

HEALTH AND SAFETY SPECIFICATION


THE DOCUMENT IS PROMULGATED UNDER THE OCCUPATIONAL HEALTH & SAFETY
ACT (85 of 1993) WITH ITS RELEVANT LEGISLATIONS

PROJECT: WONDERBOOM MILITARY BASE POWER UPGRADE SUPPLY

REF: WCS 048240

CLIENT: DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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1. PREAMBLE

In terms of Construction Regulation 7(1) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), Department of Public Works as the Client and/or its Agent on its behalf, shall be responsible to prepare Health & Safety Specifications for the intended electrical construction project of

Wonderboom Military Base and provide any Principal Contractor who is making a bid or appointed to perform construction work for the Client and/or its Agent on its behalf with the same.

Department of Public Works further duties are as described in The Act and the Regulations made there-under. The Appointed Principal Contractor shall be responsible for the Health & Safety Plan for the site in terms of Section 7 of the Act and in line with Construction Regulation 7. This 'Health and Safety Specification' document is developed with reference to the provided health and safety specification which shall be governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereinafter referred to as 'The Act'. Notwithstanding this, cognisance should be taken of the fact that no single Act or its set of Regulations can be read in isolation.

Furthermore, although the definition of Health and Safety Specifications stipulates 'a documented specification of all health and safety requirements pertaining to associated works on a construction site at Wonderboom Military Base, so as to ensure the health and safety of persons', it is required that the entire scope of the Labour legislation, including the Basic Conditions of Employment Act shall be considered as part of the legal compliance system. With reference to the specification document this requirement is limited to all health, safety and environmental issues pertaining to the site of the project as referred to here-in.

Despite the foregoing it shall be reiterated that environmental management shall receive due attention. Due to the wide scope and definition of the electrical works, every activity and site shall be different, and circumstances and conditions may change even on a daily basis. The Appointed Principal Contractor shall in consideration of the information contained in the health and safety specification, set up a Risk Assessment Program to identify and determine the scope and details of any risk associated with any hazard at the construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard. This Risk Assessment and the steps identified will be the basis or point of departure for our Health and Safety Specification.

The Health and Safety Specification shall include documented 'Methods of Statement' (see definitions under Construction Regulations) detailing the key activities to be performed in order to reduce as far as practicable, the hazards identified in the Risk Assessment. A very large number of State employees and public users of the facilities and the services provided there-in directly interacts with the facilities provided by the well-being, health and safety of a great number of people. This Department thus has directly or indirectly, an impact on the Republic of South Africa as well as the National Parliament. In this a high premium is to be placed on the health and safety of the most valuable assets of the. These are its personnel, the personnel of its Clients and the physical assets of which it is the custodian and may also include the public as well.

The responsibilities the Department and relevant stakeholders have toward its employees and other people present in the facilities or on the sites shall be captured further in this document. These responsibilities stem from both moral, civil and a variety of legal obligations. The Appointed Principal Contractor shall take due cognisance of the above statement.

2. SCOPE OF HEALTH AND SAFETY SPECIFICATION DOCUMENT AND ELECTRICAL WORKS METHOD

The Health and Safety Specification pertaining to the project; “(Department of Public Works shall cover the subjects contained in the index and shall be intended to outline the normal as well as any special requirements of the Department pertaining to the health and safety matters (including the environment) applicable to the project in question. The Specification for the electrical works is drafted in conjunction with the health and safety construction requirements , the Act, the Construction Regulations and all other Regulations and Safety Standards which were or will be promulgated under the Act or incorporated into the Act and shall be in implemented during the effective duration of the project. As indicated in the specifications, The stipulations in the specification, as well as those contained in all other documentation pertaining to the project, including contract documentation and technical specifications shall not be interpreted, in any way whatsoever, to countermand or nullify any stipulation of the Act, Regulations and Safety Standards which are promulgated under, or incorporated into the Act.

The Construction works shall constitute of Power Supply Upgrade at Wonderboom Military Base.

The power supply or upgrade shall also at times be constructed on live or energised electrical work, electrical work carried out in circumstances where the part of electrical equipment being worked on is connected to electricity or power supply or is ‘energised’.

Electrical work must not be carried out on electrical equipment while energised only because it is merely more convenient for the electrical equipment to stay energised while the work is being carried out.

Energised electrical work must not be carried out unless the safety risk to those persons directly affected by a supply interruption is higher than the risk to the licensed or registered electrical contractor or the appointed principal contractor proposed to carry out the electrical work. Only in extremely rare circumstances would it be possible to justify that it is not practicable to have a short break in supply. Most electrical installations suffer no harm through unplanned interruptions of this kind to the network supply. In some cases a short break may allow for the insertion (and removal) of insulated barriers.

A Principal contractor undertaking or requiring electrical work to be carried out may provide operational reasons appearing to justify energised electrical work. Requiring electrical work to be carried out while the equipment is energised when it could be avoided places an onerous responsibility on the business or undertaking commissioning the work to minimise the risks. Should an incident occur as a result of carrying out energised electrical work, the business or undertaking commissioning the work is at risk of being found not to have provided a safe workplace.

Planning and preparation

When electrical work is to be carried out, the principal electrical contractor undertaking the works must ensure before the work commences that:

- a risk assessment is conducted by a competent person in relation to the proposed work and recorded
- the area where the electrical work is to be carried out is clear of obstructions so as to allow for easy access and exit
- the point at which the electrical equipment can be disconnected or isolated from its electricity supply is:
 - clearly marked or labelled, and
 - cleared of obstructions so as to allow for easy access and exit by the worker who is to carry out the electrical work or any other competent person, and
 - capable of being operated quickly

- the person authorises the electrical work after consulting with the person with management or control of the workplace.

Requirements relating to the point of supply under the third bullet point above do not apply if the work is to be carried out on the supply side of the main switch on the substations for the equipment and the point at which the equipment can be disconnected from its electricity supply is not reasonably accessible from the work location.

Risk assessments

In addition to the listed considerations, the assessment should be designed to check compliance with the legislative requirements.

For energised electrical work, any significant findings should be recorded, reviewed from time to time and revised if necessary.

Consultation between duty holders

All persons conducting a business or undertaking at a workplace have a duty to manage electrical risks at the workplace while electrical work is being carried out, not just those carrying out the electrical work.

Electrical work will often be carried out at a place that is not under the management or control of the person conducting the business or undertaking carrying out the electrical work. For example, the place where work is carried out may be under the management or control of:

- if the place is a permanent workplace—the person conducting a business or undertaking from that workplace
- if the place is a public place—the relevant local or state authority.

These persons will also have duties in relation to the health and safety of the electrical worker(s) and other persons at the place where the electrical work is being carried out.

All duty holders must, so far as is reasonably practicable, consult, cooperate and coordinate activities with each other to ensure compliance with their work health and safety duties.

In addition to the general duty to consult, the principal contractor undertaking or carrying out the electrical work or project must ensure the electrical work is only authorised (among other things) after consulting with the principal agent or person with management or control at the military base.

Consultation should ensure that all relevant persons are aware of any scheduled electrical work to be carried out and also any relevant risks to health and safety arising from that work.

Arrangements should also be put in place to ensure, so far as is reasonably practicable, that all persons at the place receive suitable and adequate information and instruction, for example about the need to comply with warning or safety signs and stay out of any no go zones.

Occupied premises

Occupiers of residential premises (as a person at a workplace) must take reasonable care that their acts or omissions do not adversely affect the health or safety of other persons, including that of electrical workers at their premises.

Carrying out energised electrical work

R. 161 A person conducting a business or undertaking must ensure that electrical work carried out on energised electrical equipment is carried out:

- by a competent person who has tools, testing equipment and PPE that are suitable for the work, have been properly tested and are maintained in good working order
- in accordance with a safe work method statement prepared for the work, and

- subject to the exception explained below—with an electrical safety officer present who is competent:
 - to implement the control measures in an emergency
 - to rescue the worker who is carrying out the work if necessary, and
 - has been assessed in the previous 12 months as competent to rescue and resuscitate a person.

A safety officer shall not be required if the work consists only of testing and the risk assessment shows there is no serious risk associated with the proposed work.

The person must ensure, so far as is reasonably practicable, that the person who carries out the electrical work uses the tools, testing equipment and PPE properly.

Additionally:

- workers carrying out the electrical work must have or be provided with suitable and adequate information, instruction and training in:
 - planning and preparation requirements for the carrying out of energised electrical work
 - safe work procedures, particularly those documented in safe work method statements
 - proper use of the relevant tools, testing equipment and PPE
- first aid facilities must be provided at the workplace and they must be readily accessible
- emergency contact numbers should be made available at the workplace
- firefighting equipment that is suitable for electrical fires should be accessible
- the person with management or control of the workplace must be consulted before the electrical work is authorised
- energised conductors should be insulated where necessary to prevent inadvertent contact or flashovers
- unauthorised persons should be prevented from entering the work area, for example through the use of barriers and signage.

Many of these requirements require consultation, cooperation and coordination between multiple duty holders at the workplace.

Safe work method statements prepared for energised electrical work must describe consultation arrangements with the person with management or control of the workplace, including any authorisation procedures and position descriptions.

Safe work method statements

Safe work method statements document a process for identifying and controlling health and safety hazards and risks. They may also incorporate a risk assessment.

Safe work method statements must be developed in consultation with relevant workers. If the workers are represented by a health and safety representative, the consultation must involve that representative.

Safe work method statements must:

- identify the electrical work
- specify the hazards associated with that electrical work and risks associated with those hazards
- describe the measures to be implemented to control the risks
- describe how the risk control measures are to be implemented, monitored and reviewed, and may include the risk assessment prepared for the relevant work.

Safe work method statements must be written in a way that makes them readily understandable by the workers who are to use them.

A copy must be readily accessible to any worker who is to carry out the electrical work covered by the statement.

Safe work method statements must be kept up-to-date. They must, for example, be revised if a decision is made to change relevant safe work procedures at the workplace.

Appendix D to this Code includes a preventative actions checklist that may help you to identify hazards associated with electrical work and develop safe work methods.

If the electrical work falls within the description of 'high risk construction work' then the construction regulations in the WHS Regulations will also apply. For more information see the Code of Practice: Construction Work.

Record keeping requirements

The appointed principal contractor undertaking or carrying out electrical work must keep:

- a copy of the risk assessment throughout the duration of the project, and
- a copy of the safe work method statement until the work to which it relates is completed.

If a 'notifiable incident' under section 24 of the Act occurs in connection with the work to which the assessment or statement relates, the person must keep the assessment or statement (as the case requires) for at least two years after the incident occurs.

Hazards indirectly caused by electricity—conductive materials

Persons can be exposed to electrical risks, including risks of electric shock, arcing and explosion, without directly contacting exposed energised parts of electrical equipment. Other conductive materials can provide current paths for the electric shock, fault current or both.

All materials should be regarded as conductive unless proved otherwise. Gases and liquids should be regarded as conductive. Particular care should be taken when exposed energised parts are near earthed situations.

The electric shock path to earth can be via conductive materials, such as concrete, timber with a high moisture content or water. For example, ladders that are damp or dirty may become conductive and create a potential hazard.

Uncertain

When working near exposed energised parts or working energised, the tools and equipment used should be non-conductive or insulated. Examples include:

- Torches, telescopic devices, rulers and tape measures
- insulated hand tools, for example screwdrivers, pliers, cable cutters, spanners and crimpers
- electrical or hydraulic powered tools.

Metallic personal items including watches and watchbands should not be worn by workers carrying out work near exposed energised parts. Metal objects worn on or close to the body increase the risk of electric shock. Additionally, electrical burns can be more serious because these objects retain heat and provide contact points for current to flow.

Examples of metallic personal items include jewellery, body piercings and metal spectacle frames.

Tools and equipment

All workers should be competent in the safe use of their tools and equipment (including PPE). For more information about maintaining and inspecting tools and equipment, including testing and fault-finding instruments.

Work position

Electrical work should be carried out from a position that minimises the risk of inadvertent contact with exposed energised parts and also the risk of an electric shock path being created. For example, safe work method statements should require, so far as is reasonably practicable, that electrical workers position themselves so that:

- an involuntary action like sneezing would not cause them to touch exposed energised parts
- no electric shock path can be created due to working in an awkward position, for example testing components towards the rear of a washing machine via the front panel
- no electric shock path can be created when carrying out phase sequencing or rotation testing on overhead mains or at an underground pillar.

Electrical safety officers

A competent electrical safety officer must be present when work is carried out on energised electrical equipment, unless the work consists only of testing and a risk assessment shows that there is no serious risk associated with the proposed work.

The role of the electrical safety officer should be clearly communicated and understood. The electrical safety officer must:

- be competent to implement the control measures in an emergency
- be competent to rescue the worker who is carrying out the work if necessary, and must have been assessed in the previous 12 months as competent to rescue and resuscitate a person.

The electrical safety officer should:

- not carry out any other work or function that compromises their role, for example they should not be required to observe more than one task at a time
- not be situated in the work basket of the elevating work platform from which the electrical work is being carried out
- be able to communicate quickly and effectively with the electrical worker(s) carrying out the work. Specialist equipment may be necessary if there is a barrier to communication.
- not have any known temporary or permanent disabilities that would adversely affect their role and performance.

Safety barriers and signs

Barriers and signs may be designed, erected or installed to:

- protect electrical workers from inadvertently contacting energised exposed parts
- ensure that access to and egress from the work location of live work allows for clear, unobstructed passage warn others and direct people away from dangerous work areas.

Different kinds of safety barriers may be required for different purposes. For example, to protect electrical workers from inadvertently contacting energised exposed parts—a physical safety barrier should consist of a non-conductive material such as wood or plastic or, alternatively, correctly earthed steel and be strong enough to withstand the impact from falling objects or loose material to exclude persons generally from a work area where there is a risk of energised exposed parts—secure housings, enclosures, doors and room may provide appropriate safety barriers.

A risk assessment should be carried out by a competent person to advise on whether a barrier is appropriate to address the relevant risks and, if so, appropriate design and correct materials.

The barrier must be erected safely. This may require switching off or isolating the electricity supply while the barrier is installed.

A barrier may be temporary or permanent and, if applicable, should clearly designate the safe work area by defining the approach path to the relevant piece of equipment.

Emergency planning

An emergency plan for the workplace must be prepared, maintained and implemented at the workplace.

For this purpose, you must consider all relevant matters, including the following:

- the nature of the work being carried out at the workplace
- the nature of the hazards at the workplace
- the size and location of the workplace
- the number and composition of the workers and other persons at the workplace.

Quick action after an electrical incident that causes injury can save a life or significantly reduce the severity of the injury. Even if an electrical incident does not appear to have caused injury at the time, there may be some delayed effects.

Any person who is involved in an electrical incident involving an electric shock should receive medical attention.

Incidents that expose a worker or any other person to a serious risk from an electric shock must be notified to the regulator and may also be notifiable separately to an electrical safety regulator.

A well-prepared emergency response assists in managing the severity of the injury where an incident has occurred and takes into account the health and safety of those required to respond to the incident. For example, in an exposed energised high voltage situation, the electricity supply should be isolated and proved de-energised before carrying out a rescue.

Special consideration must also be given in relation to other higher-risk workplaces including confined spaces, working at heights (e.g. elevating work platforms), workplaces with hazardous atmospheres which present a risk to health or safety from fire or explosion, and trenches, shafts and tunnels.

Leaving unfinished work

Particular energised electrical work—testing and fault finding

De-energised testing methods should be used before energised testing methods

Fault finding should first be attempted in a de-energised environment using de-energised testing methods. If unsuccessful, energised testing methods may be used subject to meeting the requirements of the regulation or electrical standards for working energised.

Planning and preparation, etc.

Before commencing any testing or fault finding in an energised environment:

- identify exposed conductive parts that could become energised while using test instruments
- use temporary or fixed barriers to prevent electrical workers from inadvertently contacting exposed conductive parts use only appropriate insulated and rated tools, test instruments and test probes
- carry out checks to ensure that the test instruments to be used are appropriate and functioning correctly use only appropriately SANS rated, if required by the risk assessment conducted for the work ensure that only authorised persons may enter the immediate area where the work is to be carried out
- carry out a regular review of the work situation to ensure that no new hazards are created during the process.

When testing or fault-finding is completed, circuits and equipment must be restored to a safe condition. For example, disconnected conductors should be reconnected and left in a safe state, covers replaced, and accessories and equipment properly secured.

Procedures involving coordination, such as procedures related to switching circuits or equipment on and off during the fault finding or testing process, must be implemented and maintained at all times.

Safe work procedures—hazardous atmospheres

SANS 10142 for guidance on electrical testing and fault finding in hazardous atmospheres that present a risk to health and safety from fire or explosion.

RISK CONTROLS – WORKING NEAR ENERGISED ELECTRICAL PARTS

Electrical work on any installation, equipment, machinery, plant or appliance may pose a risk of direct or indirect contact with nearby exposed energised electrical parts (e.g. installing or testing circuits on a switchboard adjacent to exposed live electrical parts).

In some circumstances the risks associated with undertaking electrical work near exposed live parts can be equivalent to those associated with live electrical work. Risks to be considered, but not limited to, are those arising from energised parts exposed high temperature parts moisture entering the electrical equipment.

Identifying and assessing the risks and developing risk control measures as described in the Code of Practice: **How to Manage Work Health and Safety Risks** will provide further assistance in developing safe work practices.

Planning and preparation

If there is a safety risk associated with working near energised electrical parts a written risk assessment should then be made to help determine the risk level and decide on appropriate risk control measures.

Risks include:

- electric shock if exposed energised parts are touched
- explosion, for example if a metal tool is dropped onto bus bars causing a short circuit
- exposed high-temperature parts causing burns to bare skin
- electrical fires induced, for example, by allowing moisture or dust to enter electrical equipment.

The following factors may be taken into account in assessing risks:

- type of work carried out and tools or equipment used proximity of the work to energised parts
- the types of tools and equipment used in the work, for example the conductive properties of tools
- environmental conditions such as confined space, wet surfaces or unfavourable weather
- assessing the need to repair equipment while it remains energised, for example cleaning a low voltage switch room work that may impose additional risks, for example welding or grinding that could damage adjacent electrical lines or equipment.

Working near energised electrical parts

You must work through the hierarchy of controls to choose the control that most effectively eliminates or minimises the risk of working near energised electrical parts, so far as is reasonably practicable. This may involve a single control measure or a combination of two or more different controls.

Isolation and engineering controls are ranked at the same level of protection, ahead of administrative controls and then PPE.

Elimination

The most effective control measure is to remove the hazard or hazardous work practice. This could mean electrically isolating the nearby electrical equipment or installation before starting work. When disconnecting the installation or equipment from supply, a method should be applied to ensure the equipment is not reconnected while the work is carried out. For example, you could place the plug in a lockable enclosure. If equipment is connected to supply by fixed wiring, use other suitable means of isolation as discussed elsewhere in this Code. The isolation process should be clearly documented so that everyone involved knows exactly what to do.

Redesigning equipment or work processes could involve designing and installing equipment that does not have energised parts near the work area.

Substitution

Replacing a hazardous process or material with one that is less hazardous will reduce the hazard, and hence the risk – for example replacing instead of repairing a faulty part. This could mean shorter downtime and not having to work live, lessening or eliminating the risk of exposure.

Isolation

You may be able to isolate the risk, for example by erecting a physical barrier to prevent any contact with electrical risk, directly or indirectly. A physical barrier should consist of a non-conductive material such as wood or plastic or, alternatively, correctly earthed metal, and be strong enough to withstand any impact from falling objects or loose materials. Before any barriers are erected, a risk assessment must be carried out by a competent person to ensure the appropriate design and correct materials are used. The barrier must be erected safely. This may require isolating the electricity supply while the barrier is installed.

Engineering controls

For example, installing residual current devices to prevent electric shock.

Administrative controls

Administrative controls involve the use of safe work practices to control the risk, for example the provision of suitable and adequate training, establishing exclusion zones, and use of permits and warning signs.

Personal protective equipment (PPE)

PPE includes protective eyewear, insulated gloves, hard hats, aprons and breathing protection. The PPE should be rated for the work to be done. If working on or near energised equipment, the PPE must be able to protect the user from the maximum prospective energy available at the work site.

Implementing risk control measures

In implementing risk controls, you may develop a safe work method statement that:

- specifies the determined risk controls
- sets out the steps that need to be taken to implement the risk controls
- identifies and allocates the resources necessary to implement the measures (i.e. time and expenses)
- allocates responsibilities and accountabilities (e.g. who does what and when)
- sets a date for reviewing the risk controls.

A safe work method statement must be prepared for the intended electrical construction work or intended electrical installations or services during the power supply upgrade.

3. PURPOSE

The purpose of this document is to establish a Specification for implementing our safety program during the construction liability period of the construction of Wonderboom Military Base, the electrical works shall be carried by as per the Specification as has been generated with the anticipation of general works of the construction, no specifics were considered but shall be reviewed and amended on advise by the Client or his agent.

The Specification is intended to minimize loss, meet regulatory compliance requirements and implement site safety measures in terms of occupational health and safety act 85 of 1993 and the construction regulation as amended and to meet any related requirement in terms of South African legislation and any information other than the standard conditions pertaining to construction sites which might affect the health and safety of persons at work and the health and safety of persons in connection with the use of Specification and machinery; and to protect persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work during the carrying out of construction work for the client. The Appointed Principal Contractor (if any, with our contractor(s)) shall take significant health and safety aspects of the project and receive information and requirements on inter alia:

- a) safety considerations affecting the site of the project and its environment;
- b) health and safety aspects of the associated structures and equipment;
- c) submissions on health and safety matters required from the us (and our contractor(s)); and
- d) Our health & safety Specification shall serve to ensure that the we are fully aware of what is expected from us with regard to the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Regulations made there-under including the applicable safety standards, and in particular in terms of Section 8 of the Act.

For Guidance, the Occupational Health and Safety Act, 1993 (Act 85 of 1993) in its entirety shall apply to the contract to which the specification document applies. The Construction Regulations 2014 as incorporated into the Act by Government Notice R 1010, published in Government Gazette 25207 shall apply to any person involved in construction work pertaining to this project, as will the Act.

4. DEFINITIONS - definitions in the Act and Regulations pertaining to the Specification

4.1 "Purpose of the Act"

- To provide for the health and safety of persons at work and the health and safety of persons in connection with the use of Specification and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

4.2 "Agent"

- means any person who acts as a representative for a client;

4.3 "Client"

- means any person for whom construction work is performed;

4.4 "Construction Work" is defined as any work in connection with

- (a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- (b) the installation, erection, dismantling or maintenance of a fixed Specification where such work includes the risk of a person falling;

(c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or

(d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;

4.5 “Contractor”

- means an employer, as defined in Section 1 of the Act, who performs construction work and includes Principal Contractors;

4.6 “Health and Safety File”

- means a file, or other record in permanent form, containing the information required a contemplated in the regulations;

4.7 “Health and Safety Specification”

- means a documented Specification which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

4.8 “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;

4.9 “Method Statement”

- means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

4.10 “Principal Contractor”

- means an employer, as defined in section 1 of the Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site;

4.11 “Risk Assessment”

- means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard.

4.12 “electrical contractor”

- means a person who undertakes to perform electrical installation work on behalf of any other person, but excludes an employee of such first-mentioned person;

4.13 “electrical installation”

- means any machinery, in or on any premises, used for the transmission of electricity from a point of control to a point of consumption anywhere on the premises, including any article forming part of such an electrical installation irrespective of whether or not it is part of the electrical circuit, but excluding—

(a) any machinery of the supplier related to the supply of electricity on the premises;

(b) any machinery which transmits electrical energy in communication, control circuits, television or radio circuits;

(c) an electrical installation on a vehicle, vessel, train or aircraft; and

(d) control circuits of 50 V or less between different parts of machinery or system components, forming a unit, that are separately installed and derived from an independent source or an isolating transformer;

5. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

5.1 Structure and Organization of OH&S

Responsibilities

5.1.1. Overall Supervision and Responsibility for OH&S

The Appointed Principal Contractor as appointed in terms of Construction Regulation 7(1), shall implement and maintain the agreed and approved H&S Specification. We acknowledge that failure to comply on the part of the Client or Agent requirement will not relieve us from any one or more of the duties under the Act and Regulations.

5.1.1.1 The Chief Executive Officer shall, in terms of Section 16 (1) of the Act, ensure that the Employer (as defined in the Act) complies with the Act. The pro forma Legal Compliance Audit may be used for this purpose by The Appointed Principal Contractor or his/her appointed contractor.

5.1.1.2 All OH&S Act (85 /1993), Section 8 (1) appointee/s as detailed in his/her/their respective appointment forms to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to The Appointed Principal Contractor to become part of site records (Health & Safety File).

5.1.1.3 The Construction Supervisor and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 8(7)/(8) to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to The Appointed Principal Contractor to become part of site records (Health & Safety File).

5.1.1.4 All Health and Safety Representatives (SHE-Reps) shall act and report as per Section 17 of the Act.

5.1.2. Further (Specific) Supervision Responsibilities for OH&S

The following competent appointments are anticipated, in terms of the Construction Regulations are required to ensure compliance to the Act, Regulations and Safety Standards, competencies shall be provided prior to appointment of such person.

A full-time construction manager who is registered with the SACPCMP body Council as a construction manager shall be appointed and remain full-time on-site.

A registered full-time safety officer who is registered as a safety officer with the SACPCMP body Council shall be appointed and remain full-time on-site during the liability period of the project.

No	OHS ACT Ref	APPOINTMENT	Name of appointee
1	CR 8(7)	Construction supervisor	
2	CR 8(8)	Construction supervisor sub-ordinates	
3	CR 8(5)	Construction safety officer	
4	CR 9	Risk assessor	
5	CR 12 (3)(F)	Formwork and support work supervisor	
6	CR 13(1)	Excavation supervisor	
7	CR 11 (3)(b)(ii)(b)	Professional engineer or technologist	
8	CR 14(1)	Supervisor demolition work	
9	CR 17(1)	Suspended platform supervisor	
10	15(2)(c)	Compliance Specification developer	
11	EMR 9	Portable electrical tool	

12	21(1)(d)(i)	Construction vehicle and mobile Specification operator	
13	22(d)	Temporary vehicle and mobile Specification operator	
14	CR 28(a)	Stacking and storage supervisor	
15	CR 29 (h)	Fire equipment inspector	
16	EIR 9	Electrical installers	
17	E		

5.2 Communication & Liaison

5.2.1 OH&S Liaison between the Employer, The Appointed Principal Contractor, the other Contractors, the Designer and other concerned parties shall be through the H&S Committee as per the procedures determined by the H&S Committee.

5.2.2 In addition to the above, communication may be directly to the Client or his appointed Agent, verbally or in writing, as and when the need arises.

5.2.3 Consultation with the workforce on OH&S matters will be through their Supervisors and H&S Representatives ('SHE – Reps')

5.2.4 The Appointed Principal Contractor shall be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and/or its Agent on its behalf and the Designer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

6. INTERPRETATION

(i) The Occupational Health and Safety Act and all its Regulations, with the exception of the Construction Regulations, distinguish between the roles, responsibilities and functions of employers and employees respectively. It views consultants and contractors as employees of the "owner" of a construction or operational project, the "owner" being regarded as the employer. Only if formally agreed to by way of the written agreement in this regard between the "owner(s)" and consultant and/or between the "owner(s)" and the contractor(s), will these assumptions be relinquished in favour of the position agreed upon between the relevant parties.

(ii) The position taken by the Construction Regulations is that the "owner", in terms of its instructions, operates (has to operate) in the role of client as per relevant definition. The contractors working for the "client" shall be seen to be in two categories, i.e. The Appointed Principal Contractor and Contractors. The Appointed Principal Contractor who shall take full responsibility for the health and safety on the site of the relevant project/contract. This includes monitoring health and safety conditions and overseeing administrative measures required by the Construction Regulations from all contractors on the project site. (Ordinary/sub) Contractors are required to operate under the scrutiny and control (in terms of all health and safety measures which are covered in the Construction Regulations) of The Appointed Principal Contractor.

Where, for the work The Appointed Principal Contractor will have to execute himself, practical health and safety measures are applicable, he will also be subject to the relevant requirements with which (ordinary / sub) Contractors have to comply. The Appointed Principal Contractor will, however, not have to actually fulfill such requirements in respect of any of the work / functions of any (ordinary/sub) Contractors on the site for which he has been appointed as Principal Contractor. However, he has to monitor/oversee such processes, ensuring that the requirements are complied with and that the required appointments/evaluations/inspections/assessments and tests are done and that the records are duly generated and kept as prescribed in the Construction Regulations which has to be clear in The Appointed Principal Contractor's Health and Safety Specification.

7. RESPONSIBILITIES

7.1 Client

7.1.1 The Appointed Principal Contractor shall accept an appointment from The Client or his appointed Agent on his behalf under this Act for this project or phase/section of the project in writing for assuming the role of Principal Contractor as intended by the Construction Regulations and determined by the Bills of Quantities.

7.1.2 The Client or his appointed Agent on his behalf, shall discuss and negotiate with The Appointed Principal Contractor the contents of the health and safety Specification of both the Principal Contractor and/or Contractor for approval.

7.1.3 The Client or his appointed Agent on his behalf, will take reasonable steps to ensure that the health and safety Specification of both The Appointed Principal Contractor and Contractor is implemented and maintained. The steps taken will include periodic audits at intervals of at least once every month.

7.1.4 The Client or his appointed Agent on his behalf, will prevent the Appointed Principal Contractor and/or the Contractor from commencing or continuing with construction work should The Appointed Principal Contractor and/or the Contractor at any stage in the execution of the works be found to:

7.1.4.1 have failed to have complied with any of the administrative measures required by the Construction Regulations in preparation for the construction project or any physical preparations necessary in terms of the Act;

7.1.4.2 have failed to implement or maintain their health and safety Specification;

7.1.4.3 have executed construction work which is not in accordance with their health and safety Specification; or

7.1.4.4 act in any way which may pose a threat to the health and safety of any person(s) present on the site of the works or in its vicinity, irrespective of him/them being employed or legitimately on the site of the works or in its vicinity.

7.2 Principal Contractor

7.2.1 The Appointed Principal Contractor shall accept the appointment under the terms and Conditions of Contract. We shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 3 of the Construction Regulations. Annexure B of this Specification contains a "Notification of Construction Work" form. The Appointed Principal Contractor shall submit the notification in writing prior to commencement of work and inform the Client or his Agent accordingly.

7.2.2 The Appointed Principal Contractor shall ensure that he is fully conversant with the requirements of this Specification and all relevant health and safety legislation and that the Specification is not intended to supersede the Act nor the Construction Regulations or any part of either. Those sections of the Act and the Construction Regulations which apply to the scope of work to be performed by The Appointed Principal Contractor in terms of this contract (entirely or in part) will continue to be legally required of The Appointed Principal Contractor to comply with. The Appointed Principal Contractor will in no manner or means be absolved from the responsibility to comply with all applicable sections of the Act, the Construction Regulations or any Regulations proclaimed under the Act or which may perceivable be applicable to this contract.

7.2.3 The Appointed Principal Contractor shall provide and demonstrate to the Client a suitable and sufficiently documented health and safety Specification based on this Specification, the Act and the Construction Regulations, which shall be applied from the date of commencement of and for the

duration of execution of the works. This Specification shall, as appendices, include the health and safety Specifications of all Sub-contractors for which he has to take responsibility in terms of this contract.

7.2.4 The Appointed Principal Contractor shall provide proof of his registration and good standing with the Compensation Fund or with a licensed compensation insurer prior to commencement with the works.

7.2.5 The Appointed Principal Contractor shall, in submitting his document, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, 11 the Act and Construction Regulations which is contained in the conditions of tender upon offer.)

7.2.6 The Appointed Principal Contractor shall consistently demonstrate his competence and the adequacy of his resources to perform the duties imposed on The Appointed Principal Contractor in terms of this Specification, the Act and the Construction Regulations.

7.2.7 The Appointed Principal Contractor shall ensure that a copy of his Health and Safety Specification is available on site and is presented upon request to the Client, an Inspector, Employee or Sub-contractor.

7.2.8 The Appointed Principal Contractor shall ensure that a Health and Safety File, which shall include all documentation required in terms of the provisions of this Specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Client or Inspector upon request. Upon completion of the works, The Appointed Principal Contractor shall hand over a consolidated health and safety file to the Client.

7.2.9 The Appointed Principal Contractor shall, throughout execution of the contract, ensure that all conditions imposed on his Sub-contractors in terms of the Act and the Construction Regulations are complied with as if they were The Appointed Principal Contractor.

7.2.10 The Appointed Principal Contractor shall from time to time evaluate the relevance of the Health and Safety Specification and revise the same as required, following which revised Specification shall be submitted to the Client and/or his/her Agent for approval

7.3 Contractor(s)/Subcontractor(s)

- (a) All Sub-Contractors will be expected to comply with the Company Policy for Health Safety and Welfare and must liaise with the Site Management about any difficulties foreseen that may affect Health & Safety on site.
- (b) All work must be carried out in accordance with the relevant statutory provisions and take into Account the safety of others on the site and the General Public.
- (c) Sub-Contractors' employees are not permitted to alter any scaffold provided for their use or use or interfere with any Specification or equipment on the site, unless authorised.
- (d) All Specification or equipment brought on to site by Sub-Contractors must be safe and in good working condition, fitted with any necessary guards and safety devices, and with any necessary certificates displayed and available for checking.
- (e) Power tools or electrical equipment must operate at an accepted, safe voltage. All transformers, generators, extension leads, plugs and sockets must be in good condition and constructed and installed to approved standards.
- (f) Any injury sustained or damage caused by Sub-Contractors employees must be reported immediately to this Company's Representative (Project Engineer/Project Safety Officer).
- (g) Sub-Contractors' employees must comply with any safety instructions given by the Company's Management Team.

- (h) The Company shall appoint a Project Safety Officer to inspect sites and report of Health and Safety matters. Sub-Contractors informed of any hazards or defects noted during such inspections will be expected to take immediate action to rectify shortcomings.
- (i) Suitable Welfare facilities and First Aid equipment in accordance with the regulations must be provided by Sub-Contractors for their employees, unless arrangements have been made for Sub-Contractor's employees to have the use of the Company's facilities.
- (j) Any material or substance brought on site that has Health, Fire or Explosion risks must be used and stored in accordance with regulations and current recommendations, and information must be provided to any other person on site who may need it.
- (k) Sub-Contractors shall ensure that workplaces are kept tidy and all debris, waste materials, etc., cleared away as work proceeds.
- (l) Sub-Contractors must provide and insist on the use by their employees of all necessary protective equipment required on site.
- (m) Sub-Contractors must give adequate training and instruction to their operatives to make them aware of hazards existing on the site and the correct procedures to deal with these risks.

8. HEALTH AND SAFETY FILE

8.1 The Appointed Principal Contractor shall, in terms of Construction Regulation 7(1)(b), keep a Health & Safety File on site at all times that shall include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to The Appointed Principal Contractor and the agreements between the parties and details of work being done. A more detailed list of documents and other legal requirements that must be kept in the Health and Safety File is attached as an addendum to this document.

The Health and Safety File shall remain the property of the Client and/or its Agent on its behalf throughout the period of the project and shall be consolidated and handed over to the Client and/or its Agent on its behalf at the time of completion of the project.

9. OH&S GOALS AND OBJECTIVES AND ARRANGEMENTS FOR MONITORING AND REVIEWING OH&S PERFORMANCE

The Appointed Principal Contractor shall maintain an acceptable disabling incident frequency rate (DIFR) and report on this to the Client and/or its Agent on its behalf on a monthly basis.

10. IDENTIFICATION OF HAZARDS AND DEVELOPMENT OF RISK ASSESSMENTS, STANDARD WORKING PROCEDURES (SWP) AND METHOD STATEMENTS

The Appointed Principal Contractor shall develop Risk Assessments, Standard Working Procedures (SWP) and Method Statements for each activity executed in the contract or project (see 4. below "Project/Site Specific Requirements") The identification of hazards is over and above the hazards identification programme and those hazards identified during the drafting of the Health and Safety Specification.

11. ARRANGEMENTS FOR MONITORING AND REVIEW

11.1 Monthly Audit by Client and/or its Agent on its behalf

The Client and/or its Agent on its behalf will be conducting Periodic Audits at times agreed with The Appointed Principal Contractor Audit to comply with Construction Regulation 4(1)(d) to ensure that

The Appointed Principal Contractor has implemented, is adhering to and is maintaining the agreed and approved OH&S Specification.

Audits shall meet compliance ratio of 60% to commence with any works.

No works shall be permitted unless otherwise the accepted ratios have been complied with.

11.2 Other audits and inspections by client and/or its agent on its behalf.

11.3 Reports

11.3.1 The Appointed Principal Contractor shall report all incidents where an employee is injured on duty to the extent that he/she:

11.3.1.1 dies

11.3.1.2 becomes unconscious

11.3.1.3 loses a limb or part of a limb

11.3.1.4 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:

11.3.1.5 a major incident occurred

11.3.1.6 the health or safety of any person was endangered

11.3.1.7 where a dangerous substance was spilled

11.3.1.8 the uncontrolled release of any substance under pressure took place

11.3.1.9 machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects

11.3.1.10 machinery ran out of control

to the Provincial Director of the Department of Labour within seven days and at the same time to the Client and/or its Agent on its behalf.

11.3.2 The Appointed Principal Contractor shall provide the Client and/or its Agent on its behalf with copies of all statutory reports required in terms of the Act and the Regulations.

11.3.3 The Appointed Principal Contractor shall provide the Client and/or its Agent on its behalf with a monthly "SHE Risk Management Report".

11.3.4 The Appointed Principal Contractor shall as a.s.a.p provide to the Client and/or its Agent on its behalf with copies of all internal and external accident/incident investigation reports including the reports contemplated in 12.7, 12.8.2, 15, 16, 17, 21 and 22 below. As soon as the occurrence of any accident/incident of whatever nature comes to our knowledge, it shall be reported immediately to any of the following

11.4 Review

The Appointed Principal Contractor shall review the Hazard Identification, Risk Assessments and Standard Work Processes at each Production Specification and Progress Report meeting as the construction work develops and progresses and each time changes are made to the designs, Specifications and construction methods and processes.

The Appointed Principal Contractor shall provide the Client and/or its Agent on its behalf, other Contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in the above paragraph

11.5 Site Rules and other Restrictions

The Appointed Principal Contractor must develop a set of site-specific OH&S rules that will be applied to regulate the Health and Safety Specification and associated aspects of the construction.

11.5.1 The following site safety rules will be enforced on this project;

1. Every employee will come to work physically fit and alert as they understand the hazard associated with a person under the influence of alcohol or other drug that numbs the sense and slows reaction time.
2. Every employee will use the protective clothing and equipment prescribed for his/her job, in the proper manner.
3. Every employee will follow the instructions given by Supervisors or inform supervisors of the reason if it is not possible to do so.
4. Before attempting something new or different the employee will discuss it with his/her supervisor to avoid causing an incident.
5. Employees will maintain the tools that they use in a safe condition and return defective tools to supervisors.
6. If employees have to climb, they will ensure that the ladder they use is not broken and has non-slip safety feet. Metal ladders are not to be used when working on electricity due to the very high risk of electrocution>
7. Employees will not work at heights of over 2 meters without using a safety belt/harness unless guard rails are in place to prevent them from falling.
8. Employees will not clean up or perform any work on, or close to unguarded machinery until they have properly locked the electrical switches or know that the supervisor has done so.
9. Employees will not attempt to operate any machinery or equipment that they have not been trained for or been authorised to operate by a Supervisor.
10. Employees will only operate assigned equipment/machinery when they know that it is properly guarded and all safety devices, such as in good working order. They will report any defect to the Construction supervisor immediately.
11. Employees will not run or hurry downstairs or jump of a high place – knowing the high injury risk.
12. Employees will not engage in teasing, jostling, mock sparring or throwing objects even playful as such actions could lead to injuries to themselves or others.
13. Employees will use compressed air only for work purposes, knowing that playful uses or blowing off work clothes can cause very serious injuries.

Visitors and non-employees upon entering the site shall be issued with the proper Personal Protective Equipment (PPE) as and when necessary which shall not be limited to hard hats, reflective vests and dust protection, ear and eye protection where necessary.

11.5.2 Security Arrangements

The Appointed Principal Contractor shall establish site access rules and implement and maintain these throughout the construction period. Access control shall include the rule that non-employees shall at all times be provided with fulltime supervision while on site;

- Our Site will be fenced all around with a recognised access points, and signs will be displayed warning that it is a construction site and that entry is prohibited.
- Specification and equipment should be locked away out of sight where practicable, and disabled/secured in-situ where not practicable.
- keys shall not be left on any Specification when unattended.
- We shall consider methods of access control based upon the scale and type of site (which may

- comprise a simple sign telling persons to report to the site manager, or could be a manned access point – note this may also provide a method of monitoring who is on site for emergency purposes).
- Ladders will be removed from scaffolding, walls, etc, or board up at the end of each working day.
- Trespassers, including children, may be a challenge and should either be escorted off site or introduced to the site manager, where caution should be exercised to avoid putting yourself in a position where you could be accused of assault.
- Our system shall ensure that no-one can access the site when occupied without authorisation, and when not occupied without having to clearly commit trespass.
- The Appointed Principal Contractor shall appoint a competent Emergency Controller who must develop contingency Specifications for any emergency that may arise on site as indicated by the risk assessments. It shall include a monthly practice/testing programme for the Specifications e.g. January: trench collapse, February: flooding etc. and practiced/tested with all persons on site at the time, participating.

11.6 Training

The contents and syllabi of all training required by the Act and Regulations including any other related or relevant training as required shall be included in our management program, Health and Safety Specification and Health and Safety File.

- The Appointed Principal Contractor shall 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 our employees and contractors shall be in possession of proof that they have attended a site-specific occupational health and safety induction training at all times.

11.6.1. All operators, drivers and users of construction vehicles, mobile Specification and other equipment shall be in possession of valid proof of training and where applicable licenses or proof of competency. Occupational Health and Safety Training Requirements: (as required by the Construction Regulations and as indicated by the Health and Safety Specification Document & the Risk Assessment/s and recommendations by the Health and Safety Committee)

11.6.2. All employees in jobs requiring training in terms of the OHSACT and Regulations shall be in possession of valid proof of training.

11.6.3. 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. –

- General induction (Section 8 of the OHSACT);
- Site and job specific induction, including visitors (Sections 8 and 9 of the OHSACT);
- Site and project manager;
- Construction manager;
- Health and Safety Officer
- Risk Assessor
- Incident investigator
- First aiders etc.
- Storekeeping Methods & Safe Stacking (Construction Regulation 26)
- Emergency Security and Fire Co-Ordinator

11.6.4 Awareness and promotion i.e.-

A promotion and awareness programme will be 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 will be used:

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

11.7 Accident and Incident Investigation

The Appointed Principal Contractor shall be responsible to oversee the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to receive first aid or be referred for medical treatment by a doctor, hospital or clinic. (General Administrative Regulation 9)

The results of the investigation to be entered into the Accident/Incident Register listed above. (General Administrative Regulation 9)

The Appointed Principal Contractor shall be responsible for the investigation of all non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar incidents in future.

The Appointed Principal Contractor shall be responsible for the investigation of all road traffic accidents relating to the construction site and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

Notwithstanding the requirements of Section 24 of the Act, ALL incidents shall be investigated and reported on in writing, irrespective of whether such incident gave rise to injury or damage.

11.8 H&S Representatives (SHE-Reps – ‘safety, health & environment’) and H&S Committees

11.8.1 Designation of H&S Representatives (‘SHE – Reps’)

Where more than 20 persons (including the employees of other Contractors (sub-contractors)) The Appointed Principal Contractor shall appoint one H&S Representatives for every 50 employees or part thereof. (Section 17 & 18 of the Act and General Administrative Regulation 6. & 7.) H&S Representatives have to be designated in writing and the designation shall be in accordance with the Collective Agreement as concluded between the parties as is required in terms of General Administration Regulation 6.

11.8.2 Duties and Functions of the H&S Representatives

The Appointed Principal Contractor shall ensure that the designated H&S Representatives conduct at least a weekly inspection of their respective areas of responsibility using a checklist and report thereon, after which these reports shall be consolidated for submission to the Health and Safety Committee.

H&S Representatives shall be included in and be part of accident/incident investigations. H&S Representatives shall be members of at least one H&S Committee and must attend all meetings of that H&S committee.

11.8.3 Establishment of H&S Committee(s)

The Appointed Principal Contractor shall establish H&S Committees consisting of designated H&S Representatives together with a number of Employers Representatives appointed as per Section 19(3) that are not allowed to exceed the number of H&S Representatives on the committee. The persons

nominated by the employer on a H&S Committee must be designated in writing for such period as may be determined by him. The H&S Committee shall co-opt advisory (temporary) members and determine the procedures of the meetings including the chairmanship.

11.8.3.1 The establishment of our H&S Committee shall meet on a minimum monthly and consider, at least, the following Agenda for the first meeting. Thereafter the H&S Committee shall determine its own procedures as per the previous paragraph.

Agenda:

- 1) Opening and determining of chairmanship (only when necessary)
- 2) Minutes of Previous Minutes
- 3) Observations
- 4) Program and Safety considerations
- 5) Hygiene
- 6) Housekeeping improvement
- 7) Incidents & Accidents / Injuries
- 8) Registers:
 - a H&S Rep. Inspections
 - b. Matters of First Aid
 - c. Scaffolding
 - d. Ladders
 - e. Excavations
 - f. Portable Electric Equipment
 - g. Fire Equipment
 - h. Explosive Power Tools
 - i. Power Hand tools
 - j. Incident! Report Investigation
 - k. Pressure Vessels
 - l. Personal Protective Equipment
- 9) Safety performance Evaluations
- 10) Education & Safety promotion program
- 11) First Aid Officials and training in First Aid
- 12) Demarcation of work- /hazardous-/safe areas/walkways
- 13) Posters and signage
- 14) Environmental preservation and conservation
- 15) Specific training programs
- 16) General
- 17) Date of Next Meeting
- 18) Closing

12. PROJECT/SITE SPECIFIC REQUIREMENTS

The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by The Appointed Principal Contractor:

- Clearing & Grubbing of the Area/Site
- Site Establishment including:

- Office/s
- Secure/Safe Storage and storage areas for materials, Specification & equipment
- Ablution facilities
- Sheltered dining area
- Vehicle access to the site
- Dealing with existing Structures.
- Location of existing Services
- Installation & Maintenance of Temporary Construction Electrical Supply, Lighting and Equipment
- Adjacent Land uses/Surrounding property exposures
- Boundary & Access control/Public Liability Exposures (Remember: The Employer is also responsible for the OH&S of non-employees affected by his/her work activities.)
- Health risks arising from neighbouring as well as own activities and from the environment e.g.
 - threats by dogs,
 - bees,
 - snakes,
 - lightning,
 - allergies etc.
- Exposure to Noise
- Exposure to Vibration
- Protection against dehydration and heat exhaustion
- Protection from wet & cold conditions
- Dealing with HIV/Aids and other diseases as per specific programme provided by the client and/or its Agent on its behalf
- Use of Portable Electrical Equipment including:
 - Angle grinder
 - Electrical Drilling machine
 - Skill saw
- Excavations including:
 - Ground/soil conditions
 - Trenching
 - Drainage
 - Daily inspections
- Welding including:
 - Arc Welding
 - Gas welding
 - Flame Cutting
 - Aggregate/Sand and other Materials Delivery
- Manual and Mechanical Handling
- Lifting and Lowering Operations
- Driving & Operation of Construction Vehicles and Mobile Specification including:
 - Trenching machine
 - Front End Loader
 - Mobile Cranes and the ancillary lifting tackle
 - Parking of Vehicles & Mobile Specification

- Use and Storage of Flammable Liquids and other Hazardous Substances
 - the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
- Layering and Bedding of trench floor
- Installation of Pipes in trenches
- Backfilling of Trenches
 - the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
- Protection from Overhead Power Lines
- As discovered by The Appointed Principal Contractor's hazard identification exercise
- As discovered from any inspections and audits conducted by the Client and/or its Agent on its behalf or by The Appointed Principal Contractor or any other Contractor on site
- As discovered from any accident/incident investigation.

12.1 The following are in particular requirements depending on scope of works and will form a basis for compliance audits.

1. Administrative & Legal Requirements
2. Education, Training & Promotion
3. Public Safety & Emergency Preparedness
4. Personal Protective Equipment
5. Housekeeping
6. Scaffolding, Formwork & Support work
7. Ladders
8. Electrical Safeguarding
9. Emergency/Fire Prevention & Protection
10. Excavations & Demolition
11. Tools
12. Cranes
13. Personnel & Material Hoists
14. Transport & Materials Handling
15. Site Specification & Machinery
16. Specification & Storage Yards/Site Workshops Specifics
17. Health & Hygiene

13. OUTLINED DATA, REFERENCES AND INFORMATION ON CERTAIN AND/OR SPECIFIC OBLIGATORY REQUIREMENTS TO ENSURE COMPLIANCE

STANDARD SPECIFICATIONS REFERENCE

Specifications for Electrical and Electronic Installations shall generally (but compulsory) conform to OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 CONSTRUCTION REGULATIONS, 2014, whereby:.

The Minister of Labour has under section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), after consultation with the Advisory Council for Occupational Health and Safety, made the regulations in the Schedule.

All shall generally be in accordance with (but NOT limited to) the relevant SANS, OHS and Regulations and Standards such as:

Temperature-rise assessment, PTTA, switchgear, control gear	SANS 60890:2007 / IEC 60890:1987
AC switchgear, AC control gear, alternating current, degrees of protection, electrical equipment, EMC	SANS 62271-1:2008 / IEC 62271-1:2007
AC switchgear, circuit breakers, distribution networks, electrical appliances, equipment, high voltage	SANS 62271-108:2007 / IEC 62271-108:20
Access control systems, barriers, electrical security	SANS 2220-2-7:2005
Access, control systems, processors	SANS 2220-2-2:2005
Adaptors, plugs, socket-outlets, household equipment	SANS 60884-2-5:1995 / IEC 60884-2-5:1995
Ageing tests, electric cables, XPLE, insulated cables	SANS 6284-5:2007
conditioners, heat pumps, rooms	SANS 1125:2004
Air conditioning equipment, ducted, heat-pumps, testing, rating, Performance	SANS 13253:2003 / ISO 13253:1995
Air driers, laundry machines, industrial, safety measures	SANS 10472-4:1997 / ISO 10472-4:1997
Air-conditioners, heat pumps, dehumidifiers, electrical safety	SANS 60335-2-40:2006 / IEC 60335-2-40:2005 SANS 1424:2008
Air-conditioning systems, ducts (building services)	SANS 1238:2005
Air-conditioning systems, ducts (building services), installation, Testing	SANS 10173:2003
Air-conditioning systems, filters	SANS 1424:2008
Air-conditioning systems, plants, refrigerating systems	SANS 10147:2002
Alternating current, rated voltages, switchgear, control gear, switches	SANS 62271-109:2007 / IEC 62271-109:2006
Alternator sets, diesel engines, installations, fixed	NRS 024-1:1994
Battery chargers, industrial	SANS 1652:2008
Buildings, regulations	SANS 10400:1990
CCTV surveillance, security systems, electrical, installation, Maintenance	SANS 10222-5-1-5:2003
Cable conduits, communication cables, fibre-optic cable, underground cable, duct	NRS 088-1:2007
Cable glands, flameproof materials, enclosures	SANS 808:1967
Cable terminations, live conductors, air-insulated enclosures, a.c., < 36 kV	NRS 012:2002
Cables, electric, medium voltage	NRS 013:2007

Cables, insulated, lugs, ferrules, copper conductors	SANS 1803-1:2002
Cathodic protection, underground structures, submerged Structures	SANS 10121:1977
Circuit-breakers, switchgear, low voltage	SANS 60947-2:2007 / IEC 60947-2:2006
Conductors, electric cables, flexible cords	SANS 1411-1:2008
Conduit fittings, electrical installations, insulating materials	SANS 61035-2-2:1993 / IEC 61035-2-2:1993
Contactors, electromechanical devices, switchgear, low voltage	SANS 60947-4-1:2004 / IEC 60947-4-1:2002
Contactors, low voltage, motor starters, alternating current, semiconductor controllers	SANS 60947-4-3:2007 / IEC 60947-4-3:2007
Control circuit devices, proximity sensors, switching amplifiers,	SANS 60947-5-6:1999 / IEC 60947-5-6:1999 switchgear, low voltage
Control gear, lamps, safety requirements	SANS 61347-1:2007 / IEC 61347-1:2007
Control gear, switchgear, control equipment, low voltage	SANS 60947-1:2008 / IEC 60947-1:2007
Couplers, plugs, sockets, industrial	SANS 60309-1:2006 / IEC 60309-1:2005
Current transformers, measuring instruments, electrical protection devices	NRS 029:2002
Degrees of protection, electrical insulation, climate	SANS 62271-304:2008 / IEC/TS 62271-304:2008
Dielectric, insulation, cores, cords, 300V, 450V, 500V, 750V, General	SANS 1574-1:2008
Discharge lamps, electric ballasts, control gear, lamps	SANS 61347-2-9:2004 / IEC 61347-2-9:2003
Distribution transformers	SANS 780:2004
Earth-leakage circuit breakers, electrical protection equipment	SANS 767-1:1982
Earth-leakage circuit breakers, single phase current, portable, electrical protection equipment	SANS 767-2:1983
Earth-leakage circuit-breakers, regulations	VC 8035:1987
Earthing, electric power systems, medium voltage, industrial	SANS 10200:1985
Earthing, low voltage, distribution systems	SANS 10292:2001
Electric appliances, electric control equipment, electrical safety, electrical engineering	SANS 60730-2-14:2008 / IEC 60730-2-14:2008
Electric plugs, household equipment, conventional system, plugs, socket-outlet systems	SANS 164-3:2007
Electric plugs, household equipment, plugs, socket-outlets, low voltage, fixed	SANS 164-0:2007

Electric power systems, uninterruptible power systems	SANS 1474:2004
Electric wiring systems, electrical installations, low-voltage	SANS 10142-1:2008
Electrical enclosures, floor boxes	SANS 60670-23:2006 / IEC 60670-23:2006
Electrical equipment, explosive gas atmospheres, enclosures "d"	SANS 60079-1:2004 / IEC 60079-1:2003
Electrical equipment, high voltage, machinery, safety, > 1000 V	SANS 60204-11:2000 / IEC 60204-11:2000
Electrical equipment, laboratory equipment, heating equipment, Safety	SANS 61010-2-010:2007 / IEC 61010-2-010:2005
Electrical equipment, electrical safety, electrically-operated devices, enclosures, erection	SANS 61241-11:2007 / IEC 61241-11:2005
Electrical household appliances, electrical safety, specifications, general requirements	SANS 60335-1:2007 / IEC 60335-1:2006
Electrical household equipment, plugs, socket outlets, SELV	SANS 60906-3:1994 / IEC 60906-3:1994
Electrical medical equipment, safety	SANS 60601-1:2007 / IEC 60601-1:2005
Electrical protection equipment, earth-leakage circuit breakers	SANS 767-1:1982
Electrical protection equipment, surge arresters, metal-oxide, alternating current	SANS 60099-4:2007 / IEC 60099-4:2006
Emergency lighting, electronic ballasts, lamps, control gear	SANS 61347-2-7:2007 / IEC 61347-2-7:2006
Emergency lighting, interior	SANS 10114-2:2002
Enclosures, protected electrical equipment, IP code	SANS 60529:2001 / IEC 60529:2001
Filament lamps, built-in transformers, luminaires	SANS 60598-2-6:1994 / IEC 60598-2-6:1994
Floodlights, luminaires	SANS 60598-2-5:1998 / IEC 60598-2-5:1998
Fluorescent lamps, ballasts, lamps, control gear	SANS 61347-2-8:2007 / IEC 61347-2-8:2006
Fuses, low voltage, general requirements	SANS 60269-1:2007 / IEC 60269-1:2006
Hazardous areas classification (for electrical equipment)	SANS 10108:2005
Hazardous areas classification (for electrical equipment)	SANS 60079-10:2005 / IEC 60079-10:2002
High-voltage switchgear, metal-clad	SANS 1885:2008 / NRS 003:2008
Hospitals, luminaires	SANS 60598-2-25:1994 / IEC 60598-2-25:1994
Hospitals, transformers, isolating transformers	SANS 61558-2-15:1999 / IEC 61558-2-15:1999
IP codes, electric enclosures, degrees of protection	SANS 60529:2001 / IEC 60529:2001
Laboratory equipment, electrical equipment, safety	SANS 61010-1:2004 / IEC 61010-1:2001

Lamp control gear, LED modules	SANS 61347-2-13:2007 / IEC 61347-2-13:2006
Lightning protection, buildings	SANS 10313:2008
Lightning protection, electromagnetic impulse, surge protective devices, SPDs, requirements	SANS 61312-3:2006 / IEC TS 61312-3:2000
Power stations, substations, overhead lines, metal-clad switchgear, cables, mini-substations, safety	NRS 040-6:2009
Security installations, electrical, CCTV surveillance systems, Maintenance	SANS 10222-5-1-5:2003
Service distribution boxes, kiosks, meter, distribution	NRS 056-2:2004
Surge protection, electric power systems, low voltage	SANS 61643-1:2006 / IEC 61643-1:2005
Uninterruptible power systems	SANS 1474:2004
Wiring of premises, low-voltage installations	SANS 10142-1:2008

13.1 Administrative & Legal Requirements

OHS Act Section/ Regulation	Subject	Requirements
Construction. Regulation 3	Notice of carrying out Construction work	Department of Labour notified Copy of Notice available on Site
General Admin. Regulation 4	*Copy of OH&S Act (Act 85 of 1993)	Updated copy of Act & Regulations on site. Readily available for perusal by employees.
COID Act Section 80	*Registration with Compensation. Insurer	Written proof of registration/Letter of good standing available on Site
Construction. Regulation 4 and 5(1)	H&S Specification & Programme	H&S Spec received from Client and/or its Agent on its behalf OH&S programme developed & Updated regularly
Section 9(1) Construction. Regulation 9	*Hazard Identification & Risk Assessment	Hazard Identification carried out/Recorded Risk Assessment and – Specification drawn up/Updated RA Specification available on Site Employees/Sub-Contractors informed/ trained
Section 8(1)	*Assigned duties (Managers)	Responsibility of complying with the OH&S Act assigned to another person/s by CEO.
Construction. Regulation 8(7)	Designation of Person Responsible on Site	Competent person appointed in writing as Construction Supervisor with job description
Construction. Regulation 8(8)	Designation of Assistant for above	Competent person appointed in writing as Assistant Construction Supervisor with job description
Section 17 & 18 General Administrative Regulations 6 and 7	*Designation of Health & Safety Representatives	More than 20 employees - one H&S Representative, one additional H&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 Meaningful H&S Rep. reports. Reports actioned by Management

Section 19 & 20 General Administrative Regulations 5	*Health & Safety Committee/s	H&S Committee/s established. All H&S Reps shall be members of H&S Committees. Additional members are appointed in writing. Meetings held monthly, Minutes kept. Actioned by Management.
Section 37(1) & (2)	*Agreement with Mandataries/ (Sub-)Contractors	Written agreement with (Sub-)Contractors List of (Sub-)Contractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing Construction Supervisor designated Written arrangements re. H&S Reps & H&S Committee Written arrangements re. First Aid
Section 24 & General Admin. Regulation 8 COID Act Sect.38, 39 & 41	*Reporting of Incidents (Dept. of Labour)	Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1?) (WCL 1 or 2) and to the Client and/or its Agent on its behalf Cases of Occupational Disease Reported Copies of Reports available on Site Record of First Aid injuries kept
General Admin. 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 H&S Committee meeting Action taken by Site Management.
Construction. Regulation 10(1)(A)	Fall Prevention & Protection	Competent person appointed to draw up and supervise the Fall Protection Specification Proof of appointment competence available on Site Risk Assessment carried out for work at heights Fall Protection Specification drawn up/updated Available on Site
Construction. Regulation 10(5)(B)	Roof work	Competent person appointed to Specification & supervise Roof work. Proof of appointment competence available on Site Risk Assessment carried out Roof work Specification drawn up/updated Roof work inspect before each shift. Inspection register kept Employees medically examined for physical & psychological fitness. Written proof on site
Construction. Regulation 11	Structures	Competent person appointed in writing to supervise erection, maintenance, use and dismantling of Support & Formwork Design drawings available on site Risk Assessment carried out Support & Formwork inspected: - before use/inspection - before pouring of concrete - weekly whilst in place - before stripping/dismantling. - Inspection register kept
Construction. Regulation 16(1)	Scaffolding	Competent persons appointed in writing to: - erect scaffolding (Scaffold Erector/s) - act as Scaffold Team Leaders - inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s) Written Proof of Competence of above appointees available on Site Copy of SABS 085 available on Site Risk Assessment carried out Inspected weekly/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 Platforms Team Leaders - inspect Suspended Scaffolding

		<p>weekly and after inclement weather Risk Assessment conducted Certificate of Authorisation issued by a registered professional engineer available on Site/copy forwarded to the Department of Labour The following inspections of the whole installation carried out by a competent person - after erection and before use - daily prior to use. Inspection register kept The following tests to be conducted by a competent person:</p> <ul style="list-style-type: none"> - load test of whole installation and working parts every three months - hoisting ropes/hooks/load attaching devices quarterly. <p>Tests log book kept Employees working on Suspended Platform medically examined for physical & psychological fitness. Written proof available</p>
Construction. Regulation 13	Excavations	<p>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 Inspected:</p> <ul style="list-style-type: none"> - before every shift - after any blasting - after an unexpected fall of ground - after any substantial damage to the shoring - after rain. Inspections register kept <p>Method statement developed where explosives will be/ are used</p>
Construction. Regulation 14(1)	Demolition Work	<p>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</p>
Construction. Regulation 19	Materials Hoist	<p>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. Inspections register kept.</p>
Construction. Regulation 21	Explosive Powered Tools	<p>Competent person appointed to control the issue of the Explosive Powered Tools & cartridges and the service, maintenance and cleaning. Register kept of above Empty cartridge cases/nails/fixing bolts returns recorded Cleaned daily after use Work areas are demarcated!</p>
Construction. Regulation 20	Batch Specifications	<p>Competent person appointed to control the operation of the Batch Specification and the service, maintenance and cleaning. Register kept of above Risk Assessment carried out</p>

		Batch Specification to be inspected weekly by a competent person. Inspections register kept
Construction. Regulation 22/ Driven Machinery Regulations 18 & 19	Cranes & Lifting Machines Equipment	Competent person appointed in writing to inspect Cranes, Lifting Machines & Equipment Written Proof of Competence of above appointee available on Site. Cranes & Lifting tackle identified/numbered Register kept for Lifting Tackle Log Book kept for each individual Crane Inspection: - All cranes - daily by operator - Tower Crane/s - after erection/6monthly - Other cranes - annually by comp. person - Lifting tackle (slings/ropes/chain slings etc.) - daily or before every new application
Construction. Regulation 24/Electrical Machinery Regulations 9 & 10/ Electrical Installation Regulations	*Inspection & Maintenance of Electrical Installation & 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 & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools, electric lights and extension leads must be uniquely identified/numbered. Weekly visual inspection by User/Issuer/Storeman. Register kept.
Construction. Regulation 28/ General Safety Regulation 8(1)(a)	*Designation of Stacking & Storage Supervisor.	Competent Person/s with specific knowledge and experience designated to supervise all Stacking & Storage Written Proof of Competence of above appointee available on Site
Construction. Regulation 29/ Environmental Regulation 9	*Designation of a Person to Co-ordinate Emergency Specifications And Fire Protection	Person/s with specific knowledge and experience designated to co-ordinate emergency contingency Specifications and execution and fire prevention measures Emergency Evacuation Specification developed: - Drilled/Practiced - Specification & Records of Drills/Practices available on Site Fire Risk Assessment carried out All Fire Extinguishing Equipment identified and on register. Inspected weekly. Inspection Register kept 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 freely available Equipment as per the list in the OH&S Act. One qualified First Aider appointed for every 50

		<p>employees. (Required where more than 10 persons are employed)</p> <p>List of First Aid Officials and Certificates</p> <p>Name of person/s in charge of First Aid box/ displayed.</p> <p>Location of First Aid box/clearly indicated. Signs instructing employees to report all Injuries/illness including first aid injuries</p>
General Safety Regulation 2	Personal Safety Equipment (PSE)	<p>PSE Risk Assessment carried out</p> <p>Items of PSE prescribed/use enforced</p> <p>Records of Issue kept</p> <p>Undertaking by Employee to use/wear PSE</p> <p>PSE remain property of Employer, not to be removed from premises GSR 2(4)</p>
General Safety Regulation 9	*Inspection & Use of Welding/Flame Cutting Equipment	<p>Competent Person/s with specific knowledge and experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment</p> <p>Written Proof of Competence of above appointee available on Site</p> <p>All new vessels checked for leaks, leaking vessels NOT taken into stock but returned to supplier immediately</p> <p>Equipment identified/numbered and entered into a register</p> <p>Equipment inspected weekly. Inspection Register kept Separate, purpose made storage available for full and empty vessels</p>
Hazardous Chemical Substances (HCS) Regulations Construction Regulation 25	*Control of Storage & Usage of HCS and Flammables	<p>Competent Person/s with specific knowledge and experience designated to Control the Storage & Usage of HCS (including Flammables)</p> <p>Written Proof of Competence of above appointee available on Site</p> <p>Risk Assessment carried out</p> <p>Register of HCS kept/used on Site</p> <p>Separate, purpose made storage available for full and empty containers</p>
Vessels under Pressure Regulations	Vessels under Pressure (VUP)	<p>Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of VUP's</p> <p>Written Proof of Competence of above appointee available on Site</p> <p>Risk Assessment carried out</p> <p>Certificates of Manufacture available on Site</p> <p>Register of VUP's on Site</p> <p>Inspections & Testing by Approved Inspection Authority (AIA):</p> <ul style="list-style-type: none"> - after installation/re-erection or repairs - every 36 months. - Register/Log kept of inspections, tests. Modifications & repair
Construction. Regulation 23	Construction Vehicles & Earth Moving Equipment	<p>Operators/Drivers appointed to:</p> <ul style="list-style-type: none"> - Carry out a daily inspection prior to use

		- Drive the vehicle/Specification that he/she is competent to operate/drive Written Proof of Competence of above appointee available on Site. Record of Daily inspections kept
General Safety Regulation 13A	*Inspection of Ladders	Competent person appointed in writing to inspect Ladders
General Safety regulation 13B	Ramps	Competent person appointed in writing to Supervise the erection & inspection of Ramps. Inspection register kept. Daily inspected and noted in register

13.2 Education & Training

13.2.1 Company OH&S Policy Section 7(1)

Our OHS policy shall be signed by the CEO and published/Circulated to Employees and displayed on the Employee Notice Boards as our management and employees commitment.

13.2.2 Company/Site OH&S Rules (Section 13(a))

Our Company Site Rules shall be published and displayed on Employee Notice Boards, employees will be effectively informed or trained: a written proof Follow-up shall be conducted to ensure employees understand/adhere to the policy and rules

13.2.3 Induction & Task Safety Training (Section 7(5))

All new employees receive OH&S Induction Training. Training includes Task Safety Instructions. Employees acknowledge receipt of training. Follow-up to ensure employees understand/adhere to instructions.

13.2.4 General OH&S Training (Section 7(5))

All current employees shall receive a specified OH&S training: written proof Operators of Specification & Equipment shall receive specified training as well as a Follow-up process to ensure employees understand/adhere to instructions.

13.2.5 Occupational Health & Safety Promotion Incident Experience Board indicating e.g.

- No. of hours worked without an Injury
- No. of days worked without an Injury

Mission, Vision and Goal

Star Grading - Board kept up to date.

Safety Posters displayed & changed regularly

Employee Notice Board for OH&S Notices.

Site OH&S Competition.

Company OH&S Competition.

Participation in Regional OH&S Competition

Suggestion scheme.

13.3 Public Safety, Security Measures & Emergency Preparedness

13.3.1 Notices & Signs

As a means for access control, the following shall be implemented: Notices & Signs at entrances / along perimeters indicating “No Unauthorised Entry”. Notices & Signs at entrance instructing visitors and non - employees what to do, where to go and where to report on entering the site/yard with directional signs. e.g

“Visitors to report to Office” Notices & Signs posted to warn of overhead work and other hazardous activities. e.g. General Warning Signs

13.3.2 Site Safeguarding

Nets, Canopies, Platforms, Fans etc. to protect members of the public passing/entering the site.

13.3.3 Security Measures

Access control measures/register in operation, Security patrols after hours during weekends and holidays, Sufficient lighting after dark and that Guard has access to telephone/mobile/other means of emergency communication

13.3.4 Emergency Preparedness

Emergency contact numbers shall be displayed and made available to Security & Guard Emergency Evacuation instructions posted up on all notice boards (including employees’ notice boards) Emergency contingency Specification shall be made available on site/in yard Doors open outwards/unobstructed Emergency alarm audible all over (including in toilets)

13.3.4 Emergency Drill & Evacuation

Adequate No. of employees shall be trained to use Fire Fighting Equipment. Emergency Evacuation Specification available, displayed and practiced.

13.4 Personal Protective Equipment (PPE)

13.4.1 PPE needs analysis

Need for PPE identified and prescribed in writing. PPE remain property of Employer, not to be removed from premises GSR 2(4)

13.4.2 Head Protection

All persons on site wearing Safety Helmets including Sub-contractors and Visitors (where prescribed)

13.4.3 Foot Protection

All employees on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work. Visitors to wear same upon request or where prescribed

13.4.4 Eye and Face Protection

Eye and Face (also Hand and Body) Protection (Goggles, Face Shields, Welding Helmets etc.) used when operating the following:

- * Jack/Kango Hammers
- * Angle/Bench Grinders
- * Electric Drills (Overhead work into concrete/cement/bricks)
- * Explosive Powered tools
- * Concrete Vibrators/Pokers
- * Hammers & Chisels
- * Cutting/Welding Torches
- * Cutting Tools and Equipment
- * Guillotines and Benders
- * Shears
- * Sanders and Sanding Machines

- * CO₂ and Arc Welding Equipment
- * Skill/Bench Saws
- * Spray Painting Equipment etc

13.4.5 Hearing Protection

Hearing Protectors to be used: (Muffs, Plug etc.) used when operating the following:

- * Jack/Kango Hammers
- * Explosive Powered Tools
- * Wood/Aluminium Working Machines e.g. saws, Specification, routers

13.4.6 Hand Protection

Protective Gloves worn by employees handling/using:

- * Cement / Bricks / Steel / Chemicals
- * Welding Equipment
- * Hammers & Chisels
- * Jack / Kango Hammers etc

13.4.7 Respiratory Protection

Suitable/efficient prescribed Respirators worn correctly by employees handling/using:

- * Dry cement
- * Dusty areas
- * Hazardous chemicals
- * Angle Grinders
- * Spray Painting etc

13.4.8 Protective Clothing

All jobs requiring protective clothing (Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn.

13.4.9 PPE Issue & Control

Identified Equipment issued free of charge. All PPE maintained in good condition. (Regular checks). Workers instructed in the proper use & maintenance of PPE. Commitment obtained from wearer accepting conditions and to wear the PPE. Record of PPE issued kept on H&S File. PPE remain property of Employer, not to be removed from premises GSR 2(4)

13.5 **Housekeeping**

13.5.1 Scrap Removal System

All items of Scrap/Unusable Off-cuts/Rubble and redundant material removed from working areas on a regular basis. (Daily) Scrap/Waste removal from heights by chute/hoist/crane. Nothing thrown/swept over sides. Scrap disposed of in designated containers/areas Removal from site/yard on a regular basis.

13.5.2 Stacking & Storage

Stacking:

- * Stable, on firm level surface/base.
- * Prevent leaning/collapsing
- * Irregular shapes bonded
- * Not exceeding 3x t the base
- * Stacks accessible * Removal from top only.

Storage:

- * Adequate storage areas provided.
- * Functional – e.g. demarcated storage areas/racks/bins etc.
- * Special areas identified and demarcated e.g. flammable gas, cement etc.
- * Neat, safe, stable and square.
- * Store/storage areas clear of superfluous material.
- * Storage behind sheds etc. neat/under control.
- * Storage areas free from weeds, litter etc.

13.5.3 Waste Control/Reclamation

Re-usable off-cuts and other re-usable material removed daily and kept to a minimum in the work areas. All re-usable materials neatly stacked/stored in designated areas. (Nails removed/bent over in re-usable timber). Issue of hardware/nails/screws/cartridges etc. controlled and return of unused items monitored.

13.5.4 Sub-contractors (Housekeeping)

Sub-contractors required to comply with Housekeeping requirements.

13.6 Method for Construction of Pipeline

- (a) Understand the Company Safety Policy for Health and Safety and ensure that it is brought to the notice of all employees, particularly new employees. Carry out all work in accordance with its requirement and bring to the notice of the Project Manager any improvements or additions which are felt necessary.
- (b) Organise sites so that work is carried out to the required standard with minimum risk to employees, other Contractors, the Public, equipment or materials.
- (c) Where necessary, issue written instructions setting out the method of work. Identify training needs and advise the Project Manager and Project Safety Officer of these as and when necessary.
- (d) Know the requirements of the relevant local safety regulations and ensure that they are observed on site.
- (e) Ensure that suitable staff are appointed to keep all registers, records and reports up to date and properly filled in, and ensure that they are kept in a safe place. Ensure that copies of regulations are available and statutory notices are prominently displayed, when and where necessary.
- (f) Ensure that the "competent persons" appointed to make the necessary inspections of scaffolding, excavations, Specification, etc., have sufficient knowledge and are experienced and qualified to evaluate all aspects of safety relating to the item being inspected.
- (g) Ensure that Supervisors and Operatives under your control are aware of their responsibilities for safe working and are not required or permitted to take unnecessary risks.
- (h) Establish procedures to ensure that any electricity supply is installed and maintained in a safe and proper manner.
- (i) Establish procedures to ensure that all information available, relating to services on the site is obtained and that services are located, marked and plotted accurately before excavation work starts. Do not allow mechanical excavation to take place within limits of the services laid down by the service authority and the Company Policy.
- (j) Specification and maintain a tidy site.
- (k) Implement arrangements with Sub-Contractors and others on site to avoid confusion about areas of responsibility for Health, Safety and Welfare.

- (l) Establish procedures to check that all machinery and Specification on site, including power and hand tools, are maintained in good condition and that all temporary electrical equipment is of suitable, safe voltage.
- (m) Ensure that adequate supplies of approved protective clothing and equipment are maintained on site.
- (n) Establish systems to ensure that the protective clothing is issued as and when required.
- (o) Ensure that adequate First Aid facilities are on site and that all persons on site are aware of their location and procedure for receiving treatment for injuries. Establish emergency evacuation procedures for sending injured personnel to hospital.
- (p) Ensure that a system is organised in the event of an emergency for applying First Aid and that necessary emergency procedures have been established on the site.
- (q) Liase, when necessary, with the Local Enforcing Authority and act upon advice given by Inspectors.
- (r) Liase with the Project Safety Officer and when necessary seek his advice before commencing new methods of work or potentially hazardous operations.
- (s) Ensure that adequate fire precautions are provided taking into account special requirements on the site and local Permit to Work Systems. Site offices and welfare facilities must be adequately protected, and any flammable liquids or liquefied petroleum gases stored and used safely.
- (t) Examine drawings and soil investigation reports to determine excavation support requirements in advance, and provide details in accordance with Company Policy
- (u) Set a personal example by wearing appropriate personal protective clothing and equipment on site.
- (v) Ensure that any accident on site that results in an injury to any person (not just employees) and/or damage to Specification or equipment is reported in accordance with Company Policy, or local requirements.

13.6.1 Openings

- Unprotected openings adequately guarded/fenced/barricaded/catch nets installed
- Roof work discontinued when bad/hazardous weather
- Fall protection measures (including warning notices) when working close to edges or on fragile roofing material
- Covers over openings in roof of robust construction/secured against displacement

13.7 Fall into

13.7.7 Edges & Openings

Edges barricaded to acceptable standards. Manhole openings covered / barricaded. Openings in floor/ other openings covered, barricaded/fenced. Stairs provided with handrails. Lift shafts barricaded/ fenced off.

13.8 Ladders

13.8.1 Physical Condition / Use & Storage

Stepladders - hinges/stays/braces/stiles in order. Extension ladders - ropes/rungs/stiles/safety latch/hook in order. Extension / Straight ladders secured or tied at the bottom / top. No joined ladders used Wooden ladders are never painted except with varnish Aluminium ladders NOT to be used with electrical work All ladders stored on hooks / racks and not on ground. Ladders protrude 900 mm above landings / platforms / roof. Fixed ladders higher than 5 m have cages/Fall arrest system.

13.10 Emergency and Fire Prevention and Protection

13.10.1 Fire Extinguishing Equipment

Fire Risks Identified and on record

The correct and adequate Fire Extinguishing Equipment available for:

- Offices
- General Stores
- Flammable Store
- Fuel Storage Tank/s and catchment well
- Gas Welding / Cutting operations
- Where flammable substances are being used / applied.
- Equipment Easily Accessible

13.10.2 Maintenance

Fire equipment checked minimum monthly, serviced yearly

13.10.3 Location & Signs

Fire Extinguishing Equipment: * Clearly visible * Unobstructed * Signs posted including “No Smoking”/ “No Naked Lights” where required. (Flammable store, Gas store, Fuel tanks etc.)

13.10.4 Storage Issue & Control of Flammables (incl. Gas cylinders)

- Storage Area provided for flammables with suitable doors, ventilation, bund etc.
- Flammable store neat / tidy and 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 task or one day’s usage Separate, special gas cylinder store/storage area.
- Gas Cylinders stored / used / transported upright and secured in trolley/cradle/structure and ventilated.
- Types of Gas Cylinders clearly identified as well as the storage area and stored separately.
- Full cylinders stored separately from empty cylinders.
- All valves, gauges, connections, threads of all vessels to be checked regularly for leaks.
- Leaking acetylene vessels to be returned to the supplier IMMEDIATELY

13.10.5 Storage, Issue & Control of Hazardous Chemical Substances (HCS)

- HCS storage principles applied: products segregated Only approved, non-expired HCS to be used
- Only the prescribed PPE shall be used as the minimum protection
- Provision made for leakage/spillage containment and ventilation
- Emergency showers/eye wash facilities provided
- HCS under lock & key controlled by designated person
- Decanted/issued in containers as prescribed with information/warning labels
- Disposal of unwanted HCS by accredited disposal agent
- No dumping or disposal of any HCS on or inside the storage area or anywhere else on the project site
- All vessels or containers to be regularly checked for leaks

13.11 Excavations

Excavations deeper than 1.5m	<p>Shored / Braced to prevent caving / falling in. Provided with an access ladder. Excavations guarded/barricaded/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 All excavations are subject to daily inspections</p>
Hand Tools	<p>Shovels / Spades / Picks:</p> <ul style="list-style-type: none"> • Handles free from cracks and splinters • Handles fit securely • Working end sharp and true <p>Hammers:</p> <ul style="list-style-type: none"> • Good quality handles, no pipe or reinforcing steel handles. • Handles free from cracks and splinters • Handles fit securely <p>Chisels:</p> <ul style="list-style-type: none"> • No mushroomed heads / heads chamfered • Not hardened • Cutting edge sharp and square <p>Saws:</p> <ul style="list-style-type: none"> • Teeth sharp and set correctly • Correct saw used for the job
Explosive Powered Tools	<p>Only used by trained / authorised personnel. Prescribed warning signs placed / displayed where tool is in use. Work area must be properly isolated/demarcated during use of tool. Inspected at least monthly by competent person and results recorded. Issue and return recorded including cartridges / nails and unused cartridges / nails / empty shells recorded.</p>

13.13 Cranes

Mobile Crane	<p>Only operated by trained authorised operator with valid certificate of training Rear view mirrors Windscreen visibility good Windscreen wipers operating effectively Indicators operational Hooter working Tyres safe/sufficient tread/pressure visibly sufficient No missing Wheel nuts Headlights, taillights operational Reverse alarm working and audible and known by all employees</p>
Mobile Crane continued	<p>Grease nipples and grease on all joints No Oil leaks Hydraulic pipes visibly sound/no leaks No corrosion on Battery terminals Boom visibly in good condition/no apparent damage Cable/sheaves greased/no visible damage/split wires/corrosion and checked daily Brakes working properly Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed By-pass valves operational Deflection chart displayed/visible to operator/driver Outriggers functional used</p>
Gantry Crane	<p>Only operated by trained authorised persons Correct slinging techniques used Recognised/displayed on chart signals used</p>

	<p>Log book kept/up to date</p> <p>Prescribed inspections conducted on crane & lifting tackle and checked daily</p> <p>"Crane overhead" signage, where applicable</p> <p>Crane hook: Throat pop marked/safety latch fitted/functional</p> <p>SWL/MML displayed/load limiting switches fitted/operational</p>
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13.14 Builder's Hoist

Builder's Hoist	<p>"Hoist In Operation" - sign displayed.</p> <p>General construction strong and free from patent defects.</p> <p>Tower:</p> <ul style="list-style-type: none"> • Adequately secured / 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. <p>Platform:</p> <ul style="list-style-type: none"> • No persons conveyed on platform • Steel wire ropes with breaking strength of six times max. load. • Signal systems used which may include two-way radio connection. • Goods prevented from moving / falling off. • Effective brake capable of stopping and holding max. load.
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13.15 Transport & Materials Handling Equipment

Site Vehicles	<p>All Site Vehicles, Dumpers, Bobcats, Loaders etc; checked daily before use by driver/operator.</p> <p>Inventory of vehicles used/operated on site</p> <p>Inspection by means of a checklist / results recorded.</p> <p>No persons riding on equipment not designed or designated for passengers.</p> <p>Site speed limit posted, enforced and not exceeded.</p> <p>Drivers / Operators trained / licensed and carrying proof.</p> <p>No unauthorised persons allowed to drive / operate equipment</p>
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13.16 Site Specification and Machinery

Brick Cutting Machine	<p>Operator Trained.</p> <p>Only authorised persons use the machine.</p> <p>Emergency stop switch clearly marked and accessible.</p> <p>Area around the machine dry and slip/trip free/clear of off-cuts</p> <p>All moving drive parts guarded/electrical supply cable protected</p> <p>Operator using correct PPE - eye/face/hearing/foot/hands/body.</p>
*Electric Arc Welder	<p>Welder Trained.</p> <p>Only authorised / trained persons use welder.</p> <p>Earth cable adequately earthed to work.</p> <p>Electrode holder in good condition/safe</p> <p>Cables, clamps & lugs/connectors in good condition.</p> <p>Area in which welding machine is used is dry/protected from wet.</p> <p>Welder using correct PPE - eye/ face/foot/body/respirator.</p> <p>Correct transparent screens & warning signs placed</p>
*Compressors	<p>Relief valves correctly set and locked / sealed. Maximum Safe Working Pressure (MSWP) indicated on face of pressure gauge: not on glass cover. All</p>

	drives adequately guarded. Receiver/lines drained daily Hoses good condition/clamped, not wired Compressed air NEITHER used to dust off clothing/PPE/ and work areas NOR on bare skin
Concrete Mixer / Batch Specification	Top platform provided with guardrails. Dust abatement methods in use. Operators using correct PPE - eye / hands / respirators. All moving drive parts guarded. Emergency stops identified / indicated and accessible. Area kept clean/dry/and free from tripping and slipping hazards. Operators overseer identified and crane signals displayed and used.
Gas Welding / Flame Cutting Equipment	Only authorised/trained persons use the equipment. Torches and gauges in good condition. Flashback arrestors fitted at cylinders and gauges. Hoses in good condition/correct type/all connections with clamps Cylinders stored, used and transported in upright position, secured in trolley / cradle / to structure. All cylinders regularly checked for leaks, leaking cylinders returned immediately Fire prevention/control methods applied/hot work permits

13.17 Specification & Storage Yards/Site Workshops Specifics

Section 8(2)(1) General Machinery Regulation 2(1): Supervision of the Use & Maintenance of Machinery	Person/s with specific knowledge and experience designated in writing to Supervise the Use & Maintenance of Machinery Critical items of Machinery identified/numbered/placed on register/inventory Inspection/maintenance schedules for abovementioned Inspections/maintenance carried out to above schedules Results recorded
General Machinery Regulation 9(2): Notices re. Operation of Machinery	Schedule D Notice posted in Work areas
Vessels under Pressure Regulation 13(1)(b): Supervision of the Use & Maintenance of Vessels under Pressure (VUP)	Person/s with specific knowledge and experience designated in writing to Supervise the Use & Maintenance of VUP VUP identified/numbered/placed on register/Manufacturers plate intact Inspection/maintenance schedules for abovementioned Inspections/maintenance carried out to above schedules Results recorded/Test certificates available
Lock-out Procedure	Lock-out procedure in operation
Ergonomics	Ergonomics survey conducted – results on record Survey results applied
Demarcation & Colour Coding	Demarcation principles applied All services, pipes, electrical installation, stop-start controls, emergency controls etc. colour coded to own published or SABS standard Employees trained to identify colour coding
Portable & Bench Grinders	Area around grinder clear/trip/slip free Bench grinders mounted securely/grinder generally in good condition/No excessive vibration On/Off switch/button clearly demarcated/accessible Adequate guards in place Tool rest – secure/square/max. 2 mm gap, perpendicular to drive shaft Stone/disk - correct type and size/mounted correctly/dressed Use of Eye protection enforced
Battery Storage & Charging	Adequately ventilated, ignition free room/area/no smoking sign/s Batteries placed on rubber/wooden surface Emergency shower/eye wash provided No acid storage in area Prescribed methods in place and adhered to when charging batteries
Ancillary Lifting Equipment	Chain Blocks/Tirfors/jacks/mobile gantries etc. identified/ numbered on register Chains in good condition/links no excessive wear/checked daily Lifting hooks – throat pop marked/safety latch fitted SWL/MML marked/displayed
Presses/Guillotines/ Shears	Only operated by trained/authorised persons Interlocks/lock-outs fitted/PPE worn or used at all times

13.18 Workplace Environment, Health and Hygiene

Lighting	Adequate lighting in places where work is being executed e.g. stairwells and basements. Light fittings placed / installed causing no irritating/blinding glare. Stroboscopic effect eliminated (not only reduced) where moving objects or machinery is used.
Ventilation	Adequate ventilation / extraction / exhausting in hazardous areas e.g. chemicals/adhesives/welding/petrol or diesel/motors running and in confined spaces/basements.
Noise	Tasks identified where noise levels exceeds 85 dB at any one time. All reasonable steps taken to reduce noise levels at the source. Hearing protection used where noise levels could not be reduced to below 85 dB.
Heat Stress	Measures in place to prevent heat exhaustion in heat stress problem areas e.g. steel decks (See Environmental Regulation 4) Cold drinking water readily available at all times.
Ablutions	Sufficient hygiene facilities provided - 1 toilet per 30 employees (National Building Regulations prescribe chemical toilets for Construction sites) Toilet paper available. Sufficient showers provided. Facilities for washing hands provided Soap/cleaning agent available for washing hands Means of drying hands available Lock-up changing facilities / area provided. Ablution facilities kept hygienic and clean.
*Eating / Cooking Facilities	Adequate storage facilities provided. Weather protected eating area provided, separate from changing area Refuse bins with lids provided. Facilities kept clean and hygienic.
Pollution of Environment	Measures in place to minimize dust generation. Accumulation or littering of empty cement pockets, plastic wrapping / bags, packing materials etc. prevented. Spillage / discarding of oil, chemicals and dieseline into storm water and other drains or into existing or newly dug holes/cavities on site expressly prohibited
Hazardous Chemical Substances	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. Expiry dates meticulously checked where applicable

14. THE APPOINTED PRINCIPAL CONTRACTOR'S GENERAL DUTIES

The Appointed Principal Contractor shall at all times ensure his status of an “employer” as referred to in the Act, and will abide by his/her responsibilities, duties and functions as per the requirements of the Act and Regulations with specific reference to Section 8 of the Act.

The Appointed Principal Contractor shall keep, and on demand make available, a copy of the Act on site at all times and in addition to that he/she will introduce and maintain a file titled “Health and Safety File”, or other record in permanent form, which shall contain all relevant aspects and information as contemplated in the Construction Regulations. He/she will make this file available to the client or his representative whenever necessary or on request to an interested party

15. THE APPOINTED PRINCIPAL CONTRACTOR'S SPECIFIC DUTIES

15.1 We take cognisance to our specific duties in terms of these specifications are detailed in the Construction Regulations as published under government notice No R1010 dated 18 July 2003. The Appointed Principal Contractor is specifically referred to the following elements of the Construction Regulations:

- Regulation No. 1 - Definitions
- Regulation No. 2 - Scope of application
- Regulation No. 3 - Notification of construction work
- Regulation No. 5 - Principal Contractor and Contractor
- Regulation No. 6 - Supervision of construction work
- Regulation No. 9 - Risk Assessment
- Regulation No. 26 - Stacking & Storage on construction sites
- Regulation No. 28 - Construction welfare facilities
- Regulation No. 29 - Approved Inspection authorities
- Regulation No. 30 - Offences and penalties

15.2 We shall ensure compliance to the Act and its Regulations and specifically to the above regulations and document each record in the Health and Safety File.

16. THE APPOINTED PRINCIPAL CONTRACTOR'S SPECIFIC RESPONSIBILITIES WITH

16.1 WE SHALL TAKE REGARD TO HAZARDOUS ACTIVITIES in the following activities as identifiable as hazardous in terms of the Construction Regulations. The Appointed Principal Contractor shall execute the activities in accordance with the following Construction Regulations and other applicable regulations of the Act:

- Regulation No.9 - Structures
- Regulation No. 10 - Formwork and support work
- Regulation No. 13 - Excavation work
- Regulation No. 14 - Demolition work
- Regulation No. 15 - Tunneling
- Regulation No. 17 - Suspended platforms
- Regulation No. 19 - Material hoists
- Regulation No. 18 - Batch Specifications
- Regulation No. 21 - Explosive powered tools
- Regulation No. 22 - Cranes
- Regulation No. 23 - Construction vehicles & mobile Specification.
- Regulation No. 24 - Electrical installations and machinery on construction sites
- Regulation No. 25 - Use and temporary storage of flammable liquids on construction sites
- Regulation No. 26 - Water environments
- Regulation No. 25 - Housekeeping on construction sites
- Regulation No. 29 - Fire precautions on construction sites.

16.2 All of the above requirements will be read in conjunction with the relevant regulations and health and safety standards as required by the Act. All documents and records required by the Construction Regulations will be kept in the Health and Safety File and will be made available at any time when required by the client or his representative, or on request to an interested party.

16.3 Legal Liabilities

16.3.1 Common Law and Legislation

-Based on two main criteria –

- Would the reasonable person have foreseen the hazard?
That is a reasonable person in that specific position, taking experience, qualifications, authority, position in the organization etc. into consideration
- Would the reasonable person have taken precautionary measures (action) to prevent or limit the hazard?
Negligence can be proven on failure on any or both of the above criteria
(There may not necessarily be a relationship between criminal and civil liability!)

17. HOUSE KEEPING

17.1 Good housekeeping will be maintained at all times as per Construction Regulation No. 27. Poor housekeeping contributes to three major problems, namely, costly or increased accidents, fire or fire hazards and reduction in production. Good housekeeping will enhance production time.

Particular emphasis is to be placed on the following crucial elements of a construction site:

- Phase priorities and production/Specification layout
- Enclosures
- Pits, openings and shoring
- Storage facilities
- Effective, sufficient and maintained lighting or illumination
- Principal sources of injuries e.g. stairways, runways, ramps, loose building material
- Oil, grease, water, waste, rubble, glass, storm water
- Colour coding
- Demarcations
- Pollution
- Waste disposal
- Ablution and hygiene facilities
- First aid

This list must not be taken to be exclusive or exhaustive!

In promotion of environmental control all waste, rubble, scrap etc, will be disposed of at a registered dump site and records will be maintained. Where it is found to be impractical to use a registered dump site or it is not available, The Appointed Principal Contractor will ensure that the matter is brought to record with the client or his representative, after which suitable, acceptable alternatives will be sought and applied.

Dross and refuse from metals, and waste matters or by-products whose nature is such that they are poisonous or capable of fermentation, putrefaction or constituting a nuisance shall be treated or disposed of by methods approved of by an inspector. NOTE: No employer (Principal Contractor) shall require or permit any person to work at night or after hours unless there is adequate, suitable artificial lighting including support services in respect of Health and Safety.

18. LOCKOUT SYSTEMS - ELECTRICAL!

18.1 A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, Specification or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

- Physical/mechanical lock-out systems shall be part of the safety system and included in training.
- Lockouts shall be tagged and the system tested before commencing with any work or repairs.

19. INCIDENT INVESTIGATION

19.1 Inspection and reporting is the best way in which a responsible contractor can control his area of responsibility. All incidents therefore, irrespective of whether it gave rise to loss, injury, damage or not, shall be investigated and the results recorded in the Health and Safety File

20. GENERAL

20.1 We take note of the project subjection under our control to periodic health and safety audits that will be conducted by the client at intervals agreed upon between us and the client/Agent, provided such intervals will not exceed periods of one month.

20.2 The Appointed Principal Contractor shall ensure that all persons under our control on the construction site adhere to the above specifications, as non-conformance will lead to the client taking action as directed by Construction Regulation 4.1(e).

20.3 The Appointed Principal Contractor note that we shall be held liable for any anomalies including costs and resulting deficiencies due to delays caused by non-conformance and/or non-compliance to the above Health and Safety Specifications and the Health and Safety Specification based on these specifications.

ANNEXURE A - ITEMS TO CONSIDER ON PRICING

No.	Item
1.	Development of the Principal Contractor's site Specific Health and Safety Plan as stipulated by the Project SHE specification
2.	Development of the activity/task risk assessment based on the baseline risk assessment
3.	Initial (Baseline) medical examinations.
4.	Periodic and exit examinations
5.	Health and Safety File development
6.	Principal Contractor's initial day to day obligations in respect to the occupational Health and Safety Act and Construction Regulations, Maintenance of OHS management system.
7.	Construction Health and Safety Manager (SACPCMP registered)
8.	Full-time Construction Health and Safety officer (SACPCMP Registered)
9.	General induction
10.	Health awareness training, e.g. HIV, COVID-19, etc
11.	Health and Safety Representatives training
12.	Fire-fighting training
13.	First Aider training
14.	Provision of scaffolding
15.	Provision of temporary structures
16.	Scaffold erectors
17.	Scaffold supers and inspectors
18.	First aid kit and refills
19.	Fire-fighting equipment
20.	Fire-fighting maintenance
21.	Hazardous chemical substance caging

Provision of Personal Protective Equipment (PPE)

22.	High visibility 2-piece work suit
23.	Hard hats
24.	Protective steel toed foot wear (construction safety boots)
25.	Standard hand gloves
26.	Ear plugs
27.	Reflective Vests
28.	Safety goggles
29.	Gumboots (water boots)
30.	Dust masks
31.	Safety harness
32.	Fall protective equipment

Environmental Monitoring

33.	Spill kit
34.	Waste bins
35.	Hazardous waste disposal
36.	Biohazardous waste bins
37.	Disposal of biohazardous waste
38.	Noise monitoring
39.	Dust monitoring
40.	ECO

Safe-guarding of exposed areas

41.	Barricading of electrical/excavations or working areas
42.	Fall protection
43.	Lifeline

44.	Safe catch net
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Awareness Signage & Posters

45.	Posters & fliers
46.	Booklets
47.	Videos
48.	Emergency signs
49.	Site safety awareness signs
50.	Mandatory safety signs

ANNEXURE B - SAFETY FILE ARRANGEMENT

No.	Item
1.	Contractor's Appointment
2.	Health and Safety Plan
3.	Construction work permit
4.	Letter of Good Standing
5.	Company Policies (Health & Safety, Environmental, HIV, Substance and drug policies, PPE policies)
6.	Organogram
7.	Legal Appointments and Training Certificates
8.	List of Employees & ID's
9.	Company Insurances
10.	Induction Training
11.	Medicals
12.	Baseline Risk Assessment (Client)
13.	Company Risk Assessment
14.	Daily Task Risk Analysis
15.	Emergency Preparedness procedure and contact details
16.	First-Aid management
17.	Incident management procedure
18.	Incident reporting documents
19.	Environmental Management Plan
20.	Visitors Induction
21.	Safety Awareness Programs i.e (Toolbox Talks)
22.	Plant checklist and registers
23.	Safe Working Procedures/Method Statements
24.	MSDS

End