



Road Traffic
Management Corporation

Occupational Health and Safety Specification for the RTMC

APPOINTMENT OF A SERVICE PROVIDER FOR REFURBISHMENT WORK AT THE BOEKENHOUTKLOOF TRAFFIC TRAINING COLLEGE

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Occupational health and safety specification for the RTMC construction of phase 1 training academy centre of excellence located in Pretoria West

1. Definitions

In this document the following expressions shall bear the meanings assigned to them below:

- 1.1 **Client** means any person for whom construction work is being performed and/or undertaken [i.e. Road Traffic Management Corporation for purposes of this specification];
- 1.2 **Construction Regulations** means the Occupational Health and Safety Act's, No 85 of 1993, new Construction Regulations (GNR.84 of 07 February 2014) that came into effect on 01 March 2014;
- 1.3 **Occupational health and safety plan** means a sufficiently documented plan to the standards of the Client, which addresses hazards identified and includes safe working procedures to mitigate, reduce or control the hazards identified;
- 1.4 **Occupational health and safety specification** means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons working, visiting, passing, staying and/or working close to the construction site and/or other applicable areas such as site camp;
- 1.5 **OHSACT** means the Occupational Health and Safety Act, No 85 of 1993, as amended; and
- 1.6 **Principal Contractor** means an employer, as defined by Section 1 of the OHSACT who performs construction work and is appointed by the Client to be in overall control and management of the construction site and works.

2. Introduction

In terms of Construction Regulation 5(1)(b) of the OHSACT, the Client is required to compile an occupational health and safety specification for any intended project and provide such specification to prospective tenderers/bidders.

This specification has as objective to ensure that the principal contractor entering into a contract with the Client achieves and maintain an acceptable level of occupational health and safety performance and compliance. This document forms an integral part of the contract between the Client and the principal contractor and the principal- and other contractors should make it part of any contract/s that they may have with other contractors and/or suppliers as far as this project is concerned.

Compliance with this document does not absolve the principal contractor from complying with any other minimum legal requirements and the principal contractor remains responsible for the health and safety of his employees, those of his mandataries as well as any persons coming on site or on adjacent properties as far as it relates to the construction activities.

3. Scope

To develop a project specific occupational health and safety specification that addresses the reasonable and foreseeable risks, exposures and aspects of occupational health and safety as affected by the abovementioned contract work.

The specification will provide the requirements that the principal contractor and other contractors will have to comply with in order to reduce the risks associated with the abovementioned contract work and that may lead to incidents causing injury and/or ill health, to a level as low as reasonably practicable and possible.

Any contractor interested in submitting a bid in response to the Client's formal tender for any construction project, has to prepare and include a draft occupational health and safety plan based on this specification and the OHSACT in its tender submission. The Client will evaluate this plan as part of its formal tender adjudication processes to ensure compliance with Construction Regulation 5 that stipulates that the Client may only appoint a contractor who has the necessary competencies and resources to carry out the work appointed for safely.

4. General occupational health and safety provisions

4.1 Hazard identification and risk assessment (Construction Regulation 9)

4.1.1 Risk assessments

Annexure 5 of this specification contains a list of risk assessment headings that have been identified by the Client as possibly applicable to the abovementioned contract work. It is, by no means, exhaustive and is only offered as assistance to the contractors intending to tender for the applicable works. It therefore remains the overall responsibility of the principal contractor to consider all applicable risks and pro- actively undertake risk assessments and implement appropriate risk mitigation measures.

4.1.2 Development of risk assessments

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, ensure that risk assessments are undertaken by a competent person, appointed in writing, and the risk assessments shall form part of the occupational health and safety plan and be implemented and maintained as contemplated in Construction Regulation 9(1).

The risk assessments shall include, at least:

- The identification of the current as well as emerging risks and hazards to which persons may be exposed to;
- The analysis and evaluation of the risks and hazards identified;

- A documented plan of safe working procedures (SWP) and any method statements to mitigate, reduce or control the risks and hazards that have been identified;
- A plan to monitor the application of the SWPs; and
- A plan to review the risk assessments as the work progresses and changes are introduced or incidents occurred which requires the re-evaluation of the processes/risk mitigation.

Based on the risk assessments, the principal contractor must develop a set of site-specific occupational health and safety rules that will be applied to regulate the occupational health and safety aspects of the construction.

The risk assessments, together with the site-specific occupational health and safety rules, must be submitted to the Client before mobilisation on site commences.

Despite the risk assessments listed in Annexure 5, the principal contractor is required to conduct a baseline risk assessment and the aforesaid risk assessments must be incorporated into the baseline risk assessment. The baseline risk assessment must further include the SWPs and the applicable method statements based on the risk assessments.

Hazard identification and risk assessments must be undertaken whilst SWPs must be developed for all out-of-scope work.

4.1.3 Review of risk assessments

The principal contractor is to review the hazards identified, the risk assessments and the SWPs at each production planning and progress report meeting as the contract work develops and progresses and each time changes are made to the designs, plans and construction methods and/or processes.

It is also proposed that should an incident occur the SWPs and all other applicable processes be re-evaluated to ensure that the mitigation measures are still applicable and appropriate and if not a revision of the risk assessments be undertaken.

The principal contractor must provide the Client, other contractors and all other concerned or affected parties with copies of any changes, alterations or amendments as soon as possible but within 14 calendar days of such changes.

4.2 Legal Requirements

All Contractors entering into a contract with the Client shall, as a minimum, comply with the -

- OHSACT and a current, up-to-date copy of the OHSACT and its Regulations must be available on site at all times; and
- Compensation for Occupational Injuries and Diseases Act, No 130 of 1993 (COIDA) as amended. The principal contractor will be required to submit a letter of registration and “good-standing” from the Compensation Commissioner or compensation insurer before being awarded the contract. A current, up-to-date copy of the COIDA must be available on site at all times.

4.3 Structure and responsibilities

4.3.1 Overall supervision and responsibility for occupational health and safety

- The principal contractor [appointed in terms of Construction Regulation 5(1)(k)] is responsible to implement and maintain the occupational health and safety plan approved by the Client.
- The Chief Executive Officer (in terms of Section 16(1) of the OHSACT) of the principal contractor is to ensure that the Employer (as defined in the OHSACT) complies with the OHSACT. Annexure 1 “Legal Compliance Checklist” may be used for this purpose and assistance.
- The principal contractor’s Chief Executive Officer may appoint any person reporting to him/her as Designated Person in terms of Section 16(2) of the OHSACT. Such Designated Person is responsible to assist the Chief Executive Officer to ensure that the Employer complies with the requirements of the OHSACT.
- The construction manager, assistant construction manager, construction supervisor and assistant construction supervisor(s) appointed in terms of Construction Regulation 8 are responsible for supervising the construction work and in specific to ensure that all work undertaken comply with the requirements of the OHSACT, its Regulations and the Client’s specifications.

4.3.2 Operational responsibilities for occupational health and safety

The principal contractor shall appoint designated competent employees and/or other competent persons as outlined in the following list to assist with the operational responsibilities for occupational health and safety. This list is only the minimum requirement and is therefore in no way exhaustive.

Appointment description	Appointment required in terms of
Assistant construction manager	Construction Regulation 8(2)
Assistant construction supervisor	Construction Regulation 8(8)
Construction health and safety officer	Construction Regulation 8(5)
Construction manager	Construction Regulation 8(1)
Construction supervisor	Construction Regulation 8(7)

Appointment description	Appointment required in terms of
Construction vehicle, mobile plant and machinery supervisor	Construction Regulation 23
COVID-19 compliance officer	Regulation 16(6) of Government Notice, No R 480
Drivers of construction vehicles and operators of plant	Construction Regulation 23
Electrical installation and appliances inspector	Construction Regulation 24
Emergency, security and fire coordinator	Construction Regulation 29
Excavation supervisor	Construction Regulation 13
Fall risk protection supervisor	Construction Regulation 10
First-aiders	General Safety Regulation 3
Fire fighting equipment inspector	Construction Regulation 29
Hazardous chemical substances supervisor	Hazardous Chemicals Substances Regulations 10
Incident investigator	General Administrative Regulation 9
Ladder inspector	General Safety Regulation 13(a)
Lifting machines and equipment inspector	Construction Regulation 22
Occupational health and safety committee	OHSACT Section 19
Occupational health and safety representatives	OHSACT Section 17
Person responsible for machinery	General Machinery Regulation 2
Risk assessor	Construction Regulation 9(1)
Scaffolding supervisor	Construction Regulation 16
Stacking and storage supervisor	Construction Regulation 28
Traffic management supervisor	OHSACT Section 9(1)
Traffic safety officer	OHSACT Section 9(1)
Pressure equipment supervisor	Pressure Equipment Regulations
Welding supervisor	General Safety Regulation 9

These appointments must be in writing and the responsibilities clearly stated together with the period for which each appointment is made. This information must be communicated to and agreed with the appointees.

Copies of appointments must be submitted to the Client together with concise CV's of the appointees as part of the principal contractor's health and safety plan and if appointed copies of the appointments included in the occupational health and safety file. All appointments must be approved by the Client and any changes of appointees or appointments must be communicated to the Client and agreed upon before being implemented.

The principal contractor must, furthermore provide the Client with an organogram of all contractors that he/she has appointed or intends to appoint and keep this list updated on a weekly basis.

4.3.3 Construction health and safety officer

This project requires the appointment of a full-time construction health and safety officer, appointed in terms of Construction Regulation 8(5). This appointee should be duly registered and in good standing with a statutory body approved by the Chief Inspector as is required by Construction Regulation 8(6).

The South African Council for Project and Construction Management Professions (SACPCMP) is currently the statutory body responsible for the professional registration of construction health and safety officers and a copy of the appointee's SACPCMP's registration certificate should be submitted as part of the principal contractor's health and safety plan and also be readily available in the health and safety file to be kept and maintained on site.

4.3.4 Designation of occupational health and safety representatives (Section 17 of the OHSACT)

Where the principal contractor employs more than 20 persons [including the employees of other contractors (sub-contractors) and its supervisors] he has to appoint one occupational health and safety representative for every 50 employees or part thereof. General Administrative Regulation 6 requires that the election, appointment and subsequent designation of the occupational health and safety representatives be executed in consultation with employee representatives or employees. (Section 17 of the OHSACT as well as General Administrative Regulation 6 and 7 refer).

Occupational health and safety representatives have to be designated in writing and the designation must include the area of responsibility of the person and term of the designation.

4.3.5 Duties and functions of the occupational health and safety representatives (Section 18 of the OHSACT)

- a. The principal contractor must ensure that the designated occupational health and safety representatives conduct a weekly inspection of their respective areas of responsibility, using a checklist, and report thereon to the principal contractor.
- b. Occupational health and safety representatives must be included in accident and/or incident investigations.
- c. Occupational health and safety representatives must attend all occupational health and safety committee meetings.

4.3.6 Appointment of occupational health and safety committee (Section 19 of the OHSACT)

The principal contractor must establish an occupational health and safety committee consisting of all the designated occupational health

and safety representatives together with a number of management representatives that are not allowed to exceed the number of occupational health and safety representatives on the committee and a representative of the Client who shall act as the chairperson without voting rights. The members of the occupational health and safety committee must be appointed in writing and copies of the appointments included in the occupational health and safety file.

The occupational health and safety committee must meet as a minimum on a monthly basis and consider, at least, the following agenda items:

1. Opening and welcome.
2. Members present, apologies and absent.
3. Minutes of previous meeting.
4. Matters arising from the previous meeting.
5. Occupational health and safety representatives' reports.
6. Incident and/or accident reports and investigations.
7. Incident, accident and/or injury statistics.
8. Other matters.
9. Endorsement of registers and other statutory documents by a duly authorised representative of the principal contractor.
10. Close and next meeting.

4.4 Mandatories

It is a requirement that the principal contractor, when he appoints contractors or sub-contractors in terms of Construction Regulations 7(1)(c) includes an OHSACT Section 37(2) agreement (i.e. Agreement with Mandatory) in his agreement with such contractor.

4.5 Administrative controls and the occupational health and safety file

4.5.1 The occupational health and safety file [Construction Regulation 7(1)(b)]

As required by Construction Regulation 7(1)(b), the principal contractor and other contractors will each keep an occupational health and safety file on site containing the following documents as a minimum:

1. Copy of the construction work permit (for applicable projects) (Construction Regulation 3)
2. Updated copies of the OHSACT and its Regulations as well as the COID Act (General Administrative Regulation 4.).
3. Proof of registration and good standing with the Compensation Commissioner or a COID Insurer [Construction Regulation 5(1)(j)].
4. Occupational health and safety plan agreed with the Client including the underpinning risk assessment(s) and method statements [Construction regulation 7(1)].

5. Copies of occupational health and safety committee meetings and other relevant minutes.
6. Designs and/or drawings [Construction Regulation 7(1)(b)].
7. A list of contractors (sub-contractors) including copies of the agreements between the parties, proof of good standing with the Compensation Commissioner or COID Insurer, and the type of work to be undertaken by each contractor (Construction Regulation 7).
8. Appointment and designation forms as per paragraphs 4.3.1 and 4.3.2 above.
9. Copy of the construction health and safety officer's SACPCMP registration certificate.
10. The following registers:
 - Accident and/or incident register (Annexure 1 of the General Administrative Regulations);
 - Occupational health and safety representatives' inspection register;
 - Construction vehicles and mobile plant inspections by controller;
 - Daily inspections of vehicles, plant and other equipment by the operator, driver and/or user;
 - Designer's inspections and structures record;
 - Inspection of electrical installations (including inspection of portable electrical tools, electrical equipment and other electrical appliances);
 - Fall risk protection inspections;
 - First-aid box content;
 - Record of first-aid treatment;
 - Fire equipment inspections and maintenance;
 - Record of hazardous chemical substances kept and used on site;
 - Ladder inspections;
 - Machine safety inspections (including machine guards, lock-outs etcetera);
 - Inspection registers and logbooks for lifting machines and – tackle (including daily inspections by drivers/operators);
 - Inspections of scaffolding;
 - Inspections of stacking and storage;
 - Pressure equipment inspections; and
 - Inspections of welding equipment.
12. All other applicable records.

The Client will conduct and evaluation of the principal contractor's occupational health and safety file from time to time.

4.6 Occupational health and safety goals and objectives and arrangements for monitoring and review of occupational health and safety performance

The principal contractor is required to maintain a casualty incident frequency rate (CIFR) of not more than four (See Annexure 2 to this document: "Measuring Injury Experience") and report on this to the Client on a monthly basis.

4.7 Notification of construction work (Construction Regulation 4)

The principal contractor does not need to notify the Department of Employment and Labour of its intention to carry out construction work as the Client, due to the value of the construction work, needs to apply for a construction work permit in terms of Construction Regulation 3. The principal contractor may not commence with any construction work until a site specific permit number was issued by the Department of Employment and Labour and the principal contractor must display this site specific permit number conspicuously at the entrance to the main site camp.

4.8 Medical certificates of fitness (Construction Regulation 7)

As required by Construction Regulation 7(1)(g), the principal contractor must ensure that all employees have a valid medical certificate of fitness specific to the construction work to be performed. These certificates must be issued by an occupational health practitioner in the form of Annexure 3 (i.e. Annexure 3 in the Construction Regulations).

4.9 Training, awareness and competence

The contents and syllabi of all training required by the OHSACT and Regulations must be included in the principal contractor's occupational health and safety plan.

4.9.1 General induction training

All members of the contractor's site management as well as all the persons appointed as responsible for occupational health and safety in terms of the Construction and other Regulations will be required to attend a general induction session.

All employees of the principal and other contractors must be in possession of proof of general induction training.

All subsequent and newly appointed employees must also be subjected to the induction training as soon as possible after the appointment but prior to starting work on site.

4.9.2 Site-specific induction training

The principal contractor will be required to develop a contract work project specific induction training course based on the risk assessments for the contract work and train all employees and other contractors and their employees in this.

All employees of the principal and other contractors must at all times be in possession of proof that they have attended a site-specific occupational health and safety induction training.

4.9.3 Other training

1. All operators, drivers and users of construction vehicles, mobile plant and other equipment must be in possession of valid proof of training and where applicable licenses or proof of competency.
2. All employees in jobs requiring training in terms of the OHSACT and Regulations must be in possession of valid proof of training.
3. Occupational health and safety training requirements [as required by the Construction Regulations and as indicated by the occupational health and safety specification and the risk assessment(s)] i.e. -
 - a. General induction (Section 8 of the OHSACT);
 - b. Site and job specific induction, including visitors (Sections 8 and 9 of the OHSACT);
 - c. Site and project manager;
 - d. Construction manager;
 - e. Construction supervisor;
 - f. Occupational health and safety representatives [Section 18 (3) of the OHSACT];
 - g. Training of the appointees indicated in paragraphs 4.3.1 and 4.3.2;
 - h. Operators and drivers of construction vehicles and mobile plant (Construction Regulation 23);
 - i. Basic fire prevention and protection (Environmental Regulations 9 and Construction Regulation 29);
 - j. Basic first-aid (General Safety Regulations 3);
 - k. Storekeeping methods and safe stacking (Construction Regulation 28); and
 - l. Emergency, security and fire coordinator.

4.9.4 Awareness and promotion

The principal contractor is required to have a promotion and awareness program in place to create an occupational health and safety culture within employees as well as sub-contractors. The following are some of the methods that may be used:

- Toolbox talks

- Posters
- Videos
- Competitions
- Suggestion schemes
- Participative activities such as employee “occupational health and safety circles”.

4.9.5 Notices and signs

The following notices and signs are, where applicable, compulsory on the construction site as well as the contractors' yards:

Area and/or activity where notice or sign is required	Notice or sign required in terms of
Display of notices and signs	General Safety Regulation 2B and SABS Code 1186
Entry	General Safety Regulation 2C(2)
First-aid	General Safety Regulation 3(6)
Toilets and change rooms	Facilities Regulation 2 (5) 4(2)(f)
Storage of flammable materials	General Safety Regulation 4(8)(a)(i) and (ii) [10(e) only applicable to contractor's yards]
Grinding wheels	Driven Machinery Regulation 8(1)(7)
Machinery	General Machinery Regulation 9 (Schedule D)
Explosive actuated fastening devices	Construction Regulation 21(2)(f)
Prohibition on smoking and eating or drinking at the workplaces where high risk substances [FR5 (1)] are stored or handled	Facilities Regulation 6(b)
Non-potable water	Facilities Regulation 7(B)
Construction Works Permit	Construction Regulation 3(4)

4.9.6 Competence

The principal contractor shall ensure that his and other contractors' employees appointed are competent and that all training required to undertake the work safely and without risk to health of their or other persons, has been successfully completed before work commences.

The principal contractor shall ensure that follow-up and refresher training is conducted on a regular basis as well as the contract work progresses and the work situation or requirements changes.

Records of all training must be kept on the occupational health and safety file for auditing purposes.

4.10 Consultation, communication and liaison

The following arrangements will apply-

- 4.10.1** Occupational health and safety liaison between the Client, the principal contractor, the other contractors, the designer and other concerned parties will be through the occupational health and safety committee. In the absence of a health and safety committee, the Client and principal contractor will agree on an alternative communication forum to be implemented.
- 4.10.2** In addition to the above, communication may be directly to the Client or his appointed Agent, verbally (followed up in writing within 14 calendar days) or in writing, as and when the need arises.
- 4.10.3** Consultation with the workforce on occupational health and safety matters will be through their supervisors, occupational health and safety representatives, the occupational health and safety committee and their elected trade union representatives, if any.
- 4.10.4** The principal contractor will be responsible for the dissemination of all relevant occupational health and safety information to the other contractors, for example design changes agreed with the Client and the designer, instructions by the Client and/or his Agent, exchange of information between contractors, the reporting of hazardous and/or dangerous conditions and/or situations etcetera.
- 4.10.5** The principal contractor will be required to do site safety walks with the Client and/or his Agent on a basis to be determined and agreed between the parties.
- 4.10.6** The principle and other contractors will be required to conduct toolbox talks with their employees on at least a weekly basis and records of these including the topics discussed must be kept on the occupational health and safety file. Employees must acknowledge the receipt of toolbox talks which record must, likewise, be kept on the occupational health and safety file.
- 4.10.7** The principal contractor's most senior manager on site will be required to attend all the Client's occupational health and safety meetings.
- 4.10.8** The Client or his Agent and the principal contractor will agree on the dates, times and venues of the occupational health and safety meetings.

4.11 Checking, reporting and corrective actions

4.11.1 Monthly compliance assessment by Client [Construction Regulation 5(1)(0)]

The Client will be conducting a periodic assessment to comply with Construction Regulation 5(1)(o) and to confirm that the principal contractor has implemented and is maintaining the agreed and approved occupational health and safety plan.

4.11.2 Other assessments and inspections by the Client

The Client reserves the right to conduct other ad-hoc assessments and inspections as deemed necessary. This could include among others site safety walks.

4.11.3 Conducting an assessment

A representative of the principal contractor must accompany the Client on all assessments and inspections and may conduct his/her own inspection at the same time. Each party will, however, take responsibility for the results of his/her own assessment and/or inspection.

4.11.4 Contractor's assessments and inspections

The principal contractor is to conduct his own internal assessments and inspections to verify compliance with his own occupational health and safety plan and management system as well as the requirements of this specification and the compliance of other contractors under his/her control.

4.11.5 Planned and critical task observations (PTO/CTO)

Planned and critical task observation frequency shall be determined in a risk-based manner, but at least twice a month. Such task observations shall be conducted by duly trained and competent construction supervisor(s) and assistant construction supervisor(s).

All deviations and findings identified through the observation shall be managed in accordance with the principal contractor's non-conformance management procedure including guidance and training to the employee(s) concerned. The principal contractor shall make provision for the frequency, tasks to be observed, related safe work procedures and responsible persons in the occupational health and safety plan.

4.11.6 Inspections by occupational health and safety representatives and other appointees

Occupational health and safety representatives must conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees must conduct inspections and report thereon as specified in their appointments for example vehicle, plant and machinery drivers, operators and users must conduct daily inspections before start-up.

4.11.7 Recording and review of inspection results

All the results of the abovementioned inspections must be in writing, reviewed at occupational health and safety committee meetings,

endorsed by the chairperson of the meeting and placed on the occupational health and safety file.

4.11.8 Reporting of inspection results

The principal contractor is required to provide the Client with a monthly report in the format as per the attached Annexure 3: "Safety, Health and Environment Risk Management Report".

4.12 Incident reporting and investigation

4.12.1 Reporting of accidents and incidents (Section 24 and General Administrative Regulation 8 of the OHSACT)

The principal contractor must report all incidents where an employee is injured on duty to the extent that he/she:

- dies
- becomes unconscious
- 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 -

- 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

to the Client within two calendar days and to the Provincial Director of the Department of Employment and Labour within seven calendar days from date of incident (Section 24 of the OHSACT and General Administrative Regulation 8), **except** that, where a person has died, has become unconscious for any reason or has lost a limb or part of a limb or may die or suffer a permanent physical defect, the incident must be reported to both the Client and the Provincial Director of the Department of Employment and Labour forthwith by telephone, telefax or e-mail. All other reports should still be completed and provided as required.

The principal contractor is required to provide the Client with copies of all statutory reports required in terms of the OHSACT within seven calendar days of the incident occurring.

The principal contractor is required to provide the Client with copies of all

internal and external accident/incident investigation reports, including the reports contemplated in 4.11.2 (3) and (4) below, within seven calendar days of the incident occurring.

4.12.2 Accident and incident investigation (General Administrative Regulation 9)

1. The principal contractor is responsible for the investigation of all accidents and/or incidents where employees and non- employees were injured to the extent that he, she and/or they had to be referred for medical treatment by a doctor, hospital or clinic.
2. The results of the investigation to be entered into the accident and/or incident register.
3. The principal contractor is responsible for the investigation of all minor and non-injury incidents as described in Section 24 (1) (b) and (c) of the OHSACT and keeping a record of the results of such investigations including the steps taken to prevent similar accidents/incidents in future.
4. The principal contractor is responsible for the investigation of all road traffic accidents, related to the construction activities, and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.
5. The Client reserves the right to hold its own investigation into an incident or call for an independent external investigation.

5. Operational control

5.1 Emergency preparedness, contingency planning and response

- 5.1.1 The principal contractor must appoint a competent person to act as emergency controller and/or coordinator.
- 5.1.2 The principal contractor must conduct an emergency identification exercise and establish what emergencies (such as health, safety, environmental, third party or community related actions etcetera) could possibly develop. He/she must then develop detailed contingency plans and emergency procedures, taking into account any emergency plan that the Client may have in place.
- 5.1.3 The principal contractor and the other contractors must hold regular practice drills of contingency plans and emergency procedures to test them and familiarise employees with them.

5.2 First-aid (General Safety Regulation 3)

- 5.2.1** The principal contractor must provide first-aid equipment and have qualified first-aider(s) on site as required by General Safety Regulation 3 of the OHSACT.
- 5.2.2** The contingency plan of the principal contractor must include arrangements for the speedily and timeously transportation of injured and/or ill person(s) to a medical facility or getting emergency medical support to person(s) who may require it.
- 5.2.3** The principal contractor must have firm arrangements with his contractors in place regarding the responsibility of these contractor's first-aid arrangements as well as treatment of injured and/or ill employees.

5.3 Security

- 5.3.1** The principal contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must, among others, include the rule that non- employees will not be allowed on site unaccompanied.
- 5.3.2** The principal contractor must develop a set of project applicable security rules and procedures and maintain these throughout the construction period.

5.4 Accommodation of traffic

- 5.4.1** The principal contractor shall appoint a competent traffic safety officer to take responsibility for the accommodation of all traffic.
- 5.4.2** The principal contractor shall undertake a detailed risk assessment to ensure that all traffic related risks are identified and appropriate risk mitigation measures be established, implemented and maintained. This risk assessment should be kept on the health and safety file and also duly communicated to all employees and especially operators and drivers of construction vehicles and plant.
- 5.4.3** The principal contractor shall develop a comprehensive traffic accommodation plan to provide for traffic entering and leaving the site as well as traffic on site, i.e. internal roads and construction areas.
- 5.4.4** The principal contractor shall ensure that appropriate as well as a sufficient number of road signs are posted to protect employees against traffic and to warn all road users of the presence of construction work as well as construction employees/vehicles. These signs shall be repeated and utilised, where appropriate, as actual construction work is approached.

- 5.4.5** The maintenance of all signage and especially those that is suitable after dark shall be duly managed.

5.5 Work in fall risk positions [Fall protection (Construction Regulation 10)]

- 5.5.1** Although the risk posed by working in a fall risk position is as far as reasonable possible mitigated by the project design, a pre-emptive risk assessment is required for any work to be carried out from a fall risk position.
- 5.5.2** As far as is practicable, any person working in a fall risk position will work from a stable platform, ladder or other device that is at least as safe as if he or she is working at ground level and whilst working in this position be wearing suitable fall arrest equipment to prevent the person falling from the platform, ladder or other device utilised. This fall arrest equipment will be, as far as is possible, secured to a point away from the edge over which the person might fall and the lanyard must be of such a length and strength that the person will not be able to move over the edge.
- 5.5.3** Where the requirement in paragraph 5.5.2 is not practicable, the person will be provided with a full body harness that will be worn and attached above the wearer's head at all times and the lanyard must be fitted with a shock absorbing device or the person must be attached to a fall arrest system that is approved by the Client.
- 5.5.4** Where the requirements in paragraph 5.5.3 are not practicable, a suitable catch net, which must be able to sustain the weight of at least the average person working in the elevated position, must be erected.
- 5.5.5** Employees working in fall risk positions must be trained to do this safely and without risk to their or other person's health and safety.
- 5.5.6** Where work on roofs is carried out, the risk assessment must take into account the possibility of persons falling through fragile material and openings in the roof.
- 5.5.7** Updated records confirming the physical and psychological fitness of employees working in fall risk positions should be kept on the health and safety file at all times.

5.6 Access scaffolding (Construction Regulation 16)

Access scaffolding must be erected, used and maintained safely in accordance with Construction Regulation 16 and SA Bureau of Standards Code of Practice, SANS 10085 entitled, "The Design, Erection, Use and Inspection of Access Scaffolding".

Detailed consideration must be given to all scaffolding to ensure that it is properly planned to meet the working requirements, designed to carry the necessary loadings and maintained in a sound condition. It must also be

ensured that there is sufficient material available to erect the scaffolding properly and safely.

Scaffolding must be erected, altered, maintained or dismantled by person(s) who has/have adequate training and experience in this type of work or under the continuous and direct supervision of such a person.

5.7 Lifting equipment (Construction Regulation 22)

Lifting equipment must be designed and constructed in accordance with the manufactures/designers specifications as well as generally accepted technical standards and operated, used, inspected and maintained in accordance with the manufactures requirements as well as that of the Driven Machinery Regulation 18 of the OHSACT:

The Driven Machinery Regulation requires that:

- a. Lifting equipment to be clearly and conspicuously marked with the maximum mass load (MML) that it is designed to carry safely. When the MML varies with the conditions of use, the table of maximum loads should be used by the driver/operator;
- b. Each winch on a lifting machine must at all time have, at least, three full turns of rope on the drum when the winch has been run to its lowest limit;
- c. Lifting equipment be fitted with a brake or other applicable device capable of holding the MML. This brake or device must automatically prevent the downward movement of the load when the lifting power is interrupted;
- d. Lifting equipment fitted with a load limiting device that automatically arrest the lift when the load reaches its highest safe position or when the mass of the load is greater than the MML;
- e. Every chain or rope on a lifting machine that forms an integral part of the machine must have a factor of safety as prescribed by the manufacturer of the machine and where no standard is available the factor of safety must be:
 - chains – 4 (four)
 - steel wire ropes - 5 (five)
 - fibre ropes- 10 (ten)
- f. Every hook or load attaching device must be designed as such or fitted with a device that will prevent the load from slipping off or disconnecting;
- g. Every lifting machine must be inspected and load tested by a competent person every time it has been dismantled and re-erected and every 12 months after that. The load test must be in accordance with the manufacturers prescription or to 110% of the MML in addition all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices forming an integral part of a lifting machine must be inspected every 6 months by a competent person;
- h. All maintenance, repairs, alterations and inspection results must be recorded in a log book and each lifting machine must have its own log book; and
- i. No person may be lifted by a lifting machine not designed for lifting persons unless in a cradle approved by an inspector of the Department of Employment and Labour.

5.8 Lifting tackle

The following requirements will apply to lifting tackle:

- a. Manufactured of sound material, well constructed and free from latent defects;
- b. Clearly and conspicuously marked with an identity number;
- c. Maximum mass load factor of safety:
 - Natural fibre ropes - 10(ten)
 - Man-made fibre ropes and woven webbing - 06(six)
 - Steel wire ropes – single rope - 06(six)
 - Steel wire ropes – combination slings - 08(eight)
 - Mild Steel chains - 05(five)
 - High tensile/alloy steel chains - 04(four)
- d. Steel wire ropes must be discarded (not used any further for lifting purposes) when wear and corrosion is evident and must be examined by a competent person every three months for this purpose and the results recorded in a designated log book.

5.9 Construction vehicle and mobile plant operators

The following requirements will apply to construction vehicle and mobile plant operators:

- a. Only certified and/or competent employees may be allowed to operate any construction vehicle and mobile plant.
- b. Every lifting machine operator must be trained specifically for the type of lifting machine that he or she is operating.
- c. Only employees duly authorised to do so may operate any construction vehicle and mobile plant.
- d. Only employees physically and psychologically fit, i.e. in possession of a medical certificate of fitness, may be allowed to operate any construction vehicle and mobile plant.

5.10 Construction vehicles and mobile plant (Construction Regulation 23)

Construction vehicles and mobile plant should be formally and duly inspected by a competent person appointed by the principal contractor prior to being allowed on a project site and suppliers of hired vehicles, plant and equipment must be required to comply with this specification as well as the OHSACT and Regulations.

Construction vehicles and mobile plant must be:

- a. Of acceptable design and construction;
- b. Maintained in good working order;
- c. Used in accordance with their design and intention for which they were designed;
- d. Operated and/or driven by trained, competent and authorised operators/drivers. No unauthorised persons to be allowed to drive construction vehicles and mobile plant;
- e. Provided with safe and suitable means of access;

- f. Fitted with adequate signalling devices to make movement safe including reversing;
- g. Provided with roll-over protection;
- h. Inspected daily before start-up by the driver, operator and/or user and the findings recorded in a register/log book and any defects addressed as matter of urgency;
- i. Fitted with two head and two tail lights that is in good working condition whilst operating under poor visibility conditions; and
- j. Used for transporting persons must have seats firmly secured and sufficient for the number of persons being transported.

No loose tools, material etcetera is allowed in the driver and/or operators compartment/cabin nor in the compartment in which any other persons are transported.

No person may ride on construction vehicles and mobile plant except for in a safe place designed and provided for this purpose.

The construction site must be organised to facilitate the movement of construction vehicles and mobile plant in such a manner that pedestrians and other vehicles are not endangered. Traffic routes to be suitable, sufficient in number and adequately demarcated.

All construction vehicles and mobile plant daily inspection records must be kept in the occupational health and safety file.

5.11 Electrical installations (Construction Regulation 24)

Any electrical work undertaken as part of the project, including the installation of temporary electricity for construction use shall be in accordance with Construction Regulation 24 and the Electrical Installation Regulations.

The principal contractor must ensure that:

- a. Existing services are to be located and clearly marked before construction commences and during the progress thereof;
- b. Where the abovementioned is not possible, employees with jackhammers etc. will be protected against electric shock by the use of suitable protective equipment e.g. rubber mats, insulated handles etcetera;
- c. Electrical installations and -machinery are sufficiently robust to withstand normal working conditions on site;
- d. Temporary electrical installations must be inspected at least once per week by a competent person and a record of the inspections kept on the occupational health and safety file;
- e. Electrical machinery used on a construction site must be inspected daily before start-up by the competent driver/operator or any other competent person and a record of the inspections kept on the occupational health and safety file; and
- f. A competent person appointed in writing must control all temporary electrical installations.

5.12 Electrical and mechanical lockout

An electrical and mechanical lockout procedure must be developed by a competent person (i.e. duly qualified and certified electrician) and signed off by the Construction Manager. The principal contractor must ensure that the lockout procedure is duly implemented and maintained, i.e. all contractors on site are informed of and adhere to this lockout procedure.

5.13 Use and storage of flammables (Construction Regulation 25)

The principal contractor must ensure that:

- a. No person is required or permitted to work in a place where there is the danger of fire or an explosion due to flammable vapours being present unless adequate precautions is taken;
- b. Flammables stored on a construction site are stored in a well-ventilated, reasonably fire-resistant container, cage or room that is kept locked with consistent access control measures in place and sufficient firefighting equipment installed and fire prevention methods practiced for example proper housekeeping;
- c. Only one day's quantity of flammable is to be kept in the workplace;
- d. Containers (including empty containers) to be kept closed to prevent fumes/vapours from escaping and accumulating in low lying areas; and
- e. Welding and other flammable gases to be stored segregated as to the type of gas and empty and full cylinders.

5.14 Hazardous chemical substances

The principal contractor must ensure that:

- a. Employees receive the necessary information and training to be able to use, handle and store hazardous chemical substances safely;
- b. The risk assessments required in terms of Construction Regulation 9 include employee exposure to hazardous chemical substances and that the necessary measures be taken to protect persons from being detrimentally affected by hazardous chemical substances present or used in the workplace;
- c. Suppliers provide the necessary information in the form of material safety data sheets regarding hazardous chemical substances required to ensure the safe use, handling and storage of these substances;
- d. An up-to-date list is kept on site of hazardous chemical substances stored and used together with the material safety data sheet of the said hazardous chemical substances;
- e. Hazardous chemical substances containers be clearly marked as to the contents and main hazardous category e.g. "Flammable" or "Corrosive" and the reference number of the hazardous chemical substances on the list indicated above;
- f. No person eats or drinks in an area where hazardous chemical substances are stored or utilised; and
- g. Hazardous chemical substances waste is disposed of safely in terms of hazardous

waste disposal requirements.

5.15 Storage of flammable and hazardous chemicals (Hazardous Chemical Substances Regulations)

See paragraphs 5.13 and 5.14 above.

5.16 Fire prevention and protection

The principal contractor must ensure that:

- a. The risk of fire is avoided;
- b. Sufficient and suitable storage of flammables is provided;
- c. All employees are instructed in the use of the firefighting equipment and know how to attempt to extinguish a fire;
- d. A sufficient number of employees are appointed and trained to act as an emergency team to deal with fires and other emergencies;
- e. Employees are informed regarding emergency evacuation procedures and escape routes;
- f. Emergency escape routes are kept clear at all times and clearly marked;
- g. Evacuation assembly points are demarcated and made known to employees;
- h. Evacuation is regularly practiced to ensure that all persons are evacuated timeously and;
- i. Roll call is held after evacuation to account for all employees and to ensure that no-one including visitors and disabled persons have been left behind; and
- j. A clearly audible, to all persons on site, siren or alarm is fitted and regularly tested.

5.17 Housekeeping (Construction Regulation 27)

The principal contractor must ensure that:

- a. Housekeeping is continuously implemented and maintained;
- b. Materials and equipment are properly stored;
- c. Scrap, waste and debris are removed off site regularly;
- d. Materials placed for use are placed safely and not allowed to accumulate or cause obstruction to the free-flow of pedestrians and vehicular traffic;
- e. Where practicable, construction sites are fenced off to prevent entry of unauthorised persons;
- f. An unimpeded work space is maintained for every employee;
- g. Every workplace is kept clean, orderly and free of tools and the likes that are not required for the work being done;
- h. As far as is practicable, every floor, walkway, stair, passage and gangway is kept in good state of repair, skid-free and free of obstruction, waste and materials; and
- i. The walls and roof of every indoor workplace be sound and leak-free.

5.18 Stacking and storage (Construction Regulation 28)

The principal contractor must ensure that:

- a. A competent person is appointed in writing to supervise all stacking and storage on a construction site;
- b. Adequate storage areas are provided and demarcated;
- c. The storage areas are kept neat and under control;
- d. The base of any stack is level and capable of sustaining the weight exerted on it by the stack;
- e. The items in the lower layers can support the weight exerted by the top layers;
- f. Cartons and other containers that may become unstable due to wet conditions are kept dry;
- g. Pallets and containers are in good condition and no material is allowed to spill out;
- h. The height of any stack does not exceed 3 times the base unless stepped back at least half the depth of a single container at least every fifth tier or the approval of an inspector of the Department of Employment and Labour has been obtained to build the stacks higher with the aid of a machine. (The operator of the machine must be protected against items falling from overhead or off the stack and no items may overhang);
- i. The articles that make up a single tier are consistently of the same size, shape and mass;
- j. Structures for supporting stacks are structurally sound and able to support the mass of the stack;
- k. No articles are removed from the bottom of the stack first but from the top tier first;
- l. Anybody climbing onto a stack can and does do it safely and that the stack is sufficiently stable to support him or her;
- m. Stacks that are in danger of collapsing are broken down and restacked;
- n. Stability of stacks are not threatened by vehicles or other moving plant and machinery;
- o. Stacks are built in a header and stretcher fashion and that corners are securely bonded; and
- p. Persons climbing onto stacks do not approach unguarded moving machinery or electrical installations.

5.19 Eating, changing, washing and toilet facilities (Construction Regulation 30)

5.19.1 Toilets

- a. The provision of toilets for each sex is required in terms of the National Building Regulations and Construction Regulation 30.
- b. Chemical toilets are allowed instead of the water borne sewerage type. Toilets must be provided at a ratio of at least 1 toilet per 30 employees.

5.19.2 Showers

At least cold-water showers of some sort for each sex have to be provided at a ratio of at least 1 shower per 15 employees.

5.19.3 Change rooms

Some form of screened off changing facility must be provided separately for each sex.

5.19.4 Eating facility

Some form of eating facility sheltered from the sun, wind and rain must be provided.

5.20 Personal and other protective equipment (Sections 8, 15 and 23 of the OHSACT)

The principal contractor is required to proactively identify the hazards in the workplace and deal with them on an ongoing basis. He/she must either remove them or, where impracticable take steps to protect employees and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal protective equipment should, however, be the last resort and there should always first be an attempt to apply re-engineering and other solutions to mitigating hazardous situations before the issuing of personal protective equipment is considered.

Where it is not possible to create an absolutely safe and healthy workplace the principal contractor is required to inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the principal contractor maintain the said equipment, that he/she instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s in a consistent and correct manner.

Employees do not have the right to refuse to use and/or wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other valid reason, the employee cannot be allowed to continue working under the hazardous condition(s) for which the equipment was prescribed but an alternative solution has to be found that may include relocating the employee.

The principal contractor may **not charge any fee** for protective equipment prescribed by him or her **but may charge for equipment under the following conditions:**

- Where the employee requests additional issue in excess of what is prescribed;
- Where the employee has blatantly abused or neglected the equipment leading to early failure; and
- Where the employee has lost the equipment.

Please note: Bullet points two and three above should form part of a formal disciplinary process, i.e. following a disciplinary hearing.

5.21 Portable electrical tools and equipment (Electrical Machinery Regulation 9)

Portable electrical tools and equipment includes every unit that takes electrical power from a 15 ampere plug point and is moved around for use in the workplace i.e. drills, saws, grindstones, portable lights, etcetera. In addition electrical appliances such as fridges, hotplates, heaters, etc. must be inspected regularly but at least on a weekly basis and maintained to the same standards as portable electrical tools and appliances.

The use, inspection and maintenance of portable electrical tools and equipment must be governed by the following:

- Regular inspections by a competent person appointed in writing;
- Inspection results must be recorded in a register;
- Only competent authorised persons are allowed to use portable electrical tools and equipment; and
- The correct protective equipment is worn/used whilst operating portable electrical tools and equipment.

This equipment -

- Must be maintained in good condition at all times to prevent an electrical shock to the user;
- The main source should incorporate an earth leakage protection device or receive power through a double wound transformer or be double insulated and clearly marked as such; and
- All equipment must be fitted with a switch to allow for safe and easy starting and stopping.

5.22 Public health and safety (Section 9 of the OHSACT)

The principal contractor is responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimise those dangers. This includes among others:

- a. Non- employees entering the site for whatever reason;
- b. The surrounding community; and
- c. Passers by the site.

Appropriate signage must be posted to this effect and all employees on site must be instructed to ensure that non-employees are protected at all times.

All non-employees entering the site must receive site applicable induction into the hazards and risks and the control measures for these.

5.23 Excavations (Construction Regulation 13)

All excavation work has to comply with the following:

- 5.23.1 Excavation work must be carried out under the supervision of a duly competent person who has been appointed in writing.
- 5.23.2 Before excavation work begins the stability of the ground must be evaluated.
- 5.23.3 Whilst excavation work is being performed, the principal contractor must take suitable and sufficient steps to prevent any person from being buried or trapped by a fall or dislodgement of material.
- 5.23.4 No person may be required or permitted to work in an excavation that has not been adequately shored or braced.
- 2.23.5 Where the excavation is in stable material or where the sides of the excavation are sloped back to at least the maximum angle of repose measured relative to the horizontal plane, shoring or bracing may be left out **but only after** written permission has been obtained from the appointed competent person.
- 5.23.6 Shoring and bracing must be designed and constructed to safely support the sides of the excavation and prevent it from collapsing.
- 5.23.7 Where uncertainty exists regarding the stability of the soil the opinion of a competent professional engineer or professional technologist must be obtained, before excavation proceeds, whose opinion will be decisive. The opinion must be in writing and signed by the engineer or technologist as well as the appointed excavation supervisor.
- 5.23.8 No load or material may be placed near the edge of an excavation if it is likely to cause a collapse of the excavation, unless suitable shoring has been installed to be able to carry the additional load. Best practice requires a one meter clearance so as to reduce the pressure on the side walls as well as risk of material falling onto persons inside the excavation.
- 5.23.9 Neighbouring/adjoining buildings, structures or roads that may be affected or endangered by the excavation must be suitably protected.
- 5.23.10 The location and nature of any existing services such as water, electricity, gas, telecommunication etcetera must be established before any excavation is commenced with and any service that may be affected by the excavation must be protected and made safe for employees working in or near in the excavation.
- 5.23.11 Every excavation, including the shoring and bracing or any other method to prevent a possible collapse, must be inspected by the appointed competent person as follows:

- Daily before work commences
- After an unexpected collapse of the excavation or part thereof
- After substantial damage to any support
- After rain

5.23.12 The results of any inspections must be recorded in a register kept on site in the health and safety file.

5.24 Welding, flame cutting or similar operations

Should any welding work be undertaken as part of emergency repairs to plant and equipment on site or as part of the construction activities, the principal contractor must ensure that:

5.24.1 A competent person will be appointed to supervise welding, flame cutting or similar operations on site.

5.24.2 The following rules will govern all welding and flame cutting or similar operations:

- a. The welder will be trained regarding the safe use/operation of the equipment.
- b. The welder and his assistant will be provided with effective and appropriate personal protective equipment and/or clothing.
- c. Cables and electrode holders will be effectively insulated.
- d. The workplace will be effectively screened off to prevent bystanders from being affected by the welding rays or they will be provided with personal protective equipment.
- e. Special precautions will be taken where welding is undertaken in confined spaces e.g. proper and sufficient ventilation will be provided.
- f. In wet or damp conditions the welding equipment and the welder will be properly insulated and someone will be on standby to assist in the event of any emergency.
- g. A qualified person will certify in writing that it is safe to enter and work in a specific confined space before welding or flame cutting is undertaken.
- h. No welding, flame cutting, grinding, soldering or similar work shall be undertaken in respect of any drum, vessels or similar object or container where such object or container-
 - is completely closed, unless the rise in internal pressure cannot render it dangerous; or
 - contains any substance which, under the action of heat may explode or react to form dangerous or poisonous substances.
- i. Where pressure vessels/welding cylinders containing oxygen or acetylene are transported or used, the proper precautionary measures will be taken against bumping, falling, rolling etcetera.
- j. Gas welding hoses may only be joined with approved connectors and clamps.
- k. No oil or grease may be applied to oxygen valves and fittings.
- l. It is a sound practice to store pressure vessels and/or welding cylinders

- vertically and to secure them by means of a chain.
- m. Acetylene cylinders may never be inclined in excess of 45°.
 - n. Proper and adequate fire prevention measures will be instituted and maintained for as long as the welding continues.
 - o. Where explosive and/or flammable vapours are present welding will only be done under “hot work” permits.

5.25 Transportation of employees

- 5.25.1** Any vehicle used to transport employees must have seats firmly secured and adequate for the number of employees to be carried. No employee may be permitted to stand on the back or sit on the edge of the vehicle.
- 5.25.2** The vehicle utilised for the transportation of employees must be equipped with a serviced and fully operational fire extinguisher.
- 5.25.3** Regulation 247 of the National Road Traffic Act, Number 93 of 1996 (NRTA) stipulates that the principal contractor shall not allow employees to be transported in a vehicle unless the portion of the vehicle in which the employees are being conveyed is enclosed to a height of –
 - a. at least 350 mm above the surface on which employees are seated; or
 - b. at least 900 mm above the surface on which employees are standing,in a manner and with a material of sufficient strength to prevent employees from falling from such vehicle when it is in motion.
- 5.25.4** Regulation 247 of the NRTA also stipulates that the principal contractor shall also not allow any employees to be conveyed in the goods compartment of a vehicle together with any tools or goods, except their personal effects, unless that portion in which the employees are being conveyed is separated by means of a partition, from the portion in which such goods are being conveyed.

5.26 Working in inclement weather

The principal contractor shall implement an early warning system to identify inclement weather and to prevent such weather from posing negative

implications on the safety of employees and other persons visiting. The early warning system shall as a minimum provide for the following:

5.26.1 Construction work done during electrical storms

- a. The principal contractor shall ensure that all employees are removed from heights and all employees are as safe as possible, in inclement weather conditions.
- b. No work is allowed on the construction site during electric storms where employees cannot be protected from it. Protection involves employees being restricted to:
 - eating area fitted with a lightning mast
 - workshops
 - inside buildings
- c. No work is allowed in electrical storms on top of open structural steel, even when earthed.
- d. No work is allowed on heights when the lightning is within a 10 kilometre radius.
- e. After inclement weather on-site risk assessments will be reviewed to include wet conditions.

5.26.2 Lifting equipment operations during inclement weather

- a. Lifting operations will stop during lightning within a 10 kilometre radius and wind above 28 km/h, and the lifting equipment operator will not be allowed to leave the lifting equipment with the booms extended.
- b. Lifting operations will stop during rain, rigging and hand lifts.
- c. Booms on all lifting equipment will be retracted.
- d. All rigging operations will stop and employees will be removed from site.

5.26.3 Construction work done during rain

- a. During rainy conditions all work on steel structures will stop.
- b. No electrical tools will be used during rainy weather in open areas.
- c. Work can be done in water proof areas where there is a zero risk for electrocution.
- d. Areas that may be cleared for work during rain includes:
 - workshops
 - offices
 - work on ground level with the provision that the area is maintained in a safe dry condition

5.26.4 Scaffolding activities during inclement weather conditions

During inclement weather only limited scaffolding actions will be permitted i.e. erecting and dismantling activities.

Guidelines for safe choices:

Weather type	Building and dismantling of scaffolding
Lightning	Stop all activities
Light rain	Stop all activities
Heavy rain	Stop all activities
Wind <28 km/h	Full use
Wind >40 km/h	Stop all activities
Light mist	Full use
Heavy mist	Full use
Hail	Stop all activities

All scaffold users will:

- a. Ensure that scaffolding is inspected immediately after inclement weather conditions.
- b. Ensure that the risks associated with working at heights during inclement weather are identified and reasonably mitigated.
- c. Be cautious of slip/trip hazards when performing activities during inclement weather.
- d. Take note of the weather when completing the daily safe task instructions on site, where applicable.

5.26.5 Driving in inclement weather

The principal contractor shall ensure that the danger of driving in wet conditions is adequately covered in a risk assessment.

The risk assessment will include, but not limited to:

- a. route planning
- b. speed reduction
- c. planning for emergency situations
- d. driving precautions for slippery surfaces
- e. visibility hazards

5.27 Pressure equipment

The principal contractor must ensure that:

- a. any pressure equipment in use is subjected to a formal inspection and pressure test by an approved inspection authority before commissioning, after installation, re-erection or repairs (i.e. Pressure Equipment Regulation 11 has reference). Once installed, similar inspections and pressure tests are required every 36 months.
- b. formal registers by an approved inspection authority are duly maintained (with copies readily available in the occupational health and safety file) to proof that any pressure equipment in use was subjected to the necessary inspections and pressure tests.

- c. pressure equipment (such as compressors) is provided with all appropriate safety accessories required to ensure that it is safe for use (i.e. Pressure Equipment Regulations 10(1) has reference). This include but are not limited to safety latches to secure the pressure hoses to the compressor's outlet valves as well as the pressure driven equipment at the other end of the hoses to prevent these pressure hoses from causing serious injuries to employees should their securing mechanisms fails and they become loose whilst under pressure.
- d. should gas fuel be utilised, either on site or as part of the construction process, no person be allowed to install a fixed appliance, equipment or system for gas fuel unless such person is a holder of a certificate of registration (i.e. Pressure Equipment Regulation 17(3) has reference).

5.28 Occupational health

5.28.1 Introduction

The Regulations promulgated under the National Disaster Management Act, and the lockdown of 26 March 2020 have closed all construction projects except for those involved with essential infrastructure services and emergency facility preparedness.

In terms of Regulation 16(6)(b) and Annexure E of Government Notice 480, a COVID-ready Workplace Plan must be developed prior to the reopening on any construction site. The purpose of this specification is therefore to outline the minimum specification that the client set for Principal Contractor to adhere to when developing their plans.

5.28.2 Re-introduction to the workplace after lockdown

Employees returning to the first day of work after the lockdown to answer a wellness questionnaire with the COVID-19 Compliance Officer or nominated alternative at the entrance to the main building or site camp. Upon successful completion of the questionnaire (if satisfactory) the employee will be allowed to proceed to his/her work area. All employees will attend a mandatory re-induction (revised induction for COVID-19 awareness) including new measures to be taken based on a COVID-19 risk assessment and should be communicated to all employees and other persons visiting the site to highlight requirements as well as activities and areas considered as "hot spots".

5.28.3 Administrative requirements

The following should be reflected in the COVID-ready Workplace Plan:

- a. The date the construction site will open.
- b. The hours the site it will be open.
- c. A timetable setting out the phased return of employees to enable appropriate measures to be taken to avoid and reduce the spread of the virus.

- d. List of employees who can work from home, employees who are 60 years or older and those with comorbidities.
- e. Appointment of a COVID-19 Compliance Officer.

5.28.4 Site specific health and safety procedures

a. Demographics

It will be incumbent upon the Principal Contractor to establish suitable and sufficient procedures for the identification of potentially infected employees and employees, the management of exposure to the corona virus on the project, including visitors and suppliers. Including a response plan for persons suspected of being infected with or exposed to the virus. The procedure shall be applicable to all levels of management and supervision, employees as well as visitors to the site.

As part of this procedure, the Principal Contractor shall maintain a register of all employees on the project, keeping records of the following information as a minimum.

a.1 Age of employee

The procedure shall take cognisance of the vulnerability of older employees and make provision for additional or more frequent screening of employees above a specified age. A certificate of fitness should be available to confirm that the employee is fit for duty, and the certificate should be available on site at all times.

a.2 Health status

A detailed record of all current and previous health conditions, specifically those identified as creating a higher risk for contracting COVID-19, to be kept for all employees. The procedure shall make provision for stringent testing procedures and management of exposure to the virus for employees with higher vulnerability due to underlying health conditions. Such records are confidential and will remain with the Occupational Health facility. A certificate of fitness must be available for each employee on site, including management.

a.3 Socio economic status/local labour

The procedure shall consider the socio-economic status and skill level of employees, taking cognisance of the fact that these may have an impact on the employee's level of exposure to the virus outside of the workplace and the risk of being asymptomatic carriers of the virus to the project/site

a.4 Accommodation

Where accommodation is provided by the Principal Contractor, factors to be considered in the procedure include, among others:

- a. Density of occupants to allow for adequate social distancing (minimum 1.5 m) in sleeping and dining quarters;
- b. Restriction on the number of persons using the same sanitary/hygiene facilities;
- c. Provision of dedicated crockery and cutlery for each occupant, together with a procedure for effective cleaning and safe storage of same and a prohibition on the sharing of utensils;
- d. Dedicated facilities for safekeeping of personal belongings and abovementioned utensils for each person. Such facilities are to allow for total segregation of belongings and must be easy to sanitise. Provision of such facilities for safekeeping to be accompanied with a procedure for the use and sanitising of the storage facility to reduce the risk of cross contamination;
- e. Facilities for accommodation provided by the Principal Contractor to have in place stringent procedures for personal hygiene, ongoing maintenance of sanitising and social distancing; and
- f. Additional rules to include a prohibition on the sharing of clothing, towels and other personal belongings, as well as the laundering of clothing for multiple persons at the same time.

b. Origin of labour and transportation

Where a return to work will necessitate travel between provinces and cities for employees and employees to return to the project, the Principal Contractor shall have a procedure for, or provide transport for the return of employees to minimise the risk of exposure to the virus while in transit. While this is difficult to control by the Principal Contractor, induction training needs to include such information so employees can protect themselves. Where on-site transportation is undertaken, a policy needs to be available for how such transportation will be made safe and limit any opportunity for cross infection. If possible, the Principal Contractor could provide their own transportation for their employees.

Parking areas for public and private vehicles need to be considered. Hand cleaning facilities when entering gates, doors, and security entrances.

b.1 Public Transportation across borders/towns/cities

The Principal Contractor to source/recommend a transport service provider that complies with all travel restrictions and requirements as gazetted by Government, among others:

- a. Maximum occupancy of vehicles to allow for social distancing;
- b. Vehicle sanitised before passengers board;
- c. Passengers provided with hand sanitiser (with at least 70% alcohol content) and face masks prior to boarding;
- d. Vehicle sanitised before and after boarding;
- e. boarding, after each stop where passengers leave the vehicle for comfort breaks, and
- f. Frequent hand sanitising is recommended during transit.

b.2 Contractor provided transportation across borders/towns/cities

Where the Principal Contractor provides transportation across borders/towns/cities to assist employees to return to work, provision shall be made for an adequate number of vehicles to comply with the maximum occupancy as in (a) above, and all such vehicles provided will be subject to the same requirements as abovementioned.

Since it will not be practicable to separate belongings and luggage in either instance mentioned above, the Principal Contractor's procedures must make provision for the sanitising of personal belongings and luggage on departure and arrival at the final destination

c. Social distancing

Social distancing has been shown to be an effective method to prevent or slow down the spread of the corona virus. It will be incumbent on the Principal Contractor to ensure that the construction site and facilities are set up and then managed in such a way that it will be possible as far as is practicable to maintain the required social distancing of a minimum of 1,5 metres between persons when at work.

c.1 Tasks that require more than one person to complete

Where it is not possible to maintain the required distance between employees due to the nature of the work activity, e.g. curb laying, confined working areas, rebar tying, preparing wire cages, the Principal Contractor will be required to implement, maintain and enforce a procedure to adequately protect such employees against potential infection with the corona virus. This includes but is not limited to:

- a. Providing adequate supplies of suitable PPE such as face shields in addition to the masks, task specific gloves, safety glasses, disposable/additional coveralls;
- b. PPE used during multi-person activities to be exchanged immediately after the task is completed, but should not be reissued without it being adequately disinfected;
- c. Sealed bins to be provided with appropriate labelling (as Hazardous Material) for disposable PPE such as masks, disposable coveralls, disposable gloves, etcetera.;
- d. Sealable bags provided to each person for keeping PPE requiring laundering, such as gloves and overalls, and
- e. Sanitising/washing facilities provided for immediate sanitising of hard hats, shields, safety glasses, shoes, safety harnesses etcetera. on completion of multi-person tasks.

All the above to be utilised when breaking for lunch or leaving the site, and before commencing with the next or new work activity.

c.2 Access/egress of site, welfare facilities, meeting areas

The Principal Contractor must ensure there is suitable and adequate provision to minimise the risk of persons who may be infected with COVID-19 entering or exiting the site, the spread of the virus between persons who work on or visit the site and the risk of potentially infected persons leaving the site and accessing public spaces or going home to their families and thereby infecting other persons. To achieve this, the Principal Contractor is required to implement, among others the following measures:

- a. Persons accessing or leaving the site in groups to maintain social distancing of at least 1,5 metres while waiting to access the site;
- b. Persons waiting to access the site to be segregated from the public where required by the provision of dedicated, prominently identified public pedestrian walkways situated in such a way that social distancing is maintained between site personnel and the public;
- c. Screening of each person who enters the site with a no-touch infrared thermometer;
- d. Means of (fully) sanitising each person and their belongings, who access and leave the site;
- e. Dedicated facilities for safekeeping of personal property for each person. Such facilities are to allow for total segregation of belongings and must be easy to sanitise. Provision of such facilities for safekeeping to be accompanied with a procedure for the use and sanitising of the storage facility to reduce the risk of cross- contamination;
- f. Toolbox talks to be conducted outdoors when possible in order for persons to maintain social distancing. Where inclement weather does not allow for this, toolbox talks to be conducted with smaller groupings of employees in a sheltered area large enough to maintain social distancing, and
- g. Eating areas to be set up in such a way that the maximum number of persons who will use the area at any one time are able to maintain the required social distancing of 1,5 metres. Should this not be practicable, meal times are to be staggered on a rotational basis to avoid contact between persons.

d. Alcohol and drug testing

Alcohol testing may only be done using single use test units, and must be disposed of in the appropriate contaminated waste. Drug testing will only be done by an occupational health facility either using urine or blood sampling. A protocol will be drawn up by the Principal Contractor to manage this with the occupational health service provider being used.

e. Medical surveillance

The normal requirements of pre-placement, periodic and exit medicals will remain, with the occupational health service provider providing a methodology of how they will be including factors relating to COVID-19. No lung functions or peak flows will be done until deemed safe to do so by the South African Thoracic Society.

Any person who contracts the virus may need to be reported to the Compensation Commissioner or other applicable insurer as an occupational disease where their work shall be monitored and in contact with others. Such details are included in the Compensation for Injuries and Diseases Act.

Isolation of employees who have a high temperature or any COVID-19 related symptoms, and transportation (in suitable transport) to an applicable facility as directed for testing and treatment.

Employees will be required to complete COVID-19 questionnaires and obtain a medical certificate indicating that they are no longer infected prior to returning to site. Any employee with COVID-19 related symptoms may not be allowed to return to work, but notify the Principal Contractor of same.

f. Ablution facilities

Ablution facilities are an essential facility that must be available for employees across a site. Facilities are a high-risk area for possible infection and increased cleaning regimes are required to be introduced. A policy on how this will be done is required, that will cover both portable and permanent facilities. The following should among others be considered:

- a. Portable toilets to be provided at a 1:10 ratio;
- b. Cleaners to continually clean and have a formal cleaning regime, i.e. cleaning to as a minimum be undertaken in the morning, lunchtime as well as before closing the site;
- c. Hand washing facilities (soap and water, paper towel) to be available where possible, and if not, to provide hand sanitiser (with at least 70% alcohol content);
- d. Induction training to educate all users in hand washing correctly;
- e. Flush toilets preferably 1:15 unless increased cleaning regime present;
- f. Restrict the number of people using toilet facilities at any one time e.g. use a welfare attendant;

- g. Wash hands before and after using the facilities;
- h. Enhance the cleaning regimes for toilet facilities particularly door handles, locks and the toilet flush, i.e. hourly;
- i. Portable toilets should be avoided wherever possible, but where in use these should be cleaned and emptied more frequently;
- j. Provide suitable and sufficient rubbish bins for paper towels with regular removal and disposal that need to be managed as hazardous waste;
- k. Introduce staggered start and finish times to reduce congestion and contact at all times;
- l. Consider increasing the number or size of facilities available on site if possible, and
- m. Provide suitable and sufficient rubbish bins that are duly labelled as "Hazardous Material" in these areas with regular removal and disposal.

g. Cleaning of working areas

The principal contractor must clean and disinfect objects and surfaces that are frequently touched.

When cleaning these, the following shall apply -

- a. Disposable or washable gloves should be worn during cleaning activities;
- b. Cleaners are required to wear clean re-washable cloth masks;
- c. Cloths used for cleaning purposes should at least once every hour be disinfected and then sanitised or bleached to prevent cross contamination;
- d. Dirty surfaces should be cleaned with a detergent or soap and water prior to disinfection;
- e. Cleaning equipment to be disinfected after each cleaning activity;
- f. Diluted household bleach solutions, alcohol solutions with at least 70% alcohol, and most common household disinfectants should be effective for disinfection purposes;
- g. In cases where occupied workspaces are to be cleaned, the occupant (employee) must be required to leave the workspace until the cleaning activity is completed. The employee should then be required to wash his/her hands before re-occupying the workspace; and
- h. Cleaning of workspaces will include cleaning of furniture, desk or counter surface, telephone, computer screens, keyboards and all other equipment/tools used.

h. Security access

Public access to site shall be limited at all times, and non-essential visitors are not to be allowed entry. There is required to be staggered access at all times. The following aspects are to be included in a policy document as to how such issues will be managed, among others:

h.1 Staggered access to site

The Principal Contractor should consider the following:

- a. Introduce staggered start and finish times to reduce congestion and contact at all times;
- b. Monitor site access points to enable social distancing – consideration for the number of access points, either increase to reduce congestion or decrease to enable monitoring;
- c. 50-100 mm deep trough to be placed at entrances to site. Disinfectant shall be placed in the trough and all shoes coming onto site or leaving site will be disinfected, without wetting shoes themselves;
- d. Remove or disable entry systems that require skin contact e.g. fingerprint scanners or biometric system;
- e. Require all employees and visitors to wash or sanitise their hands before entering or leaving the site;
- f. Ensure social distancing between people waiting to enter site;
- g. Regularly sanitise common contact surfaces in reception, office, access control and delivery areas e.g. scanners, turnstiles, screens, telephone handsets, desks, particularly during peak times, but as a minimum in the mornings, lunchtime and before closing the site;
- h. Reduce the number of people in attendance at site inductions and consider holding them outdoors wherever possible, and
- i. Drivers should remain in their vehicles if the load will allow it and must wash or clean their hands before unloading goods and materials.

h.2 Symptom screening

The Principal Contractor must take measures to:

- a. screen all employees and other persons, at the time that they report for work, to ascertain

whether they have any of the observable symptoms associated with COVID-19, namely –

- fever
 - cough
 - sore throat
 - redness of eyes or shortness of breath (or difficulty in breathing);
- b. require every employee or other person on site to report whether they suffer from any of the following additional symptoms –
- body aches
 - loss of smell or loss of taste
 - nausea
 - vomiting
 - diarrhoea
 - fatigue
 - weakness or tiredness; and
- c. require employees or other persons to immediately inform the Principal Contractor if they experience any of the symptoms in item a or b above, whilst on site.

h.3 Employees presenting symptoms

If an employee on site presents with the symptoms outlined in paragraph 4.7.2, or advises the Principal Contractor of these symptoms, the Principal Contractor must –

- a. not permit the employee to enter the site or report for work; or
- b. if the employee is already on site immediately:
 - isolate the employee, provide the employee with a FFP1 surgical mask and arrange for the employee to be transported in a manner that does not place other employees or members of the public at risk either to be self-isolated or for a medical examination or testing; and
 - assess the risk of transmission, disinfect the area and the employee's workstation, refer those employees who may be at risk for screening and take any other appropriate measure to prevent possible transmission;
- c. ensure that the employee is tested or referred to an identified testing site;
- d. place its employee on paid sick leave in terms of section 22 of the Basic Condition of Employment Act (BCEA) or if the employee's sick leave entitlement under the section is

exhausted, make application for an illness benefit in terms of clause 4 of the Directive issued on 25 March 2020 on the COVID-19 Temporary Employer Relief Scheme under regulation 10(8) of the Regulations promulgated in terms of section 27(2) of the Disaster Management Act;

- e. ensure that the employee is not discriminated against on grounds of having tested positive for COVID-19 in terms of section 6 of the Employment Equity Act, 1998 (Act No. 55 of 1998);
- f. if there is evidence that the employee contracted COVID-19 as a result of occupational exposure, lodge a claim for compensation in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993) in accordance with Notice 193 published on 3 March 2020.

h.4 Employees returning to work

If an employee has been diagnosed with COVID-19 and isolated in accordance with the Department of Health Guidelines, the Principal Contractor may only allow the employee to return to work on the following conditions -

- a. the employee has undergone a medical evaluation confirming that the employee has been tested negative for COVID-19;
- b. the Principal Contractor ensures that personal hygiene, wearing of masks, social distancing, and cough etiquette is strictly adhered to by the worker; and
- c. the Principal Contractor closely monitors the employee for symptoms on return to work.

The Principal Contractor to formally nominate a person to take responsibility for –

- a. considering the medical information confirming that the employee has been tested negative; and
- b. managing the employee's returning to work.

i. Procurement and storage for COVID-19 personal protective equipment (PPE) and general supplies

The following shall be implemented by the Principal Contractor:

- a. Availability of PPE is an imperative and should be available at all times. Where this is not so, the work related to the activity will be stopped until adequate supplies are available.
- b. Storage of PPE shall be tightly controlled, with records of issue. Damaged PPE shall be managed in the usual way, but all to be disposed of as if contaminated.
- c. Appropriate PPE must be provided free of charge to employees.

j. Waste management for COVID-19 waste

Waste management arrangements to be updated to include provision for the disposal of additional waste generated due to preventative measures implemented. All waste to be managed as hazardous waste.

j.1 Disposal of any gloves, masks

The Principal Contractor shall dispose of all used gloves and masks as hazardous waste and provide sealable duly labelled bags and containers for the safe disposal of this waste.

j.2 Paper towels

The Principal Contractor shall provide adequate supplies of paper towels on site. At points where these towels are provided lined waste bins that are duly labelled should be placed in order to collect all used towels and then to be disposed of in hazardous waste.

j.3 Disinfectant solution

The Principal Contractor shall provide adequate supplies of disinfectant (with at least 70% alcohol content) on site where the use of water and soap for cleaning is not practical. If disinfectant dispensers are not refilled it should be disposed with other hazardous waste.

j.4 Wastewater

Wastewater at washing points, toilets, and bathrooms to be contained in the sewer drainage system so to prevent surface spills. If wastewater is contained in waste buckets it must be sealed when removed and disinfected after it is cleaned.

k. Signage

The Principal Contractor shall review all current signs and notices displayed on site. The Principal Contractor shall avoid conflicting messages/notices that have been in place prior to lockdown and review according.

k.1 Access rules

The Principal Contractor shall install additional signage with site rules specific to the prevention of spreading the COVID-19 virus at the access control points of the site.

k.2 Notices/posters with protocols

Notices and posters shall be placed and installed to raise awareness and regarding protocols to be followed on site. These notices and posters shall be placed conspicuously at various points on the site including the following places:

- a. Entrance
- b. Site notice board
- c. Site Office
- d. Eating areas
- e. Next to toilets and bathrooms
- f. Hand washing stations
- g. Storerooms

I. Emergency planning

An updated emergency plan shall be completed that is in line with the current Regulations of the National Disaster Management Act as well as workplace plan.

I.1 First aid

Extra gloves, and disinfectants are to be available, first aiders are to be issued with at least FFP1 masks should they be required to respond

I.2 Evacuation plans

Evacuation plans should consider social distancing.

I.3 Isolation of potentially infected employees

The emergency plan shall consider how anyone who arrives on site and displays any of the COVID-19 symptoms, or has a raised temperature will be dealt with.

m. Personal protective equipment (PPE)

The hierarchy of control applies with the use of PPE. Specific regard for the type and usage, training and control shall be outlined in the policies and procedures.

m.1 Masks

Masks are compulsory for all employees; personnel and professional team members as well as visitors, reducing the potential of inhaled COVID-19 droplets. For general administration purposes and operational employees cloth masks will suffice. FFP1 masks are only to be worn by first aiders or high-risk employees, due to the national shortage thereof.

All FFP1 masks to be disposed with or after 1 day's use or after contamination. Induction shall include training on the correct use and removal of masks.

Cloth face masks to be used on entering and leaving the site. Each employee should be supplied with at least 3 cloth face masks. This would assist ensuring that the masks are hygienic (1 on the face; 1 in the wash and 1 as a backup). Training of the correct washing and drying of the masks should also be undertaken.

The Principal Contractor must ensure that sufficient stock is at all-time available on site. This will also depend on the type of mask being issued.

All disposable masks are biological waste and must be properly disposed of. This must be disposed in container (locked) or in sealed bags that is duly labelled to be either removed as medical biological waste by a registered service provider. Disposal manifests must be kept on site.

Clearly identifiable bins indicating biological waste to be provided

m.2 Face Shields

The Principal Contractor may also look at options such as full-face shields for preventing spreading of virus through eyes. This would assist the employee who is doing hard physical work to breathe more easily but still protecting the mouth, eyes and nose.

Face shields should be cleaned daily before the shift and at the end of the shift. Proper cleaning agents/disinfectant must be used. Face shields should be issued to employees and no sharing is allowed.

m.3 Overalls

All employees must be issued with 3 overalls (1 overall wearing; 1 overall in the wash and one as the backup). This will ensure that the employee will be able to wear clean hygienic overalls. This must form part of the COVID-19 training for all employees.

m.4 Gloves

It is preferable that surgical gloves are not worn unless indicated and employees trained in the proper use thereof. Gloves must only be used when the activity demand the wearing of specific type of gloves. This will be directed by the Principal Contractor's risk assessment.

Site office personnel need to be made aware of the risks in the office environment, this include to handling of documents and drawings. These employees could be issued with the appropriate gloves or sufficient hand wash/sanitising facilities must be available in the site office.

n. Consequence management

n.1 Change management

The Principal Contractor to ensure that regular information pertaining to COVID-19 and or any health and safety matters are distributed to ensure that required measures/controls are timeously addressed. The Principal Contractor must also ensure that the health and safety committee meetings are held regularly to evaluate

all activities on site. There are various information platforms available to the Principal Contractor and or employees that can assist in keeping them informed. These include among others:

- a. Local authority/legislation
- b. World Health Organisation
- c. Health care departments
- d. Health care professionals
- e. Health care centres/hospitals
- f. Public service announcements

The Principal Contractor is responsible and required to keep his or her employees informed by means but not limited by conducting the following:

- a. Awareness campaigns -i.e. posters within work places
- b. Daily site task Inspections (DSTIs)
- c. Toolbox talks / Daily briefings
- d. Meetings
- e. Company policies/procedures/employee wellbeing interaction
- f. Company newsletters
- g. Telecommunications – cellular phones, e-mail etcetera

n.2 Succession Planning

Employees who is performing specialise work/activities (including plant operators) must be identified. These positions must have alternative employees that could perform these activities. This could mean additional training for these employees to ensure business continuity.

Key personnel on site should also have competent alternative employees that could perform these functions when needed. Where possible administrative staff should be working from home to limit exposure.

It is very important to understand that the availability of certain essential products and material may not always be readily available and thus proper planning must be in place to ensure that the activities on site are not interrupted.

Proactive planning must be in place to ensure that the following are ordered and available:

- a. PPE (cloth face masks, face shields, overalls)
- b. Hand sanitisers with at least 70% alcohol content
- c. Disinfectants and cleaning materials

n.3 Consequences

When non-compliance activities are noted, that activity must be stopped. Should the remedial actions not take place the site will be shut down till the corrective actions have been implemented.

Employees that do not work according to the COVID- ready Workplace Plan must be disciplined according to the company's disciplinary codes and practices.

Supervisory employees on site must ensure consistent compliance, and when non-conformances are noted, suitable corrective measures that may include disciplinary actions should be taken.

The Principal Contractor should note that it could be fined and even according to the Disaster Management Act, arrested. The project may also be stopped with possible penalties and claims for standing changes.

o. Welfare facilities

The Principal Contractor shall adapt arrangements regarding the provision of welfare facilities to be in line with Government guidelines and requirements.

o.1 Clean, storage for food and personal belongings

The Principal Contractor to provide lockable storage facilities for all employees, which shall be disinfected daily. Training and awareness to address procedures and the importance of good hygiene practice.

o.2 No personal belongings to be kept on site

Apart from extra clean personal clothing no other personal belongings may be allowed on site except if kept in locker provided by the Principal Contractor that is disinfected daily.

o.3 No communal drinking facilities (shared cups etcetera)

The Principal Contractor shall request employees to bring their own water to site and also provide adequate supplies of bottled water when required. Empty bottles to be disposed of as normal waste. Training and awareness to address procedures and the importance of good hygiene practice.

o.4 Larger meeting areas/ preferably use technology (Skype, Zoom, Microsoft teams)

The Principal Contractor shall limit the number of employees at all activities to the minimum required to do the work in a safe manner. Where possible meetings must be held in open areas limited to essential personnel. Technological alternatives to be utilised for meeting attendance if possible. Training and awareness to address procedures and the importance of social distancing.

o.5 Eating areas

The Principal Contractor shall limit the number of employees at all activities to the minimum. Stagger lunchbreaks and resting periods for work teams. Training and awareness to address procedures and the importance of good hygiene practice and social distancing.

Employees are required to stay on site once they have entered it and not use local shops. No food deliveries to be allowed to the site.

Dedicated eating areas should be identified on site to reduce food waste and contamination.

- a. Break times should be staggered to reduce congestion and contact at all times.
- b. Hand cleaning facilities or hand sanitiser (with at least 70% alcohol content) should be available at the entrance of any room or area where people eat and should be used by employees when entering and leaving the area;
- c. Employees should be instructed to bring pre-prepared meals and refillable drinking bottles from home;
- d. Social distancing to be applied whilst eating and avoid all contact;
- e. Where catering is provided on site, it should provide pre-prepared and wrapped food only;
 - Payments should be taken by contactless card wherever possible; and
 - Crockery, eating utensils, cups etcetera. should be disposable if supplied.
- f. Drinking water should be provided with enhanced cleaning measures of the tap mechanism introduced;
- g. Tables should be cleaned and disinfected between each use;
- h. All rubbish should be put straight in the bin and not left for someone else to clear up; and
- i. All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles, vending machines and payment devices.

5.28.5 Communication

The Principal Contractor must inform the client via the professional team (i.e. project manager) of any infection incidents that have exposed the health and safety of employees or other persons on site.

The reporting should also include a schedule of employees that have tested positive for COVID-19 as well as employees who have recovered and returned to work after quarantine.

6. Health and safety policy

The principal contractor has to provide the Client, as an annexure to the health and safety plan, with

a detailed health and safety policy outlining the principal contractor's stance on and principles adopted for health and safety.

7. Cost for health and safety measures during the construction process

To enable the Client to comply with Construction Regulation 5(1)(g), all potential principal contractors submitting tenders/bids have to demonstrate to the Client that sufficient provision has been made for the cost to implement and maintain the health and safety plan proposed by the principal contractor to meet the requirements of this health and safety specification as well as that of the OHSACT and its Regulations.

A detailed schedule of costs has to be included in the health and safety plan submitted as part of the potential principal contractor's tender document. Failure by the principal contractor to adhere to this requirement will force the Client to reject the tender/bid in terms of Construction Regulation 5(1)(h).

8. Project specific risk assessment requirements

See Annexure 5.

9. Overview of annexures

Annexure 1:	Legal compliance assessment.
Annexure 2:	Measuring injury experience. Annexure
Annexure 3:	SHE risk management report.
Annexure 4:	Guide to risk assessments.
Annexure 5:	List of risk assessments.



Road Traffic
Management Corporation

Annexure 1

Legal compliance assessment

Occupational Health, -safety and environment: Risk assessment checklist

(Based on the Construction Regulations of the Occupational Health and Safety Act)

* Denotes items applicable to both construction sites, contractor plant and storage yards

ELEMENT	REMARKS
1. Administrative and legal requirements	
2. Education, training and promotion	
3. Public safety, security measures and emergency preparedness	
4. Personal protective equipment	
5. Housekeeping	
6. Working at heights (including roof work)	
7. Scaffolding and temporary work	
8. Ladders	
9. Electrical safeguarding	
10. Emergency, fire prevention and protection	
11. Excavations and demolition	
12. Tools	
13. Cranes	
14. Builder's hoist hoists	
15. Transport and materials handling equipment	
16. Site plant and machinery	
17. Plant and storage yard or site workshop specifics	
18. Workplace environment, health and hygiene	

1. Administrative and Legal Requirements

OHSACT Section or Regulation	Subject	Requirements	Yes/No
Construction Regulation 3	Application for construction permit	Should the project trigger this requirement - • Application for permit lodged; • Copy of construction permit in the OHS file; and • Is the site specific permit number conspicuously displayed at the main entrance.	

OHSACT Section or Regulation	Subject	Requirements	Yes/No
Construction Regulation 4	Notice of carrying out Construction work	For construction projects where no permit is required - - Was the Department of Employment and Labour notified; and - Is a copy of notice available on site.	
General Admin. Regulation 4	Copy of OHSACT	Updated copy of the OHSACT and Regulations on site. Readily available for perusal by all employees.	
COLD Act Section 80 and Construction Regulation 5(1)(j)	Registration with Compensation Commissioner or other approved compensation insurer	Written proof of registration/Letter of good standing available on site.	
Construction Regulation 4 and 5(1)	OHS specification, plans and program	OHS spec received from National Department of Health. OHS plan developed. OHS program implemented. Plans and program updated regularly.	
Section 8(2)(d) Construction Regulation 9	Hazard identification and risk assessment	Competent risk assessor appointed in writing Proof of risk assessor's competence available on site Risk assessment and –plan drawn up and updated. Baseline risk assessment undertaken prior to commencement of construction work. Copy of baseline risk assessment available on site. Continued risk assessments undertaken and recorded. Copies of ongoing risk assessments available on site. Employees and sub-contractors informed and trained by a competent person in the risk assessment before work commences and on an ongoing basis thereafter. Health and safety committee or employee representatives consulted on the monitoring and review of the risk assessments.	
Section 16(2)	Assigned duties (Managers)	Responsibility of complying with the OHSACT assigned to other person/s by CEO.	

Construction Regulation 8(1)	Designation of person ultimately responsible for occupational health and safety on site	Competent person appointed in writing as construction manager.	
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OHSACT Section or Regulation	Subject	Requirements	Yes/No
Construction Regulation 8(2)	Designation of Assistant for construction manager	Competent person appointed in writing as assistant construction manager.	
Construction Regulation 8(7)	Designation of person responsible for ensuring occupational health and safety compliance	Competent person appointed in writing as construction supervisor.	
Construction Regulation 8(8)	Designation of Assistant for responsible person	Competent person(s) appointed in writing as assistant construction supervisors.	
Construction Regulations 8(5)	Health and safety officer	Competent and duly registered person appointed. Proof of health and safety officer's competency on site. Health and safety officer duly registered with SACPCMP as Construction Health and Safety Officer (CHSO) Reports prepared and submitted to the client/contractor(s)?	
Section 17 & 18 and General Administrative Regulations 6 and 7	Election and Designation of occupational health and safety representatives	More than 20 employees - one representative and one additional representative for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified. Meaningful reports. Reports actioned by management.	
Section 19 and 20 and General Administrative Regulations 5	Occupational health and safety committee/s	Committee/s established. Members appointed in writing. Meetings held monthly. Minutes kept. Actioned by management.	

Section 37(1) and (2)	Agreement with mandataries, contractors and sub-contractors	Written agreement with contractors and sub-contractors. Updated list of contractors and sub-contractors displayed. Proof of Registration with Compensation Commissioner or Compensation Insurer as well as Letter of Good Standing. Construction Supervisor designated. Written arrangements regarding representatives and committee. Written arrangements regarding first-aid.	
Construction Regulation 7(1)(c) and 7(2)(a)	Management of sub-contractors	Has the principal contractor – - provided all sub-contractors with relevant sections of the client's OHS specification - formally evaluated and approved all sub-contractors' OHS plans. - ensured that the sub-contractors appointed made sufficient provision for the costs to be incurred to	

OHSACT Section or Regulation	Subject	Requirements	Yes/No
		implement and maintain their OHS plan.	
Construction Regulation 7(1)(g)	Medical certificates of fitness	Are medical certificates of fitness (issued by an occupational health practitioners) specific to the construction work performed available for all employees on site	
Section 24 and General Administrative Regulation 8 COID Act Section 38, 39 and 41	Reporting incidents of (Department of Employment and Labour)	Incident reporting procedure displayed. All incidents in terms of section 24 reported to the Provincial Director, Department of Employment and Labour, within 3 days (Annexure 1 and/or WCL 1 or 2). Cases of occupational disease reported. Copies of reports available on site. Record of first-aid injuries kept.	
General Administrative Regulation 9	Investigation and recording of incidents	All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing. Copies of reports (Annexure 1) available on site. Tabled at committee meeting. Actioned taken by site management.	

Construction Regulation 10	Fall protection	Competent person appointed to draw up and supervise the fall protection plan. Proof of appointees' competence available on site. Risk assessment carried out for work at heights. Fall protection plan drawn up and updated. Plan available on site.	
Construction Regulation 10(5)	Roof work	Competent person appointed to plan and supervise roof work. Proof of appointees' competence available on site. Risk assessment carried out. Roof work plan drawn up and updated. Roof work inspect before each shift and inspection register kept. Employees medically examined for physical and psychological fitness and written proof on site.	
Construction Regulation 12	Temporary works	Competent person appointed in writing as temporary works designer to inspect and approved any erected temporary works before use. Proof of appointees' competence available on site. Competent person appointed in writing as temporary works supervisor. Proof of appointees' competence available on site. Risk assessment carried out for work on temporary works structures.	

OHSACT Section or Regulation	Subject	Requirements	Yes/No
		Temporary works drawings approved by temporary works designer and available on site. Other relevant documentation that includes construction sequence and method statements available on site. Competent person(s) appointed in writing to: • erect, move or dismantle temporary works structures; and • examine and check all temporary works structures before being used; Written proof of competence of above appointees. Temporary work structures are inspected: • before, during and after the placement of concrete; • after inclement weather; • after a load was imposed; • daily whilst in place; and • before stripping or dismantling and inspection register kept. Inspection registers kept. Fall protection plan drawn up and updated. Plan available on site.	
Construction Regulation 16	Scaffolding	Competent persons appointed in writing to: • erect scaffolding (scaffold erector/s); • act as scaffold team leaders; and • inspect scaffolding weekly and after inclement weather (scaffold inspector/s). Written proof of competence of above appointees. Appointees available on site. Copy of SANS 10085 available on site. Risk assessment carried out. Inspected weekly and/or after bad weather. Inspection register/s kept.	

Construction Regulation 17	Suspended platforms	Competent persons appointed in writing to: • control the erection of suspended platforms; • act as suspended platform team leaders; and • inspect suspended scaffolding weekly and after inclement weather. Risk assessment conducted. Certificate of authorisation issued by a registered professional engineer available on site and copy forwarded to the Department of Employment and Labour.	
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OHSACT Section or Regulation	Subject	Requirements	Yes/No
		The following inspections of the whole installation carried out by a competent person • after erection and before use; • daily prior to use; and • inspection register kept. The following tests to be conducted by a competent person: • load test of whole installation and working parts every 12 months; and • hoisting ropes, hooks and load attaching devices quarterly; and • tests log book kept. Employees working on suspended platforms should be medically examined for physical and psychological fitness. Written proof available.	
Construction Regulation 13	Excavations	Competent person/s appointed in writing to supervise and inspect excavation work. Written proof of competence of above appointee/s available on site. Risk assessment carried out. Excavations inspected: • before every shift; • after any blasting; • after an unexpected fall of ground; • after any substantial damage to the shoring; and • after rain. Inspections register kept. Method statement developed where explosives will be and/or are used.	

Construction Regulation 14	Demolition work	Competent person/s appointed in writing to supervise and control demolition work. Written proof of competence of above appointee/s available on site. Risk assessment carried out. Engineering survey and method statement available on site. Inspections to prevent premature collapse carried out by competent person before each shift. Inspection register kept.	
Construction Regulation 19	Materials hoist	Competent person appointed in writing to inspect the material hoist. Written proof of competence of above appointee available on site. Materials hoist to be inspected weekly by a competent person. Inspection register kept.	
Construction Regulation 26	Water environments (including caissons and cofferdams)	Competent person appointed in writing to supervise, control and inspect work on or over water and the construction, installation, and dismantling of caissons	

OHSACT Section or Regulation	Subject	Requirements	Yes/No
		and/or cofferdams. Written proof of competence of above appointee available on site. Risk assessment carried by a competent person on a daily basis. Inspection register kept.	
Construction Regulation 21	Explosive actuated fastening devices	Competent person appointed to control the issue of the Explosive actuated fastening devices and cartridges as well as the service, maintenance and cleaning. Register kept of above. Empty cartridge cases, nails and fixing bolts returns recorded. Cleaned daily after use.	
Construction Regulation 20	Bulk mixing plant	Competent person appointed to control the operation of the bulk mixing plant as well as the service, maintenance and cleaning of this plant. Register kept of above. Risk assessment carried out. Bulk mixing plant to be inspected weekly by a competent person and inspections register kept.	
Construction Regulation 15 and Mine Health and Safety Act	Tunnelling	Complying with Mines Health and Safety Act (29 of 1996). Risk Assessment carried out.	

Construction Regulation 22 Driven Machinery Regulations 18 and 19	Cranes and lifting machines equipment	Competent person appointed in writing to inspect cranes, lifting machines and equipment. Written proof of competence of above appointee available on site. Cranes and lifting tackle identified and numbered. Register kept for lifting tackle. Logbook kept for each individual crane. Inspection: • All cranes: Daily by operator. • Tower cranes: After erection and thereafter 6 monthly. • Other cranes: Annually by competent person. • Lifting tackle (slings, ropes, chain slings etcetera): Three monthly.	
Construction Regulation 24 Electrical Machinery Regulations 9 and 10 Electrical Installation Regulations	Inspection and Maintenance of electrical installation and equipment (including portable electrical tools)	Competent person appointed in writing to inspect/test the installation and equipment. Written proof of competence of above appointee available on site. Inspections: • Electrical installation and equipment inspected after installation, alterations and quarterly thereafter. Inspection registers kept. • Portable electric tools and -lights	

OHSACT Section or Regulation	Subject	Requirements	Yes/No
		and extension leads identified/numbered. Monthly visual inspection by user, issuer or storeman. Register kept.	

Diving Regulations	Diving operations	Competent person appointed in writing to supervise diving operations and ensure maintenance, statutory inspection and testing by an approved inspection authority of equipment used. Written proof of competence of above appointee available on site. Proof of registration of all divers present on site available. Risk assessment carried out. Diving manual produced and available on site. Record of voice communications kept. Diving operations record kept. Each diver keeps a personal logbook and entries countersigned by the diving supervisor. Decompression tables available on site. Records of any decompression illness kept. Certificate of manufacture of any compression chamber or diving bell in use available on site.	
Construction Regulation 28 General Safety Regulation 8(1)(a)	Designation of stacking and storage supervisor	Competent persons with specific knowledge and experience designated to supervise all stacking and storage. Written proof of competence of above appointee available on site.	
Construction Regulation 29 Environmental Regulation 9	Designation of a person to coordinate emergency planning and fire protection	Person/s with specific knowledge and experience designated to coordinate emergency contingency planning and execution and fire prevention measures. Emergency evacuation plan: • Developed and available on site; • Drilled and practiced; and • Records of drills and practices available on site. Fire risk assessment carried out. All fire extinguishing equipment: • Identified and on register; • Inspected monthly and inspection registers kept; • Replaced after use; and • Serviced annually.	
General Safety Regulation 3	First-aid	Every workplace provided with sufficient number of first-aid boxes (required where 5 persons or more are employed). First-aid boxes freely available. Content of boxes as per the minimum requirements of the OHSACT. One qualified first-aider appointed for	

OHSACT Section or Regulation	Subject	Requirements	Yes/No
		every 50 employees (required where more than 10 persons are employed). List of First-aiders and competency certificates available on site. Name and contact details of person in charge of first-aid box clearly displayed. Location of first-aid boxes clearly demarcated. Signs instructing employees to report all injuries and/or illness including first-aid injuries.	
General Safety Regulation 2	Personal protective equipment (PPE)	PPE risk assessment carried out. Items of PPE prescribed and use enforced. Records of issue kept. Undertaking by employee to use and/or wear PPE.	
General Safety Regulation 9	Inspection and use of welding and/or flame cutting equipment	Competent person/s with specific knowledge and experience designated to inspect electric arc, gas welding and flame cutting equipment. Written proof of competence of above appointee available on site. Equipment identified/numbered and entered into a register. Equipment inspected monthly. Inspection register kept.	
Hazardous Chemical Substances (HCS) Regulations Construction Regulation 25	Control of storage and usage of HCS and other flammables	Competent person/s with specific knowledge and experience designated to control the storage and usage of HCS (including flammables). Written proof of competence of above appointee available on site. Risk assessment carried out. Register of HCS kept and/or used on site.	

Pressure Equipment Regulations	Pressure vessel (PV)	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections and testing of PVs. Written proof of competence of above appointee available on site. Risk assessment carried out. Certificates of manufacture available on site. Register of PVs on site. Inspections and testing by approved inspection authority (AIA): • after installation, re-erection or repairs; • every 36 months; and • register or log kept of inspections, tests, modifications and repair on site.	
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OHSACT Section or Regulation	Subject	Requirements	Yes/No
Construction Regulation 23	Construction vehicles and earth moving equipment	Operators or drivers appointed to: • Carry out a daily inspection prior to use; and • Drive the vehicle or plant that he/she is competent to drive or operate. Written proof of competence of above appointee available on site. Record of daily inspections kept on site. Medical assessments.	
General Safety Regulation 13A	Inspection of Ladders	Competent person appointed in writing to inspect ladders. Ladders inspected at arrival on site and monthly thereafter. Inspections register kept on site.	
General Safety Regulation 13B	Ramps	Competent person appointed in writing to supervise the erection and inspection of ramps. Inspection register kept on site.	

Government Notices No R. 479 and 480	COVID-19	COVID-ready Workplace Plan developed COVID-ready Workplace Plan approved by client. COVID-19 compliance officer appointed. COVID-19 risk assessment undertaken and maintained. Access control at the gate. Screen employees and visitors by asking them to complete a health questionnaire before visiting the workplace. Screening process include thermal testing and recording of results. COVID-19 induction awareness and education of employees and visitors. Sanitisers with min 70% alcohol and stations readily available. Hand washing facilities readily available. Recordkeeping. Social distancing implemented, maintained and enforced. Appropriate PPE provided and used Cleanliness of site and ablutions. Isolation area provided and maintained. Ventilation of offices Social distancing maintained during meetings. Waste management – dedicated hazardous chemicals bins available and waste disposed of accordingly. Traveling to site and support if infection identified. Staggered entry/exit/lunch Return to work after infection protocol available	
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2. Education, training and promotion

Subject	Requirement	Yes/No
*Occupational Health and Safety Policy as per OHSACT Section 7(1)	Policy signed by CEO and published and communicated to employees. Policy displayed on employee notice boards. Management and employees committed.	
*Company and site health and safety rules as per OHSACT Section 13(a)	Rules published. Rules displayed on employee notice boards. Rules issued and explained to employees with written proof hereof. Follow-up to ensure employees understand and adhere to the rules.	
*Induction and task safety training as per OHSACT Section 13(a)	All new employees receive health and safety induction training. Training includes task safety instructions. Employees acknowledge receipt of training. Follow-up to ensure employees understand and adhere to instructions.	
*General health and safety training as per OHSACT Section 13(a)	All employees receive basic health and safety training. Written proof kept. Operators of plant and equipment receive specialised training. Follow-up to ensure employees understand and adhere to instructions.	
*Occupational health and safety promotion	Incident experience board indicating among others - • Number of hours worked without an injury; and • Number of days worked without an injury. Safety grading - Board kept up to date. Relevant safety posters displayed and changed regularly. Employee notice board for health and safety notices. Site health and safety competitions. Company health and safety competition. Participation in regional health and safety competitions. Suggestion scheme.	

3. Public safety, security measures and emergency preparedness

Subject	Requirement	Yes/No
*Notices and signs	Notices and signs at entrances along perimeters indicating “No unauthorised entry” and “Entry at own risk” . Notices and signs at entrance instructing visitors and non-employees what to do, where to go and where to report on entering the site or yard with directional signs for example “Visitors to report to office” . Notices and signs posted to warn of overhead work and other hazardous activities for example General Warning Signs .	
Site safeguarding	Nets, canopies, stills, fans etcetera to protect members of the public passing and/or entering the site.	

*Security measures	Access control measures and register in operation. Security patrols after hours and weekends. Sufficient lighting after dark. Guard has access to telephone or other means of emergency communication.	
*Emergency preparedness	Emergency contact numbers displayed near telephone. Emergency evacuation instructions posted up on all notice boards (including employees' notice boards).	

Subject	Requirement	Yes/No
	Emergency contingency plan available on site or in yard. Doors open outwards and unobstructed. Emergency alarm audible all over (including in toilets).	
*Emergency drill and evacuation	Adequate number of employees trained to use fire equipment. Emergency evacuation plan available, displayed and practiced. (See Section 1 for designation and register).	

4. Personal protective equipment (PPE)

Subject	Requirement	Yes/No
*PPE needs analysis	Need for PPE identified and prescribed in writing.	
*Head protection	It is compulsory for all persons on site to wear safety helmets including sub-contractors and visitors (where prescribed).	
*Foot protection	All persons on site have to wear safety footwear including gumboots for concrete or wet work and non-slip shoes for roof work.	
*Eye and face protection	Eye and face protection (such as goggles, face shields, welding helmets) to be used when operating the following: • Jack or kango hammers; • Angle or bench grinders; • Electric drills (overhead work into concrete, cement and bricks); • Explosive actuated fastening devices; • Concrete vibrators or pokers; • Hammers and chisels; • Cutting or welding torches; • Arc welding equipment; • Skill or bench saws; and • Spray-painting equipment etcetera.	
*Hearing protection	Hearing Protectors (such as muffs, plugs) used when operating the following: • Jack or kango hammers; • Explosive actuated fastening devices; and • Wood or aluminium working machines such as saws, planers, routers.	
*Hand protection	Protective gloves to be worn by employees handling or using: • Cement, bricks, steel or chemicals; • Welding equipment; • Hammers and chisels; and • Jack or kango hammers etcetera.	

*Respiratory protection	Suitable and efficient respirators to be worn correctly by employees handling or using: • Dry cement; • Dusty areas; • Hazardous chemicals; • Angle grinders; and • Spray-painting etcetera.	
*Fall Prevention Equipment	Suitable fall arrest equipment correctly used by persons working on or in unguarded, elevated positions such as: • Scaffolding; • Riggers; • Lift shafts; • Edge work; and	

Subject	Requirement	Yes/No
	• Ring beam edges etcetera. Other applicable methods of fall prevention should also be applied such as catch nets.	
*Protective clothing	All jobs requiring protective clothing (such as overalls, rain wear, welding aprons etcetera) to be identified and clothing worn.	
*PPE issue and control	Identified equipment to be issued free of charge. All PPE should be maintained in good condition (i.e. regular checks). Workers instructed in the proper use and maintenance of PPE. Commitment obtained from wearer accepting conditions and to wear the PPE. Record of PPE issued kept on file.	

5. Housekeeping

Subject	Requirement	Yes/No
*Scrap removal system	All items of scrap, unusable off cuts, rubble and redundant material removed from working areas on a regular basis. Scrap and/or waste removal from heights by chute, hoist or crane (i.e. nothing thrown or swept over sides). Scrap disposed of in designated containers or areas. Removal from site or yard on a regular basis.	

Stacking and storage (See Section 1 for designation and register)	Stacking: • Stable; • On firm level surface or base; • Not leaning and/or collapsing; • Irregular shapes bonded; • Not exceeding 3 times the base; • Stacks accessible; and • Removal from top only. Storage: • Adequate storage areas provided; • Functional for example demarcated storage areas, racks, bins etcetera; • Special areas identified and demarcated for example flammable gas, cement etcetera: • Neat, safe, stable and square: • Store and storage areas clear of superfluous material; • Storage behind sheds etcetera should be neat and under control; and • Storage areas free from weeds, litter etcetera.	
*Waste control or reclamation	Re-usable off cuts and other re-useable material removed daily and kept to a minimum in the work areas. All re-useable materials neatly stacked or stored in designated areas (i.e. nails removed or bent over in re-useable timber). Issue of hardware, nails, screws and cartridges etcetera should be controlled and return of unused items monitored.	
Sub-contractors	Sub-contractors required to comply with the site or yard's housekeeping requirements.	

6. Working at heights (including roof work)

Subject	Requirement	Yes/No
Openings	Unprotected openings adequately guarded, fenced and barricaded with catch nets installed where necessary. Covers over openings in roof of robust construction and secured against displacement.	
General requirements	Roof work discontinued when bad or hazardous weather prevails. Fall protection measures (including warning notices) when working close to edges or on fragile roofing material.	

7. Scaffolding and temporary work

Subject	Requirement	Yes/No
Access and system scaffolding (See Section 1 for designation and register)	Foundation firm and stable. Sufficient bracing. Tied to structure and secured from side or cross movement. Platform boards in good condition and secured. Sufficient platform boards to be used. Handrails and toe boards provided. Access ladders or stairs provided. Area/s under scaffolding tidy. Safe and unsafe for use signs to be used. Complying with OHSACT and SANS 10085.	
Free Standing Scaffolding	Foundation firm and stable. Sufficient bracing. Platform boards in good condition and secured. Sufficient platform boards to be used. Handrails and toe boards provided. Access ladders or stairs provided. Area/s under scaffolding tidy. Safe or unsafe for use signs to be used. Height and base ratio correct. Outriggers used and tied to structure where necessary. Complying with OHSACT and SANS 10085.	
*Mobile scaffolding	Foundation firm and stable. Sufficient bracing. Platform boards in good condition and secured. Sufficient platform boards to be used. Handrails and toe boards provided. Access ladders or stairs provided. Area/s under scaffolding tidy. Safe and unsafe for use signs to be used. Wheels and swivels in good condition Brakes working and applied. Height to base ratio correct. Outriggers used where necessary. Complying with OHSACT and SANS 10085.	
Suspended scaffolding	Outriggers securely supported and anchored. Correct number of steel wire ropes used. Platform as close as possible to the structure. Handrails on all sides. All winches, ropes, cables and brakes inspected regularly. Inspection registers kept on site. Scaffolding complies with OHSACT.	

Subject	Requirement	Yes/No
	Winches maintained by competent person.	
Temporary works	All components in good condition. Foundation firm and stable. Adequate bracing and stability ensured. Good workmanship, uprights straight and plum. Good cantilever construction. Safe access provided. Areas under support work tidy. Same standards as for system scaffolding.	
Special scaffolding	Special scaffolding for example cantilever, jib and truss-out scaffolds erected to an acceptable standard and inspected by specialists. Inspection registers to be kept on site.	
Edges and openings	Edges barricaded to acceptable standards. Manhole openings covered and/or barricaded. Openings in floor and other openings covered, barricaded or fenced. Stairs provided with handrails. Lift shafts barricaded or fenced off.	

8. Ladders

Subject	Requirement	Yes/No
*Physical condition, use and storage (See Section 1 for designation and register)	Stepladders – hinges, stays, braces and stiles in order. Extension ladders – ropes, rungs, stiles, safety latch and hook in order. Extension or straight ladders secured or tied at the bottom or top. No joined ladders used. All ladders stored on hooks or racks and not on ground. Ladders protrude 900 mm above landings, platforms or roof. Fixed ladders higher than 5 m have cages or fall arrest system.	

9. Electrical safeguarding

Subject	Requirement	Yes/No
*Electrical distribution boards and earth leakage	Colour coded, numbered and symbolic sign displayed. Area in front kept clear and unobstructed. Fitted with inside cover plate, openings blanked off and no exposed “live” conductors or terminals. Door kept close. Switches and/or circuit breakers identified. Earth leakage protection unit fitted and operating. Tested with instrument - test results within 15 – 30 milli-amps. Aperture openings provided for the plugging in and removal of extension leads without the need to open the door.	

*Electrical installations and wiring	Temporary wiring or extension leads in good condition with no bare or exposed wires. Earthing continuity and polarity correct: “Brown is live, Blue is neutral, Green and Yellow earth the lot” Cables protected from mechanical damage and moisture. Correct loading observed for example no heating appliance	
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Subject	Requirement	Yes/No
	used from lighting circuit etcetera. Light fittings and lamps protected from mechanical damage/moisture.	
*Physical condition of electrical appliances and tools	Electrical Equipment and Tools (includes all items plugging in to a 15 Amp supply socket): • Insulation and casing in good condition. • Earth wire connected or intact where not of double insulated design. • Double insulation mark where no earth wire. • Cord in good condition/no bare wires/secured to machine & plug. • Plug in good condition, connected correctly and correct polarity.	

10. Emergency, fire prevention and protection

Subject	Requirement	Yes/No
*Fire extinguishing equipment (See Section 1 for designation and register)	Fire Risks Identified and on record. Fire Extinguishing Equipment available for: • Offices; • General stores; • Flammable store; • Fuel storage tanks; • Gas welding or cutting operations; and • Where flammable substances are being used or applied.	
*Maintenance	Fire equipment serviced minimum annually, but preferably 6 monthly.	
*Location & Signs	Fire Extinguishing Equipment: • Clearly visible; • Unobstructed; and • Sign posted including “No Smoking” and “No Naked Lights” where required i.e. (flammable store, gas store, fuel tanks etc.).	

* Storage issue and control of flammables (incl. gas cylinders)	Storage area provided for flammables with suitable doors, ventilation, bund etcetera. Flammable store neat and tidy with no Class A combustibles. Decanting of flammable substances carried out in ignition free and adequately ventilated area. Container bonding principles applied. Only sufficient quantities issued for one day's use. Special gas cylinder store or storage area. Gas cylinders stored, used and transported upright and secured in trolley, cradle or structure that is well ventilated. Types of gas cylinders identified and stored separately. Full cylinders stored separately from empty cylinders.	
*Storage, issue and control of Hazardous Chemical Substances (HCS) (See Section 1 for designation and register)	HCS storage principles applied i.e. products segregated. Provision made for leakage and spillage containment. Emergency (serviceable) showers and eye wash facilities provided. HCS under lock and key as well as controlled by designated person. Decanted or issued in containers with information and warning labels. Disposal of unwanted HCS by recognised disposal agent.	

11. Excavations and demolition

Subject	Requirement	Yes/No
Excavations deeper than 1.5 m. (See Section 1 for designation and register)	Shored or braced to prevent caving or falling in. Provided with an access ladder. Excavations guarded, barricaded or lighted after dark in public areas. Soil dumped at least 1 m away from edge of excavation. On sloping ground soil dumped on lower side of excavation.	

12. Tools

Subject	Requirement	Yes/No
*Hand tools	Shovels, Spades and Picks: • Handles free from cracks and splinters; • Handles fit securely; and • Working end sharp and true. Hammers: • Good quality handles, no pipe or reinforcing steel handles; • Handles free from cracks and splinters; and • Handles fit securely. Chisels: • No mushroomed heads or heads chamfered; • Not hardened; and • Cutting edge sharp and square. Saws: • Teeth sharp and set correctly; and • Correct saw used for the job.	

*Explosive actuated fastening devices (See Section 1 for designation and register)	Only used by trained and authorised personnel. Prescribed warning signs placed or displayed where tool is in use. Inspected at least monthly by competent person and results recorded in on site register. Issue and return recorded including cartridges or nails and unused cartridges, nails, empty shells recorded. Cleaned daily after use in on site register.	
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13. Cranes

Subject	Requirement	Yes/No
Tower crane (See Section 1 for designation and register)	Only operated by trained authorised operator with valid certificate of training. Certificate available on site. Structure - no visible defects. Electrical installation good and safe. Crane hook - throat pop marked, safety latch fitted and functional. SWL/MML displayed. Limit switches fitted and operational. Access ladder fitted with backrests or fall arrest system installed. Lifting tackle in good condition and inspection colour coding current.	

Subject	Requirement	Yes/No
*Mobile crane (See Section 1 for designation and register)	Only operated by trained authorised operator with valid certificate of training. Certificate available on site. Rear view mirrors and windscreen visibility good. Windscreen wipers operating effectively. Indicators operational. Hooter working. Tyres safe with sufficient tread and pressure visibly sufficient. No missing wheel nuts. Headlights, taillights operational. Grease nipples and grease on all joints. No visible oil leaks. Hydraulic pipes visibly sound with no leaks. No undue corrosion on battery terminals. Boom visibly in good condition with no apparent damage. Cable and sheaves greased with no visible damage, split wires or corrosion. Brakes working properly. Crane hook - throat pop marked, safety latch fitted and functional. SWL/MML displayed. By-pass valves operational.	

	Deflection chart displayed and visible to operator or driver. Outriggers functional used.	
*Gantry crane	Only operated by trained authorised persons. Correct slinging techniques used. Recognised displayed on chart signals used. Log book kept up to date. Prescribed inspections conducted on crane and lifting tackle. "Crane overhead" signage, where applicable. Crane hook - throat pop marked, safety latch fitted and functional. SWL/MML displayed and load limiting switches fitted and operational.	

14. Builder's hoist

Subject	Requirement	Yes/No
Builder's hoist (See Section 1 for designation and register)	"Hoist in operation" - sign displayed. General construction strong and free from latent defects. Tower: • Adequately secured and braced. • At least 900 mm available for over travel. • Barricaded at least 2 100 mm high at ground level and floors. • Landing place provided with gate at least 1 800 high. Platform: • No persons conveyed on platform. • Steel wire ropes with breaking strain of six times maximum weight. • Signal systems used. • Goods prevented from moving/falling off. • Effective brake capable of holding maximum weight.	

15. Transport and materials handling equipment

Subject	Requirement	Yes/No
*Site vehicles	All site vehicles, dumpers, bobcats, loaders etcetera checked daily before used by driver or operator. Inventory of vehicles used/operated on site. Inspection by means of a checklist and results recorded. No persons riding on equipment not designed for passengers. Site speed limit posted and not exceeded. Drivers and operators trained and licensed. Licenses available on site. No unauthorised persons allowed to drive or operate equipment.	
Conveyors	Conveyor belt nip points and drive guarded. Emergency stop and lever brake fitted, clearly marked and accessible.	

16. Site plant and machinery

Subject	Requirement	Yes/No
Brick cutting machine	Operator trained and only authorised persons use the machine. Emergency stop switch clearly marked and accessible. Area around the machine dry and slip or trip free as well as clear of off cuts. All moving drive parts guarded. Electrical supply cable protected. Operator using correct PPE i.e. eye, face, hearing, foot, hands and body.	
*Electric arc welder	Welder trained. Only authorised and trained persons use welder. Adequately earthed. Electrode holder in good condition and safe. Cables, clamps, lugs and connectors in good condition. Area in which welding machine is used is dry and protected from wet. Welder using correct PPE i.e. eye, face, foot, body and respiratory. Screens and warning signs placed.	
*Woodworking machines	Operator's trained and only authorised persons use machines. Provided with guards and guards used. Operators using correct PPE i.e. eye, face, foot and hearing.	
*Compressors	Relief valves set, locked and sealed. Maximum safe working pressure (MSWP) indicated on face of pressure gauge face and not on glass cover. All drives adequately guarded. Receiver and lines drained daily. Hoses good condition and clamped, not wired.	
Concrete mixer and bulk mixing plant	Top platform provided with guardrails. Dust abatement methods in use. Operators using correct PPE i.e. eye, hands and respiratory. All moving drive parts guarded. Emergency stops identified, indicated and accessible. Area kept clean, dry and free from tripping and slipping hazards. Banksman identified and crane signals displayed and used.	
*Gas welding and flame cutting equipment	Only authorised and trained persons use the equipment. Torches and gauges in good condition.	

Subject	Requirement	Yes/No
	Flashback arrestors fitted at cylinders and gauges. Hoses in good condition, correct type and all connections with clamps. Cylinders stored, used and transported in upright position, secured in trolley or cradle. Fire prevention control methods applied. Hot work permits.	

17. Plant and storage yard or site workshop specifics

Subject	Requirement	Yes/No
OHSACT, Section 8(2)(1) General Machinery Regulation 2(1) Supervision of the use and maintenance of machinery	Persons with specific knowledge and experience designated to supervise the use and maintenance of machinery. Critical items of machinery identified, numbered and placed on register or inventory. Inspection or maintenance schedules for abovementioned. Inspections or maintenance carried out to above schedules. Results recorded.	
General Machinery Regulation 9(2) Notices regarding operation of machinery	Schedule D notice posted in work areas.	
Pressure Equipment Regulations Supervision of the use and maintenance of pressure equipment such as pressure vessels (PV)	Persons with specific knowledge and experience designated to Supervise the use and maintenance of PVs. PVs identified, numbered and placed on register. Manufacturers plate intact. Inspection or maintenance schedules for abovementioned. Inspections or maintenance carried out to above schedules. Results recorded and test certificates available.	
Lock-out procedure	Lock-out procedure in operation.	
Ergonomics	Ergonomics survey conducted. Results on record. Survey results applied.	
Demarcation and colour coding	Demarcation principles applied. All services, pipes, electrical installation, stop-start controls, emergency controls etcetera colour coded to own published or SABS standard. Employees trained to identify colour coding.	
Portable and bench grinders	Area around grinder clear and trip/slip free. Bench grinders mounted securely and grinder generally in good condition. No excessive vibration. On and off switch or button clearly demarcated and accessible. Adequate guards in place. Tool rest – secure, square and maximum 2 mm gap. Stone or disk - correct type and size, mounted correctly and dressed. Use of eye protection enforced.	

Ancillary lifting equipment	Chain blocks, tirlors, jacks and mobile gantries etcetera identified and numbered on register. Chains in good condition and links no excessive wear. Lifting hooks – throat pop marked and safety latch fitted. SWL/MML marked or displayed.	
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Subject	Requirement	Yes/No
Presses, guillotines and shears	Only operated by trained and authorised persons. PPE used by operators Interlocks or lockouts fitted.	

18. Workplace environment, health and hygiene

Subject	Requirement	Yes/No
*Lighting	Adequate lighting in places where work is being executed for example stairwells and basements or after sunset. Light fittings placed and installed causing no irritating or blinding glare.	
*Ventilation	Adequate ventilation, extraction and exhausting in hazardous areas for example where chemicals and adhesives are stored, welding takes place and where petrol or diesel motors are running in confined spaces or basements.	
*Noise	Tasks identified where noise exceeds 85 dBa. All reasonable steps taken to reduce noise levels at the source. Hearing protection used where noise levels could not be reduced to below 85 dBa.	
*Heat stress	Measures in place to prevent heat exhaustion in heat stress problem areas e.g. steel decks, when the WBGT index reaches 30 (see Environmental Regulation 4). Cold drinking water readily available when extreme temperatures are experienced.	
*Ablution facilities	Sufficient toilets provided for men and women separately i.e. 1 per 30 employees (National Building Regulations prescribe chemical toilets for Construction sites). Toilet paper available. Sufficient showers provided for men and women separately. Facilities for washing hands provided. Soap available for washing hands. Means of drying hands available. Changing facilities or area provided for men and women separately. Ablution facilities hygienic and clean.	
*Eating and cooking facilities	Adequate storage facilities provided. Weather protected eating area provided, separate from changing area. Refuse bins with lids provided. Facilities clean and hygienic.	
*Pollution of environment	Measures in place to minimize dust generation. Accumulation of empty cement pockets, plastic wrapping or bags, packing materials etcetera prevented. Spillage or discarding of oil, chemicals and dieseline into storm water and other drains prevented.	

*Hazardous chemical substances (See Section 1 for designation and register)	All substances identified and list available e.g. acids, flammables, poisons etc. Material Safety Data Sheets (MSDS) indicating hazardous properties and emergency procedures in case of incident on file and readily available. Substances stored safely.	
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Annexure 2

Measuring injury experience

Measuring injury experience

1. Background

Injury experience has traditionally been measured by the use of a disabling injury frequency rate, the so-called "DIFR". The DIFR is calculated by multiplying the number of disabling injuries by 1 million and dividing by the number of person-hours worked.

The DIFR has recently been replaced internationally with a disabling injury incidence rate (DIIR). The only difference between the two rates are that the 1 million in the calculation is replaced with 200 000 (200 000 purported to be the number of hours and average person works in a lifetime).

The use of the two rates above has proved to be somewhat problematical as they are open to manipulation and disabling injuries are often "hidden" by returning the injured employee to the workplace so as not to lose a shift and therefore having to register a disabling injury.

The construction industry recently decided to promote the use of a new frequency rate based on the number of compensation injury claims, as these are more difficult to hide or manipulate because the reporting of compensationable injuries is a legal requirement.

The industry is hoping that adoption of this new measurement of injury experience will enable the industry to monitor itself as far as work related injuries are concerned.

2. Compensation Incidence Frequency Rate (CIFR)

2.1 Formula

$$\frac{\text{No of compensation claims} \times 200\,000}{220 \text{ person hours} \times \text{No of employees}}$$

2.2 Definitions

No of compensation claims:	The number of claims lodged with the Commissioner or COID insurer for the period under review.
200 000:	The fixed factor to align the rate with other rates used internationally.
Person hours worked Include:	Hourly paid employees Sub-contactors (No of employees X *220 each) Staff (No of employees X *220 hours each)

220 person-hours:

The *average number of hours worked by one employee in one month in the construction industry.

Note: * Overtime, absence on leave or sick leave, unrecorded after hours time worked by senior and middle management factored into this average.

No of employees:

The actual or average number of employees employed for the period under review.



Annexure 3

Safety, Health and Environment: Example of risk management report

Safety, Health and Environment (SHE): Example of risk management report

Please note that this is an example only and all information is fictitious.

XYZ Construction

SHE risk management report for the period January 2014 to March 2014

1. Introduction

We trust that this quarterly SHE Risk Management report will provide a clear picture of the company's performance as far as occupational health, safety and environment is concerned.

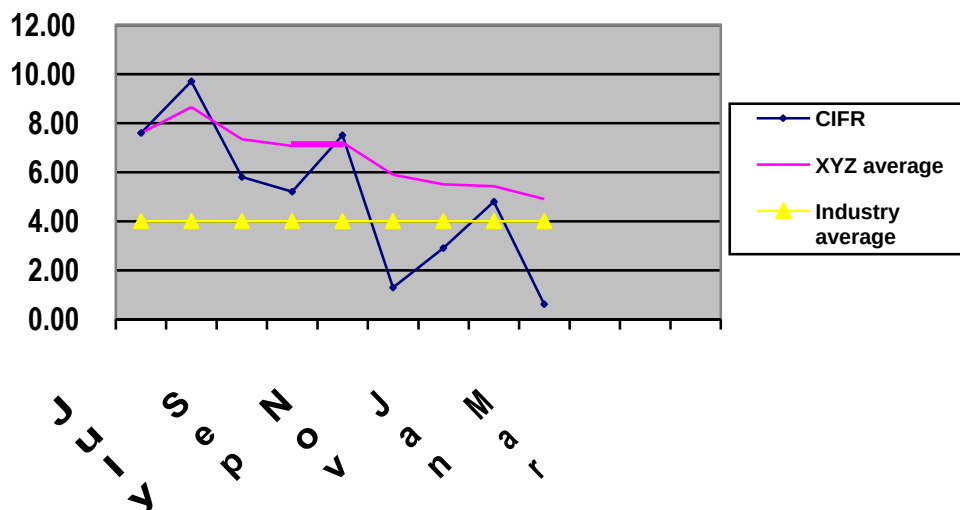
The first quarter of 2014 generally reflected an improvement in injury experience and indicates a decline in the number of injuries. Although Building was the only division where there was an increase in compensation claims, figures are still well down from the average 2013 figures. A sub-contractor experienced one fatality.

All divisions are eagerly awaiting the final implementation during May 2014 of the new electronic SHE Management system that will provide the tools to implement the SHE programme and make it available to all management and supervisory staff.

2. Incident statistics

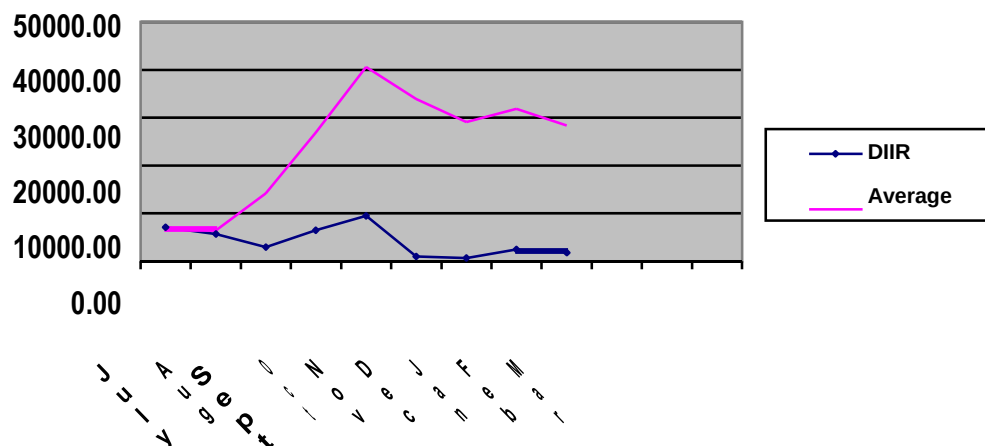
2.1 Compensation Incident Frequency Rate (CIFR)

$$\text{CIFR} = \frac{\text{No of compensation claims} \times \frac{200\,000}{\text{No of employees}}}{220 \text{ person hours} \times \text{No of employees}}$$



2.2 Disabling Injury Incidence Rate (DIIR)

$$\text{DIIR} = \frac{\text{No disabling injuries} \times 200\,000}{\text{Person hours worked}}$$



2.3. Other major incidents

Three other major incidents were experienced in the period under review:

- 2.3.1. A major trench collapsed at Job. 00123: XYZ Head Office, Braamfontein: No personnel injured, extensive damage to foundations: 3 days delay.
- 2.3.2. A concrete dumper ran away when its brakes failed. It smashed into the glass façade of the building on Job 00332: McDonalds, Randburg. The driver jumped off and was not injured. Cost of damage to façade: R45 000.
- 2.3.3. A storage hut on Job 00567: BP Petrol Station, Swartruggens was demolished by fire when the night watchman made a fire inside the storage hut which contained concrete vibrators and leveling machines. Cost of replacing the hut and machines: R30 000.

3. Risk areas

The following items of concern need priority consideration by management:

- 3.1. New employees must undergo pre-employment medical examinations to:
 - protect XYZ from possible claims at a later stage
 - ensure that only capable persons are employed
 - prevent injuries and illness in the workplace
 - enhance XYZ image
- 3.2. Vehicle drivers and plant operators must be instructed to inspect their vehicles daily before start-up using the prescribed checklists to ensure that these are safe to operate and in good condition.

4. Risk assessments

Three SHE risk assessments were conducted in February and

March: Job 00432:

Gillooly's Mall

Job 00786:	Compliance: 56%	Compliance: 83%
Job 00589:	Cullinan Head Office	Compliance: 76%
	Cleveland Station	

5. Training

One hundred and forty two employees, representing 7% of employees, attended nine training courses. *Our objective is to train 5,5% of employees on a quarterly basis.

Month	No. of Employees Trained	Course	Source
January	26 15 3	Induction OH&S Reps Crane Drivers	Internal Consultant External
February	23 17	Induction OH&S Reps	Internal Consultant
March	43 9 3 3	Induction OH&S Reps Bomag Rollers First Aiders	Internal Consultant Supplier St. John's

6. Legal matters

6.1. An inspector of the Department of Labour issued an improvement notice on Job 00987: Gillooly's Mall. The notice requires that all scaffolding comply with the SABS standards for the Erection and Maintenance of Access Scaffolding (SANS 085). This is currently being attended to and the inspector will return on 15 April 2014 to ascertain if the notice has been complied with.

7. Occupational health matters

7.1 HIV Aids

The proposed clinic will soon be operational and we will then be able to send our employees who have tested positive for HIV/Aids to the clinic for counseling and eventual treatment when necessary.

The mobile clinic attended to and tested fifty employees on a voluntary basis at 3 sites this month. Eighteen of them tested positive.

7.2 Tuberculosis (TB)

The mobile clinic will be calling at Gillooly's Mall and Cleveland Station on 15 and 16 April 2014 respectively to screen employees for TB.

7.3 Noise

All suspected noise pollution areas have been identified and tested and the results are awaited. Employees working in areas testing over 85dBa will be issued with suitable hearing protectors.

8. Environmental measures

Inspectors from the Botswana Department of Environment visited Djwaneng and inspected the site and yard. They gave it a "clean bill of health" and advised that we should increase the dust control measures by spraying roads three times per day with water instead of the present twice per day.

9. Achievements and awards

- 9.1 The client at Djwaneng (Job 00786) awarded the XYZ site first position in the housekeeping competition conducted bi-monthly by the client's SHE managers. The project manager and his team are to be congratulated for this sterling effort.
- 9.2 Job 0987: Refurbishment of Pretoria Main Railway Station has just completed 1 million compensation claim free days. This was no easy achievement if we consider the conditions being worked under after the extensive fire that caused major damage.

SHE Risk Manager

2014-03-31

Source: SAFCEC Occupational Health and Safety Committee



Road Traffic
Management Corporation

Annexure 4

Guide to risk assessments

SAKHIWO
HEALTH SOLUTIONS

Guide to risk assessments

1. Nine steps to effective risk assessments

- Step 1 : Identifying the current as well as emerging hazard, risks or exposures.
- Step 2 : Aim to identify major hazards, don't waste time on the minor and detail except if such hazard has the potential be repeat itself on a frequent basis.
- Step 3 : Involve as many people as possible in the ongoing risk assessment process especially those at risk.
- Step 4 : Gather all the information and analyse it.
- Step 5 : Look at what actually could or has occurred including non-routine operations.
- Step 6 : Use a systematic approach to ensure all hazards are adequately addressed.
- Step 7 : Assess the risks identified or the risk has occurred by taking into account the effectiveness of current as well as controls under consideration.
- Step 8 : Ensure the process is practical, realistic, cost and business effective.
- Step 9 : Always record the assessment in writing including i.e. assumptions, date and why a particular decision has been made.

2. How serious is it?

Probability

- A Common
- B Has Happened
- C Could Happen
- D Not Likely
- E Practically impossible

Consequences

- 1 Fatality or permanent disability.
- 2 Major injury.
- 3 Average Lost Time Injury.
- 4 Minor Injury.
- 5 Medical Treatment or less.

Probability

		A	B	C	D	E
Consequence	1	1	2	3	4	5
	2	2	3	4	5	6
	3	3	4	5	6	7
	4	4	5	6	7	8
	5	5	6	7	8	9

Risk rating

- 1 - 3 = Serious
- 4 - 5 = High
- 6 - 7 = Moderate
- 8 - 9 = Acceptable

Action

- Immediate (within 1 week).
- Within 1 month.
- > 4 weeks.
- No action but will consider from time to time.



Annexure 5

List of risk assessments

List of risk assessments

- a. Aggregate/Sand Delivery
- b. Arc welding
- c. Blasting
- d. Brickwork
- e. Compressed gas cylinders-handling
- f. Compressors – Air
- g. Cutting of pipes
- h. Distribution boards – Electrical
- i. Drivers – of vehicles
- j. Electrical installation – Maintenance of
- k. Emergencies that the project are exposed to (such as health, safety, environmental, third party or community related actions etcetera)
- l. Fire prevention and protection
- m. Fuel supply
- n. Gas welding-cutting operations
- o. Hand and spray painting
- p. Hand tools
- q. Levelling of materials
- r. Loading supervisor
- s. Loading/unloading - of trucks
- t. Machine operator
- u. Making of steel items
- v. Material delivery
- w. Material handling
- x. Occupational health (including COVID-19)
- y. Plastering
- z. Portable ladders
- aa. Pressure equipment
- bb. Refuelling of stand-by generator
- cc. Scaffolding
- dd. Site establishment
- ee. Traffic control
- ff. Trenches – Digging of
- gg. Use of portable electrical tools
- hh. Work in fall risk positions
- ii. Working close to existing services i.e. electrical, waste water etc
- jj. Working in inclement weather