
- 3.7.6 Steps are to be taken in order to ensure the continued adherence to the Fall Protection Plan.
- 3.7.7 The Fall Protection Plan shall include:

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- 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 evaluation of the employees medical fitness necessary to work at a fall risk position and the records thereof;
 - the programme for the training of employees working from fall risk positions and records thereof; and
 - the procedure addressing the inspection, testing and maintenance of all fall protection equipment.
- 3.7.8 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.
- 3.7.9 The Principal Contractor / Contractors will cause the necessary training to be conducted on this rescue plan and ensure competent persons are trained in the execution of this rescue plan. (rescuers are to be competent and trained in line with Unit Standard 229995).
- 3.7.10 Proof of training will be made available on the site Health & Safety file.
- 3.7.11 Contractors shall ensure the Construction Manager appointed under Construction Regulation 8(1) is in possession of the most recently updated version of the Fall Protection Plan.
- 3.7.12 The Principal Contractor / Contractors shall ensure:
- all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or similar means are used to safeguard any person from falling through such openings;
 - no person works in a fall risk position, unless such work is performed safely as contemplated in '3.7' above;
 - notices are conspicuously placed at all openings where the possibility exists a person might fall through such openings;
 - The Principal Contractor / Contractors shall ensure fall prevention and fall arrest equipment is:
 - suitable and of sufficient strength i.e. - from a reputable source, CE marked, or SABS approved - for the purpose or purposes for which it is being used having regard to the work being carried out and the load, including any person, it is intended to bear;
 - securely attached to a structure or plant and the structure or plant and the means of attachment thereto is suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who is liable to fall. *All anchor points will be certified by a person competent to do so and record of this maintained site safety file.*
- 3.7.13 Fall arrest equipment shall only be used where it is not reasonably practicable to use fall prevention equipment; and suitable and sufficient steps are taken to ensure, as far as is reasonably practicable, in the event of a fall by any person, the fall arrest equipment or the surrounding environment does not cause injury to the person.
- 3.7.14 Where roof work is being performed on a construction site, the contractor shall ensure in addition to the requirements set out as above, it is furthermore indicated in the Fall Protection Plan:
- the roof work has been properly planned;
 - the roof erectors are competent to carry out the work;
 - no employees are permitted to work on roofs during inclement weather conditions or if weather conditions are a hazard to the health and safety of the employees;

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- prominent warning notices are to be placed where all covers to openings are not of sufficient strength to withstand any imposed loads and where fragile material exists;
 - areas mentioned as above are to be barricaded off to prevent persons from entering;
 - suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way; the weight of any person passing across or working on or from fragile material is supported; and
 - there is suitable and sufficient guard-rails or barriers and toe-boards or other similar means of protection to prevent, so far as is reasonably practicable, the fall of any person, material or equipment.
- All scaffolding shall be erected in accordance with "SANS 10085" meaning the South African National Standard Code of Practice entitled "The Design, Erection, Use and Inspection of Access Scaffolding". A copy of this document will be available on site at all times.
 - Scaffolding shall be erected by a competent person who has been appointed in this regard.
 - All scaffolding will be inspected on a weekly basis or immediately after inclement weather, and the results of these inspections shall be maintained in the site Health & Safety file.
 - Inspections will be conducted by a competent person who has been appointed in this regard.
 - All scaffolding will be indicated by signage whether it is classified as "safe to use" or "unsafe to use". Signage will be distinct so as not to cause confusion amongst the work force, especially if a language barrier or illiteracy may be present.
 - All staff is to be made aware of the signage and record of this training is to be maintained in the site Health & Safety file.

3.7.15 The Client or his/her duly appointed representative must approve the Fall Prevention / Protection Plan before work may commence.

Rope Access

- 3.7.16 All rope access work must be planned and executed in accordance with Construction Regulation 18.
- 3.7.17 A level 3 rope access supervisor with requisite proof of current competency must be appointed in writing to oversee the work being performed and sign off on any and all rigging arrangements used by the Contractor.
- 3.7.18 All rope access technicians must be in deemed competent and licenced to carry out their work.]
- 3.7.19 The design, selection, use of equipment, and anchors comply with safety standards, specifically SANS 50795, SANS 50352-part1 and part 2.

3.8 Lifting Machines, Tackle and Lifting Operations/ (DMR 18 / CR 22)

The Principal Contractor and all contractors shall ensure that lifting machinery and tackle are inspected before use and thereafter in accordance with the Driven Machinery Regulations and the Construction Regulations (Regulation 22).

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There must be a competent lifting machines inspector (registered with the Department of Labour,

Gazette number 27305) and a competent lifting tackle inspector who must inspect the equipment, taking into account that:

- All lifting machinery and tackle has a safe working load clearly indicated;
- Regular inspection and servicing is carried out (3-monthly inspections and records for tackle and 6-monthly inspections and records for lifting machines);
- Records are kept of inspections and of service certificates;
- There is proper supervision in terms of guiding the loads that includes a trained banks man to direct lifting operations and check lifting tackle and attachments daily;
- Rigging of loads to be done in accordance with acceptable safe work practices;
- Tower crane bases have been designed and finally approved by an engineer before loading such base;
- Annual load test certificates for lifting machines are in place;
- Tower cranes are fitted with wind speed meters and audible alarm/warning lights, crane hooters, and that the crane's load chart is posted up in the crane cab;
- The operators are certified to operate the specific machine (valid certificate to be on site);
- The operators are physically and psychologically fit to work and in possession of a medical certificate of fitness to be available on site.

The Principal Contractor must ensure that safe lifting operations are adhered to. This must include the following:

- Pallets of bricks being lifted by a tower crane or mobile crane may only be lifted when secured in a brick cage or brick net, securing the entire load of bricks to the crane hook;
- Mortar bins, waste bins and any other receptacle must be deemed to be a lifting attachment and must be designed to carry the required load. Such attachments must be on register and inspected every 3 months by the competent lifting tackle inspector;
- Temporary Works may only be lifted by using purpose designed and manufactured lifting tackle – eight-gauge wire and the like is prohibited;
- A competent banks man must be in control of all rigging, slinging and lifting operations and must wear a high visibility vest, be in possession of a two-way radio and make use of a
- Whistle, warning persons of overhead loads. The crane operator may only take commands and signals from the designated bank men;
- Guide ropes (tag lines) must be used when lifting large shutters, long bundles of re-bar and other similar loads. This must be detailed in the Principal Contractor's and Contractors' fall prevention plans.
- Detailed Load Chart must be conducted by a competent person and be in possession prior to lifting operations, for cranes and lifting booms in this regard.

Lifting operations must be re-evaluated once wind speeds reach 40 km/h unless otherwise specified by the lifting machine manufacturer

3.9 Materials Hoists (CR 19)

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A contractor shall ensure that every material hoist and its tower have been constructed of sound material in accordance with the generally accepted technical standards.

Each contractor shall cause the tower of every material hoist to be-

- Erected on firm foundations and secured to the structure or braced by steel wire guy ropes, and to ensure that the highest landing has an unobstructed space of 900 mm for over travel.
- enclosed on all sides at the bottom, and at all floors
- Provided with a door or gate at least 2100 mm in height at each landing and such door or gate shall be kept closed, except when the platform is at rest at such a landing.
 - A contractor shall cause-
 - the platform of every material hoist to be designed in such a manner that it shall safely contain the loads being conveyed and that the combined weight 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
- The material hoist to be provided with an efficient brake capable of holding the platform with its maximum load in any position when the power is not being supplied to the hoisting machinery.
- A load Test to be conducted on all cranes or hoists to be used on site & the certificates to be retained in the site Health & Safety file and provided on request by the client.

The contractor is to ensure that wherever building tools and equipment are conveyed that these have been tied down and secured so as to prevent uncontrolled movement.

A contractor shall cause a notice, indicating the maximum mass MML 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 shall not require or permit any person to operate such a hoist, unless the person is competent (Has proof of training which should be retained on the site Health and Safety File) in the operation thereof.

No contractor shall require or permit any person to ride on a material hoist unless certified otherwise.

A contractor shall cause every material hoist-

- to be inspected on a daily basis by a competent person who has been appointed in writing and has the experience pertaining to the erection and maintenance of material hoists or similar machinery;
- inspection contemplated in paragraph (a), to include 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 to be entered and signed in a register, which shall be kept on the site safety file C.R. 7 for that purpose;
- to be properly maintained and that the maintenance records in this regard are kept on the site safety file C.R.7

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Temporary works for Structures – Construction Regulations 12

3.10 Temporary Works for Structures

The Principal Contractor shall ensure the provisions of the Construction Regulations 12 are adhered to as a minimum.

3.11 Ladders and Ladder Work – General Safety Regulations 13A

- 3.11.1 The Principal Contractor shall ensure all ladders are inspected monthly, are in good safe working order, are the correct height for the task, extend at least 1m above the landing, fastened and secured, and at a safe angle.
- 3.9.1 Inspections are to be conducted by a competent person who has been appointed in writing.
- 3.9.2 Records of inspections are to be maintained in a register in the site Health & Safety file.
- 3.9.3 Contractors using their own ladders must ensure compliance in this regard.
- 3.9.4 Ladders shall not be used as horizontal walkways or as scaffolding. Tools or equipment must be carried in suitable slung containers or hoisted up to the working position.

3.11.2 General Machinery

The Principal Contractor and relevant Sub Contractors shall ensure compliance with the Driven Machinery Regulations, which will include:

- inspecting machinery regularly,
- appointing a competent person to inspect and ensure maintenance,
- issuing PPE or clothing, and
- training those who use machinery

3.12 Portable Electrical Tools and Explosive Actuated Fastening Devices

- 3.12.1 The Principal Contractor shall ensure the use and storage of all explosive actuated fastening devices and portable electrical tools is done in accordance with Construction Regulation 21 and 24 respectively.
- 3.12.2 The Principal Contractor shall ensure all-electrical tools, electrical distribution boards, extension leads, and plugs are kept in safe working order.
- 3.12.3 **The Principal Contractor shall consider the following:**
 - A competent person undertakes routine inspections and records are kept;
 - Only authorised trained persons use the tools;
 - The safe working procedures apply;
 - Awareness training is carried out and compliance is enforced at all times; and
 - PPE and clothing is provided and maintained.
 - A register indicating the issue and return of all explosive round;
 - Ensure cartridges and explosive tool/s are locked up separately.

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- Signs to be posted up in the areas where explosive powered tools are being used.

3.13 Transport of Workers – Construction Regulations 23

- 3.13.1 The Principal Contractor and other Sub Contractors shall ensure:
- 3.13.1.1 No persons shall be transported together with goods or tools unless there is an appropriate area or section to store them;
 - 3.13.1.2 No persons shall be transported in a non-enclosed vehicle, e.g., truck; there must be a proper canopy (properly covering the back and top) with a suitable seating area.
 - 3.13.1.3 Workers shall not be permitted to stand or sit at the edge of the transporting vehicle.
 - 3.13.1.4 No persons may be transported in LDV's unless they are closed/covered and have the correct number of seats for the passengers.
 - 3.13.1.5 The driver of any LDV may not permit more than 2 passengers to occupy the cab of any LDV.
- 3.13.2 All vehicles operated on the site will in all aspects comply with the requirements of the National Road Traffic Act, Act No 93 of 1996.
- 3.13.3 Drivers of such vehicles must have a valid driver's license for the code of vehicle being driven by them.
- 3.13.4 No servicing of vehicles on a Construction Site, which is occupied by staff working for the Client.
- 3.13.5 In the event of an emergency breakdown authority may be granted for the repairs to be made.
- 3.13.6 Servicing or repairs of vehicles on site may only take place if such activities are performed with the necessary procedures in place to prevent any harmful effects to the environment.
- 3.13.7 All waste generated from servicing vehicles must be disposed of in accordance with relevant Environmental legislation.
- 3.13.8 In the event where Earth Moving Equipment is present on site the following must be adhered to:
- Drivers of vehicles must be instructed to avoid parking behind earth moving vehicles to ensure their vehicle is visible to the operator of earth moving vehicles.
 - Right of way must be afforded to earth moving machinery at all times.
 - Vehicles must only be permitted to park where possible in designated areas
 - The necessary wheel chocks are applied once the Earth Moving Equipment is stationary and unoccupied.

3.14 Stacking of Materials – Construction Regulations 28

- 3.14.1 The Contractor/Employer must ensure that a competent person is appointed in writing to supervise all stacking and storage on a construction site.
- 3.14.2 Adequate storage areas are provided and demarcated.
- 3.14.3 The base of any stack is level and capable of sustaining the weight exerted on it by the stack.
- 3.14.4 The items in the lower layers can support the weight exerted by the top layers.

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- 3.14.5 Cartons and other containers that may become unstable due to wet conditions are kept dry.
- 3.14.6 Pallets and containers are in good condition and no material is allowed to spill out.
- 3.14.7 The height of any stack does not exceed 3X the base unless stepped back at least half the depth of a single container at least every fifth tier or the approval of an inspector has been obtained to build the stacks higher with the aid of an appropriate machine.
- 3.14.8 The articles that make up a single tier are consistently of the same size, shape and mass.
- 3.14.9 Structures for supporting stacks are structurally sound and able to support the mass of the stack.
- 3.14.10 No articles are removed from the bottom of the stack, but from the top tier first.
- 3.14.11 Anybody climbing onto a stack can and does so safely and that the stack is sufficiently stable to support him/her.
- 3.14.12 Stacks that are in danger of collapsing are broken down and restacked.
- 3.14.13 Stability of stacks are not threatened by vehicles or other moving plant and machinery.
- 3.14.14 Stacks are built in a header and stretcher fashion and that corners are securely bonded .
- 3.14.15 Persons climbing onto stacks do not approach unguarded moving machinery or electrical installations.
- 3.14.16 Stack material in authorized areas, never near doorways, access ways, in front of fire appliances or emergency exits or on fire escape routes.
- 3.14.17

3.15 Pressure Equipment Regulations (PER) and Gas Cylinders

- 3.15.1 The Principal Contractor and all Sub Contractors shall comply with the Pressure Equipment Regulations, including:
 - Providing competency and awareness training to the operators;
 - Providing PPE or clothing;
 - Inspect equipment regularly and keep records of inspections;
 - Ensuring appropriate fire-fighting equipment is on hand.
 - Ensure special manufactured soap tests are present to check for tell-tale bubbles that are indicative of any gas leakage (i.e.: pipes, hoses, valves, gauges, arrestors).
 - Ensure no potential ignition sources are present, E.g., Oil near Oxygen cylinders.
 - Gas cylinders are secured in appropriate gas cylinder trolleys.
 - Manufactured hose-connectors, connecting gas hoses with steel wire or insulation tape is prohibited.

3.16 Hazardous Chemical Substances – Hazardous Chemical Agent Regulations

- 3.16.1 Personnel who may be required to use Hazardous Chemical Substances or maybe exposed to a Hazardous Chemical Substances are to be adequately trained with regard to the requirements of the Hazardous Chemical Substances Regulations as amended.
- 3.16.2 In addition to the abovementioned, Material Safety Data Sheets are to be maintained on site for all hazardous chemical substances.

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- 3.16.3 First Aiders are to be made aware of the MSDS and how to treat HCS incidents appropriately.

Please Note: "HSA" or "hazardous chemical agent" means a GHS aligned chemical agent as provided for in in Annexure 1 of the regulations.

3.17 Demolition Work – Construction Regulations 14

- 3.17.1 All Demolition work shall comply with Construction Regulation 14 as a minimum, acceptable standard.
- 3.17.2 3.18.2 The disposal of rubble and other waste from elevated positions may only be conducted under controlled conditions. Waste chutes must be secured to a scaffold structure, which must in turn be secured to the main building. A person must be designated to take control of waste chute operations, which must include the inspection of the chute on a daily basis. Waste must discharge into an enclosed area (ready fence panels to be used), eliminating the risk of persons being struck by waste material.

3.18 Earthworks (Incl. Trenching and Excavations) – Construction Regulation 13

- 3.18.1 The Principal Contractor and relevant Contractors must make provision in their tender for the shoring of excavations where the soil conditions warrant it or if this is not possible cut it back – excavation walls must be battered back to a safe angle, termed the safe angle of repose. The Principal Contractor has the following options: first option is to shore or brace the excavation, should this not be practical then such excavation must be battered back to the safe angle of repose (second option). Should the first two options not be deemed necessary by the contractor, then permission must be given in writing by the appointed competent excavation supervisor (third option). Where uncertainty pertaining to the stability of the soil exists, the decision of a professional engineer or professional technologist competent in excavations shall be decisive. Such permission must be in writing.
- 3.18.2 The following is relevant to excavations:
- Excavations/trenches are inspected by a competent person before every shift and a record of these inspections is kept;
 - Safe work procedures have been communicated to the workers;
 - The safe work procedures are enforced and maintained by the Principal Contractor's and Contractors' responsible persons at all times.
 - Excavations next to permanent or temporary roadways -ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it is likely to cause its collapse and thereby endangering 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;
 - 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 that may be necessary to ensure the stability of such building, structure or road as well as the safety of persons;
 - Cause convenient and safe means of access to be provided into every excavation in which persons are required to work and such access shall not be

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further than 6m from the point where any worker within the excavation is working;

- 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. The necessary steps must then be taken to render the circumstances safe for all persons involved;
- Cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or where the safety of persons may be endangered, to be
 - adequately protected by a barrier or fence of at least one meter in height and as close to the excavation as is practicable;
 - and provided with warning illuminates or any other clearly visible boundary indicators at night or when visibility is poor;
- Cause warning signs to be positioned next to an excavation within which persons are working or carrying out inspections or tests.

3.19 Public and Site Visitor Health & Safety – OHSACT Section 9

- 3.19.1 The Principal Contractor shall ensure every person working on or visiting the site, as well as the public in general, is made aware of the dangers likely to arise from site activities, including the precautions to be taken to avoid or minimise those dangers.
- 3.19.2 Appropriate health and safety notices and signs shall be posted up, but shall not be the only measure taken.
- 3.19.3 Both the Client and the Principal Contractor have a duty in terms of the Occupational Health & Safety Act 85 of 1993 to do everything reasonably practicable to prevent members of the public and site visitors from being negatively affected by the construction activities.
- 3.19.4 Site visitors must be briefed on the hazards and risks they may be exposed to and what measures are in place or should be taken to control these hazards and risks. All hoarding layout drawings are to be strictly adhered to.
- 3.19.5 Traffic Diversions
- 3.19.6 Provision by means of a method statement must be made for any traffic diversions to conduct your construction activities as well as any loading and off-loading of materials and waste.
- 3.19.7 The method statement must include a drawing indicating traffic signage and the like.
- 3.19.8 Traffic flow to and from the may not be obstructed by construction vehicles without express written permission from the client.
- 3.19.9 Road and walkways must be kept clean and tidy at all times
- 3.19.10 Roads and pavements must be swept continuously throughout the day
- 3.19.11 If work is to be carried out on the road or walkways this may only take place with written consent from the client together with a pavement permit (where required) in place prior to work commencing.

3.20 Erection of Hoarding

- 3.20.1 All hoarding operations on site are to comply. Contractor must ensure that the site is hoarded off to prevent unauthorized access to site.
- 3.20.2 Hoarding separating the new areas that have been handed over to the client are to be solid wooden fencing.
- 3.20.3 Securely bound together with NO gaps or holes between the panels.

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- 3.20.4 The footing of the hoarding must be of such a nature it is capable of staying upright during high winds and inclement weather. Along long sections bracing must be placed on the inside of the project to ensure the integrity of the hoarding.
- 3.20.5 The hoarding must be inspected daily to ensure that they are in an acceptable condition both for security and an aesthetics perspective.
- 3.20.6 **Hazard tape is NOT considered an effective method of hoarding or barricading.**
- 3.20.7 Hoarding must have warning signs such as "No Trespassing" as well as emergency contact details for site management in the event of an emergency posted every 10 meters.
- 3.20.8 Hoarding must have sufficient and suitable mandatory PPE signs, to communicate the required compulsory PPE for the specific site upon entrance.

4. Occupational Health, Hygiene and Environmental Management

4.1 Occupational Health and Hygiene

- 4.1.1 Exposure of workers to occupational health hazards and risks is very common in any work environment, especially in construction.
- 4.1.2 Occupational exposure is a major problem, and the Principal Contractor is to ensure correct health and hygiene measures are put in place to prevent exposure to these hazards.
- 4.1.3 Prevent inhalation, ingestion, and absorption of any hazardous chemical substance and ensure personnel who are exposed to high noise level are adequately informed of such and all necessary safe guards have been taken prior to issuing PPE.
- 4.1.4 Site-specific health risks maybe as a result of cement dust, wet cement, wood-dust, noise, etc.
- 4.1.5 Noise induced Hearing Loss (GNR 307 7 March 2003)
 - Occupational noise emitted by construction machinery and power tools must be controlled as far as possible by implementing engineering solutions such as noise dampening, regular maintenance, servicing and inspection, screening off the noise, and reducing the number of persons exposed. It is generally accepted that all employees on a construction site will be exposed to varying degrees of noise.

In view of this, the contractor shall ensure full compliance with the above-mentioned regulation; furthermore, provide proof of the relative management process. The contractor is advised to pay particular attention to section 12 of the "Noise-Induced Hearing Loss Regulation".

- 4.1.6 Ergonomics
 - Ergonomics is the study of how workers relate to their workstations. We advise the Principal Contractor and Contractors to take this into consideration when conducting risk assessments, thereby improving the worker-task relationship, which will in turn improve productivity and reduce chronic conditions such as back strains, joint problems and mental fatigue, amongst others.
- 4.1.7 Occupational Health Medicals
 - The contractor shall ensure that all his/her employees are subjected to medical screening in accordance with the occupational Exposures as prescribed by the OHS Act. These medical tests shall be performed by a

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qualified Occupational Management Practitioner & A valid medical fitness certificate must be issued as per Annexure 3 document. These certificates are to be retained in the Health and Safety file and made available on request by the client.

4.1.8 Dust Exposure

The Principal Contractor shall ensure to take all reasonably practicable steps to ensure that dust exposure is limited and controlled on a daily basis. By means of a watercart or any other practicable and safe method of suppressing dust exposure during site operations and issuing FFP1 dust masks to workers exposed to potential airborne dust.

4.1.9 Lighting

The contractor is to ensure that wherever work is performed where the lighting conditions are less than the minimum requirement as defined in ER Regulation 3 and relative schedules, that this is supplemented with additional lighting capacity to ensure that all works contemplated can be conducted safely. Portable Lights must be fitted with a robust non-hygroscopic non-conducting handle and the lamp must be protected by a robust and weather proof guard. The cable lead-in must withstand rough handling. Registers must be maintained for each piece of equipment and findings of regular inspections must be entered into a register. Inspections must concentrate on plug, cord, switch and any obvious faults.

4.1.10 Hours of Work

Approval shall be subject to:

- Competent supervision being on site throughout the duration of the weekend/after-hours work.
- The contractor having a demonstrated history of adequate, problem free control and supervision of the work during normal working hours.

4.2 Construction Employees' Facilities – Facilities Regulations / Construction Regulations 30

4.2.1 **The Principal Contractor must supply and make available;**

- sufficient toilets (1 toilet per 30 workers)
- gender specific showers (1 for every 15 workers)
- gender specific changing facilities
- hand washing facilities, soap, toilet paper, and hand drying material
- Waste bins must be strategically placed and regularly emptied
- Safe, clean storage areas must be provided for workers to store personal belongings and personal protective equipment, separate lockers to be provided for personal wear and contaminated work wear/PPE.
- Workers should not be exposed to hazardous materials/substances while eating and must be provided with uncontaminated sheltered eating areas e.g. ensure segregation between hazardous chemical substance store and eating facilities.
- At all times it must be ensured these areas remain well maintained and screened off to provide necessary privacy due to possible close proximity to residential / commercial buildings, pedestrians and public roadways.

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4.3 Environmental Management

4.3.1 The Principal Contractor shall fulfil all the requirements prescribed by the National Environmental Management Acts 108 of 1998 and its applicable specific environmental management Acts (SEMA's), National, Regional, local regulations and clients approved EMPr. The Contractor shall obtain all necessary environmental permits prescribed, develop and comply to an environmental management plan inclusive of but not limited to the following: This EMP must be submitted well before commencement of planned works, and must include, but shall not be limited to the following aspects:

- a) Method Statement as per scope of work.
- b) Description of appointments, roles and responsibilities of relevant staff that will ensure implementation of environmental management during execution of planned works.
- c) Management and communication (reporting, etc.) arrangements during execution of planned works.
- d) Site establishment arrangements, explained in a proper method statement, including details on facilities and equipment to be installed/used.
- e) Waste management during execution of planned works (identification, handling and disposal of general and hazardous waste).
- f) Environmental Aspects & Impacts Management.
- g) Refuelling of plant and equipment
- h) Water management.
- i) Groundwater management/prevention of contamination.
- j) Hazardous substances management (identification, handling, storage and disposal of hazardous waste).
- k) Effluent monitoring.
- l) Spill response measures.
- m) Dust control/management
- n) Noise control/management
- o) Rehabilitation measures.
- P) Oil & Hydrocarbon spills management
- q) Archaeological & Heritage management
- r) Flora & Fauna management
- s) Alien & Invasive species management
- t) Environmental Incident Reporting
- u) Inspection, auditing and monitoring measures to be implemented during execution of planned works.

4.3.2 The **Principal Contractor shall appoint a full-time Environmental Officer** responsible for ensuring compliance with environmental regulations, monitoring project activities for potential environmental impacts, and implementing appropriate mitigation measures in the duration of contracted work.

The appointed Environmental Officer must be registered with the South African Council for Natural Scientific Professions (SACNASP) and hold a Diploma/Degree, or B-Tech in Environmental Management/Environmental Science. Furthermore, the candidate must have a minimum of five (5) years of experience as an Environmental Officer, CV & Certificates should be provided and copies to be retained thereof in the Contractor's health and safety file and made available on request by the client.

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5. The Designer

5.1 Duties of the Designer

The designer of a structure must—

- ensure that the applicable safety standards incorporated into these Regulations under section 44 of the Act are complied with in the design.
- take into consideration the health and safety specification submitted by the client.
- before the contract is put out to tender, make available in a report to the client— all relevant health and safety information about the design of the relevant structure that may affect the pricing of the construction work, the geotechnical-science aspects, where appropriate and the loading that the structure is designed to withstand.
- inform the client in writing of any known or anticipated dangers or hazards relating to the construction work, and make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered.
- refrain from including anything in the design of the structure necessitating the use of dangerous procedures or materials hazardous to the health and safety of persons, which can be avoided by modifying the design or by substituting materials.
- take into account the hazards relating to any subsequent maintenance of the relevant structure and must make provision in the design for that work to be performed to minimize the risk;
- when mandated by the client to do so, carry out the necessary inspections at appropriate stages to verify that the construction of the relevant structure is carried out in accordance with his design: Provided that if the designer is not so mandated, the client's appointed agent in this regard is responsible to carry out such inspections;
- when mandated, stop any contractor from executing any construction work which is not in accordance with the relevant design's health and safety aspects: Provided that if the designer is not so mandated, the client's appointed agent in that regard must stop that contractor from executing that construction work;
- when mandated, in his or her final inspection of the completed structure in accordance with the National Building Regulations, include the health and safety aspects of the structure as far as reasonably practicable, declare the structure safe for use, and issue a completion certificate to the client and a copy thereof to the contractor; and
- during the design stage, take cognisance of ergonomic design principles in order to minimize ergonomic related hazards in all phases of the life cycle of a structure.

5.2 Temporary Works Designer

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 to the contractor, and in the event of any uncertainty consult the temporary works designer.
- 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.
- the loads caused by the temporary works and any imposed loads are clearly

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indicated in the design.

- A geo-science technical report where appropriate
- The loading of the structure is designed to withstand all anticipated vertical and lateral loads that could be applied to them.

6. Annexure 1 - Health and Safety Costing

As part of the tender submission, Contractors are required to submit a detailed breakdown as to the expenditure requirements with regards to the implementation and maintenance of the health and safety programme. This check sheet serves as a guideline to the compilation of such costs and must be completed by the contractor.

ITEMS COSTED		ESTIMATED COST
1.	PERSONAL PROTECTIVE EQUIPMENT	
	Overalls	R
	Hard hats and safety glasses	R
	Safety boots / shoes	R
	Visors / gloves	R
	Other	R
TOTAL		R
2.	FIRE FIGHTING	
	Fire extinguishers	R
	Training	R
	Surveys	R
	Other	R
TOTAL		R
3.	HEALTH AND SAFETY PERSONNEL	
	Safety Manager	R
	Safety Officer	R
	Full Time Safety Representatives if required	R
	Fire Watchers	R
	First Aiders	R
	External Auditors Costs	R

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	Other	R
TOTAL		R

Annexure 1

4.	FACILITIES	
	Provision of ablution facilities	R
	Service and maintenance of ablution facilities	R
	Provision of eating areas	R
	Cleaning of lay down and other storage areas	R
	Other	R
TOTAL		R
5.	FALL PREVENTION AND PROTECTION	
	Safety harnesses with double lanyards	R
	Lanyard extenders	R
	Scaffold hooks	R
	Lifelines and vertical fall arrest systems	R
	Other	R
TOTAL		R
6.	FIRST AID	
	First Aid Boxes	R
	Rescue Equipment and Stretchers	R
	Replenishment of boxes and other supplies	R
	Other	R
TOTAL		R
7.	TRAINING	
	Health and Safety Representatives	R
	Health and Safety Supervisor Training	R

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	First Aid Training	R
	Firefighting Training	R
	Legal Liability Training	R
	Risk Assessment Training	R
	Other	R
TOTAL		R

8.	SIGNAGE	
	All signage as required by law: regulatory, warning and information	R
	Posters for Awareness	R
	Other	R
TOTAL		R
9.	ELECTRICAL	
	Locks Required for Lockouts	R
	Tags	R
	Permit Books	R
	Calipers	R
	Key Safes	R
	Other	
TOTAL		R
GRAND TOTAL WHICH COULD BE USED IN THE TENDER		R