

EAST LONDON INDUSTRIAL DEVELOPMENT ZONE (SOC) LTD OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

For:

Project Start Date:

Project Completion Date:

In this Health and Safety Specification the “Act” or “OHS Act” shall mean the applicable Occupational Health and Safety Act, No. 85 of 1993. The “Regulations” shall mean the applicable regulations associated with the Act, including but not limited to: The applicable Construction Regulations, and the Driven Machinery Regulations. “Contractor” shall mean Contractor, as defined in section 1 of the Act, who performs construction work and includes a principal contractor (as per definitions in the Act). The “Client” means East London IDZ (SOC) Ltd and “Agent” means any person who acts as a representative for the Client. “SHE” shall mean Safety, Health and Environment.

The Contractor shall use this specification in conjunction with all other applicable safety specifications, legislation and regulations in force at the time of the main contract for the supply of goods and/or services to the Client. Where unique site specifications are in force, those site specifications shall take precedence over this specification. For added clarity, many sections of the Act and associated Regulations have been quoted or paraphrased.

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PART A - GENERAL OCCUPATIONAL HEALTH AND SAFETY

01. INTRODUCTION

In terms of the applicable Construction Regulation, East London IDZ (SOC) Ltd, as the Client, is required to compile a Health & Safety Specification for any intended construction project and provide such specification to any prospective tenderer.

The objective of this Health and Safety Specification is to ensure that Principal Contractors / Contractors entering into a Contract with EAST LONDON IDZ (SOC) LTD achieve an acceptable level of occupational health and safety performance. This document forms an integral part of the Contract and Principal and other Contractors should make it part of any Contracts that they may have with Contractors and/or Suppliers.

Compliance with this health and safety specification does not absolve the Principal Contractor / Contractor from complying with minimum legal requirements and the Principal Contractor / Contractor remains responsible for the health & safety of his employees and those of his Mandatories

The Contractor shall ensure that he is fully conversant with the requirements of this specification. This specification is not intended to supersede the applicable Act or the Construction Regulations. Those sections of the Act and the Construction Regulations, which apply to the scope of work to be performed by the Contractor in terms of this Contract, continue to be a legal requirement of the Contractor.

Every effort has been made to ensure that this Specification is accurate in all respects, however, should it contain any errors or omissions they may not be considered as grounds for claims under the contract for additional reimbursement or extension of time.

The Contractor shall, in submitting his tender, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the applicable Act and Construction Regulations.

02. SCOPE

This Health And Safety Specification shall be applicable to all projects commissioned by EAST LONDON IDZ (SOC) LTD involving "Construction Work" as defined in the Occupational Health And Safety Act 85 of 1993 (As Amended) and applicable regulations, regardless of the size and value of works.

The Principal Contractor / Contractor is required to comply with the provisions of the Health and Safety Specification in order to reduce to a level as low as is reasonably practicable, the risks associated with the contract work that may lead to incidents causing injury or ill-health

03. OCCUPATIONAL HEALTH AND SAFETY POLICY

EAST LONDON INDUSTRIAL DEVELOPMENT ZONE (SOC) LTD OCCUPATIONAL HEALTH AND SAFETY POLICY

The East London Industrial Development Zone (ELIDZ) (SOC) Ltd is a world class world class Operator of a prestigious industrial complex where highly competitive organizations thrive on streamlined business benefits and stimulate regional economic growth. ELIDZ aims to apply world-class occupational health and safety (OH&S) management practices within its Industrial Development Zone (IDZ), hence becoming the model for similar developments throughout Africa. The East London IDZ (ELIDZ) shall be developed and operated in a manner, which is economically and socially acceptable and sustainable. ELIDZ (SOC) Ltd recognizes that Occupational Health and Safety Management is an integral part of its overall business performance as any failure in this area will negatively impact on the Organization, its employees, tenants, contractors and the public.

The ELIDZ (SOC) Ltd is committed to establish and maintain an OH&S Management System to:

- Determine those occupational health and safety hazards related to the ELIDZ development and activities which may put the health and safety of ELIDZ (SOC) Ltd employees, contractors, tenants, visitors, and community at risk;
- Plan actions to mitigate negative occupational health and safety risks within the ELIDZ's jurisdiction;
- Monitor all ELIDZ tenant activities within ELIDZ's jurisdiction which can result in negative occupational health and safety risks;
- Provide a framework and the means for setting, monitoring and achieving objectives to improve OH&S performance;
- Ensure adherence to all OH&S legislation, government policy and other requirements relevant to the development and operation of the ELIDZ;
- Periodically monitor, audit and review progress.

In so doing, the ELIDZ (SOC) Ltd shall wherever reasonably practicable manage potentially detrimental effects on health and safety of all employees and communities affected by the ELIDZ development.

As a responsible corporate citizen the ELIDZ (SOC) Ltd shall work with companies operating within the ELIDZ and with all tiers of government to ensure appropriate management of OH&S risks within its scope of authority.

The ELIDZ (SOC) Ltd shall pursue continual improvement through the use of:

- Cost effective OH&S performance criteria; and
- Reduction of the risk of ill health, accidents and incidents.

This policy will be communicated to all employees and contractors working for or on behalf of the ELIDZ.

Top Management take full responsibility for the OH&S performance of the ELIDZ (SOC) Ltd and hereby assert that adherence to this OH&S Policy is mandatory to all ELIDZ employees and contractors. Top Management hereby further pledge, on behalf of the ELIDZ (SOC) Ltd to integrate OH&S considerations into our decision-making processes.

This policy will be reviewed periodically as need arise to ensure it remains relevant and appropriate to the ELIDZ and will be distributed to the public on request.

LEGAL REQUIREMENTS

All Principal Contractors / Contractors entering into a contract with EAST LONDON IDZ (SOC) LTD shall, as a minimum requirement, comply with the following:

- The Occupational Health & Safety Act and Regulations (Act 85 of 1993), hereinafter referred to as “the Act”.
- The applicable promulgated Construction Regulations .These regulations are hereinafter referred to as “the Construction Regulations”.
- The Contractor shall provide and demonstrate to the Client a suitable and sufficiently documented health and safety plan 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.
- The South African Building Regulations
- The Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993).
- All applicable environmental legislation and standards such as the National Environmental Management Act and Regulations, Environmental Conservation Act, Environmental Impact Assessment regulations, etc.
- The wiring code of South Africa in terms of SANS 10142 (Temporary Installation)
- The installation code of electrical apparatus in hazardous locations, in terms of SANS 10108
- The by-laws of the local Municipality e.g. storage of flammable material, waste disposal, etc.
- The National Road Traffic Act,1996.
- The Employment Equity Act No.55 of 1998

04. GENERAL DUTIES OF THE CONTRACTOR TO THEIR EMPLOYEES

(Section 8 of the Act)

All Principal Contractors / Contractors shall ensure that the requirements governing the general duties of employers to their employees as defined here below are carried out in terms of the Act.

- Every Contractor shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his employees and the environment.
- Without derogating from the generality of an employer’s duties, the matters to which those duties refer include in particular—
 - The provision and maintenance of systems of work, plant and machinery that, as far as is reasonably practicable, are safe and without risks to the health of workers and the environment;

- Taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the safety or health of employees, before resorting to personal protective equipment;
- Taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the environment;
- Making arrangements for ensuring, as far as is reasonably practicable, the safety and absence of risks to health or the environment in connection with the production, processing, use, handling, storage or transport of articles or substances;
- Establishing, as far as is reasonably practicable, what hazards to the health or safety of persons are attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant or machinery which is used in his business, and he shall, as far as is reasonably practicable, further establish what precautionary measures should be taken with respect to such work, article, substance, plant or machinery in order to protect the health and safety of persons, and he shall provide the necessary means to apply such precautionary measures;
- Providing such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at work of his employees and the protection of the environment;
- As far as is reasonably practicable, not permitting any employee to do any work or to produce, process, use, handle, store or transport any article or substance or to operate any plant or machinery, unless the precautionary measures contemplated in the paragraphs above, or any other precautionary measures which may be prescribed, have been taken;
- A contractor shall ensure where applicable that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3(Refer to Regulation)

All Principal Contractors / Contractors employee shall on the premises of EAST LONDON IDZ (SOC) LTD—

- Take all necessary measures to ensure that the requirements of the Act are complied with by every person in his employment or on premises under his control where plant or machinery is used;
- Enforce such measures as may be necessary in the interest of health and safety and the protection of environment;
- Ensure that work is performed and that plant or machinery is used under the general supervision of a person trained to understand the hazards associated with it and who have the authority to ensure that precautionary measures taken by the employer are implemented; and
- Cause all employees to be informed regarding the scope of their authority as contemplated in section 37 (1) (b) of the Act.

05. DUTIES OF PRINCIPAL CONTRACTOR AND CONTRACTOR

(1) A principal contractor must—

- (a) provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications contemplated in regulation 5(1)(b), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- (b) open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the client, the client's agent or a contractor; and
- © on appointing any other contractor, in order to ensure compliance with the provisions of the Act—
 - (i) provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications contemplated in regulation 5(1)(b) pertaining to the construction work which has to be performed;
 - (ii) ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
 - (iii) ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
 - (iv) ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
 - (v) appoint each contractor in writing for the part of the project on the construction site;
 - (vi) take reasonable steps to ensure that each contractor's health and safety plan contemplated in subregulation (2)(a) is implemented and maintained on the construction site;
 - (vii) ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days
 - (viii) stop any contractor from executing construction work which is not in accordance with the client's health and safety

specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;

- (ix) where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely; and

(x) discuss and negotiate with the contractor the contents of the health and safety plan contemplated in subregulation (2)(a), and must thereafter finally approve that plan for implementation

- (c) ensure that a copy of his or her health and safety plan contemplated in paragraph(a) as as the contractor health and safety plan contemplated in subregulation(2)(a) is available on request to an employee an inspector, a contractor, the or the clients agent.
 - (d) Hand over the consolidated health and safety file to the client upon completion of the construction work and must, in addition to the documentation referred to in subregulation (2)(b), include a record of all drawings, designs, materials used and other similar information concerning the completed structure.
 - (e) In addition to the documentation required in the health and safety file in terms of paragraph ©(v) and subregulations (2)(b), include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreement between the parties and the type of work being done and
 - (f) Ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.
- (2) A contractor must prior to performing any construction work—
- a) provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification contemplated in regulation 5(1)(b) and provided by the principal contractor in terms of subregulation (1)(a), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
 - b) open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these

- Regulations, and which must be made available on request to an inspector, the client, the client's agent or the principal contractor;
- c) before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
 - d) co---operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act; and
 - e) as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

(3) Where a contractor appoints another contractor to perform construction work, the duties determined in subregulation (1)(b) to (g) that apply to the principal

06 GENERAL DUTIES OF THE CONTRACTOR'S EMPLOYEES ONSITE

(Section 14 of the Act)

All Principal Contractors / Contractors shall ensure that the requirements governing the General duties of employees at work as defined here below are carried out in terms of the Act.

Every Principal Contractor's / Contractor's employee shall on the premises of EAST LONDON IDZ (SOC) LTD—

- Take reasonable care for the environment and for the health and safety of himself and of other persons who may be affected by his acts or omissions;
- As regards any duty or requirement imposed on his employer or any other person by this Act, co-operate with such employer or person to enable that duty or requirement to be performed or complied with;
- Carry out any lawful order given to him, and obey the SHE rules and procedures laid down by his employer or by anyone authorized thereto by his employer, in the interest of health, safety or the protection of the environment;
- If any situation which is unsafe, unhealthy or detrimental to the environment comes to his attention, as soon as practicable report such situation to his employer or to the SHE representative for his workplace or section thereof, as the case may be, who shall report it to the employer; and
- If he is involved in any incident which may affect his health or which has caused an injury to himself, report such incident to his employer or to anyone authorized thereto by the employer, or to his SHE representative, as soon as practicable but not later than the end of the particular shift during which the incident occurred, unless the circumstances were such that the reporting of the incident was not possible, in which case he shall report the incident as soon as practicable thereafter.

7 DUTY TO INFORM

Without derogating from any specific duty imposed on the Contractor by this Act, every Principal Contractor / Contractor shall—

- As far as is reasonably practicable, cause every employee to be made conversant with the SHE hazards attached to any work which he has to perform, any article or substance which he has to produce, process, use, handle, store or transport and any plant or machinery which he is required or permitted to use, as well as with the precautionary measures which should be taken and observed with respect to those hazards;
- Inform the SHE representatives concerned beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector, and of any application for exemption made by him in terms of section 40 of the Act; and
- Inform a SHE representative as soon as reasonably practicable of the occurrence of an incident in the workplace or section of the workplace for which such representative has been designated.

Duty not to interfere with, damage or misuse things —

The Principal Contractor / Contractor shall ensure that no person under his/her control shall intentionally or recklessly interfere with, damage or misuse anything, which is provided in the interest of SHE protection.

8 STRUCTURE AND RESPONSIBILITIES

Overall Supervision and Responsibility for Occupational Health and Safety

The Chief Executive Officer of the Principal Contractor / Contractor, in terms of Section 16(1) of the Act shall ensure that the duties of his employer as contemplated in the Act, are properly discharged.

Every Principal Contractor / Contractor when entering in a contract with EAST LONDON IDZ (SOC) LTD and when appointing Contractors (Sub-contractors) in terms of the applicable Construction Regulations, shall do so in terms of section 37(2) of the Act.

The Contractor shall accept the appointment under the terms and Conditions of Contract. The Contractor 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 the applicable Construction Regulations. Proof of this must be submitted to EAST LONDON IDZ (SOC) LTD.

Any acceptance, approval, check, certificate, consent, examination, inspection, instruction, notice, observation, proposal, request, test or similar act by either the Employer, any of his Agents or the Representative/Agent including lack of

disapproval shall not relieve the Contractor from any responsibility he has under the Act and the applicable Construction Regulations, including responsibility for errors, omissions, discrepancies and non-compliance.

The Client or his Representative/Agent will stop the Contractor from executing construction work should the Contractor at any stage in the execution of the Works

- fail to implement or maintain his SHE plan;
- execute construction work which is not in accordance with his SHE plan;
or
- act in any way which may pose a threat to the health and safety of persons and/or the environment.

Any loss of time to the contract resulting from this type of stoppage will be for the account of the Contractor.

Every Principal Contractor / Sub Contractor shall appoint designated competent employees and/or other competent persons as required by the Act and associated Regulations.

Below is a list of identified possible (not limited to these) appointments / designations required depending on the size and nature of the project where applicable.

Designations / Appointments (see applicable Regulations of the Act)

Asbestos Stripping/Demolishing Supervisor (Asbestos Regulations)
 Construction Vehicles/Mobile Plant/Machinery Supervisor and Inspector (Construction Regulation)
 Demolition Supervisor (Construction Regulation)
 Drivers/Operators of Construction Vehicles/Plant (Construction Regulation)
 Electrical Installation and Appliances Inspector (Construction Regulation)
 Emergency/Security/Fire Coordinator (Construction Regulation)
 Excavation Supervisor and Inspector (Construction Regulation)
 Explosive Powered Tool Supervisor (Construction Regulation)
 Fall Protection Designer/Supervisor and Developer (Construction Regulation)
 First Aider (General Safety Regulation)
 Fire Equipment Inspector (Construction Regulation)
 Temporary Works Supervisor (Construction Regulation)
 Hazardous Chemical Substances Supervisor (HCS Regulations)
 Incident Investigator (General Admin Regulation)
 Ladder Inspector (General Safety Regulations)
 Lifting Equipment Inspector and Operator (Construction Regulation)
 Materials Hoist Inspector (Construction Regulation)
 SHE Committee (OHS Act)
 SHE Officer (Construction Regulation)
 SHE Representatives (OHS Act)
 Person Responsible for Machinery (General Mach. Regulation)
 Scaffolding Supervisor, Erector and Inspector (Construction Regulation)
 Stacking & Storage Supervisor (Construction Regulation)
 Structures Supervisor, Inspector (Construction Regulation)

Suspended Platform Supervisor, Erector, Inspector and Operator (Construction Regulation)
Vessels under Pressure Supervisor (Pressure Equipment Regulations)
Welding Supervisor (General Safety Regulation)
Construction Manager & Supervisor (Construction Regulation)
Temporary Works Designer, Erector, Inspector, Supervisor (Construction Regulation)
Rope Access Work Operator and Supervisor (Construction Regulation)
Bulk Mixing Plant Operator and Supervisor (Construction Regulation)
The appointments shall be in writing on the Principal Contractor's / Contractor's letter head and the responsibilities clearly stated together with the period for which the appointment / designation is valid. This information shall be communicated and agreed with the appointees.
Agent – Client (Construction Regulation)
Assistant Construction Manager and Supervisor (Construction Regulations)
CEO (OHS Act)
Assistant CEO (OHS Act)
Sub-contractor (Construction Regulations)
Crane Supervisor (Construction Regulations)
Competent Person Machinery (GMR)
Explosive actuated fastening device Operator, Inspector and Controller (Construction Regulation)
Hand Tool Inspector
Lifting Tackle Inspector (DMR)
Good Hoist Inspector (DMR)
Principal Contractor (Construction Regulation)
Risk Assessor (Construction Regulation)
Scaffold Team Leader (Construction Regulation)
Copies of appointments shall be submitted to EAST LONDON IDZ (SOC) LTD / Agent together with concise CV's of the appointees. EAST LONDON IDZ (SOC) LTD reserves the right to approve / disapprove an appointee and any changes in appointed / designated personnel shall be brought to the attention of EAST LONDON IDZ (SOC) LTD before the appointee assumes responsibility.

The Principal Contractor / Contractor shall, provide EAST LONDON IDZ (SOC) LTD with an organogram of all appointed / designated personnel and contractors and keep an up to date copy on site at all times.

In terms of the applicable Construction Regulation, or when instructed by EAST LONDON IDZ (SOC) LTD or an Inspector of the Department of Labour, the Principal Contractor / Contractor shall appoint a full-time or part-time competent Occupational Health And Safety Construction Officer (SHE Officer). This appointment shall be subject to approval by EAST LONDON IDZ (SOC) LTD.

9 DESIGNATION OF OH&S REPRESENTATIVES

(Applicable Act)

Where the Principal Contractor / Contractor employs more than 20 persons (including the employees of others), he shall ensure that SHE Representatives are appointed in terms of the General Administrative Regulations and section 17 of the Act.

SHE Representatives shall be designated in writing and the designation must include the area of responsibility of the person and term of the designation.

The Contractor's safety representative shall make available to EAST LONDON IDZ (SOC) LTD a telephone number at which the representative can be contacted at any time in the event of an emergency involving any of the Contractor's employees, or other persons at the Works.

10 DUTIES AND FUNCTIONS OF THE SHE REPRESENTATIVES

(Section 19 of the Act)

The Principal Contractor / Contractor shall ensure that the designated SHE representatives conduct inspections where required, using a checklist, of their respective areas of responsibility and report thereon to the Principal Contractor. The duties and responsibilities of the SHE representative are defined in section 19 of the Act

11 APPOINTMENT OF SHE COMMITTEE

(Section 20 of the Act)

The Principal Contractor / Contractor shall establish a SHE Committee where necessary consisting of all the designated SHE representatives and other co-opted persons.

Members of this committee shall be appointed in writing and shall meet at least monthly and the meeting Agenda shall contain the following but not limited to:

- Opening & Welcome;
- Present/Apologies/Absent;
- Minutes of previous Meeting;
- Matters Arising from the previous Minutes;
- SHE Representatives Reports;
- Incident Reports & Investigations;
- Incident /Injury Statistics;
- Other Matters;
- Endorsement of Registers and other statutory documents by a representative of the Principal Contractor;
- Close/Next Meeting.

2 HAZARD IDENTIFICATION AND RISK ASSESSMENT

(Applicable Construction Regulation)

Development of Risk Assessments

Every Principal Contractor / Contractor performing Construction Work shall, before the commencement of any Construction Work or work associated with the aforesaid Construction Work and during such work, cause a Risk Assessment to be performed by a competent person, appointed in writing, and the Risk Assessment shall form part of the SHE Plan and be implemented and maintained as contemplated in applicable Construction Regulation.

A copy of the risk assessment shall be available on site at all times for inspection.

The Risk Assessment Shall Include, At Least:

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

Based on the Risk Assessments, the Principal Contractor / Contractor shall develop a set of site-specific Safe Work Procedures (SWP's)/ that will be applied to regulate the SHE aspects of the construction.

The Risk Assessments, together with the site-specific SWP's shall be submitted together with the SHE Plan to EAST LONDON IDZ (SOC) LTD before site hand over.

The Contractor shall at all times carry out the Works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property or the environment.

The Contractor shall take all precautions, which are necessary and adequate to eliminate any conditions which contribute to the risk of injury to persons or damage to property or the environment.

Review of Risk Assessments

The Principal Contractor / Contractor shall review the Hazard Identification, Risk Assessments and SWP's as the construction work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

The Principal Contractor / Contractor shall provide the EAST LONDON IDZ (SOC) LTD and other Contractors with copies of any changes, alterations or amendments of the above-mentioned review.

A client must—

- a) prepare a baseline risk assessment for an intended construction work project;
 - b) prepare a suitable, sufficiently documented and coherent site specific health and safety specification for the intended construction work based on the baseline risk assessment contemplated in paragraph (a);
 - c) provide the designer with the health and safety specification contemplated in paragraph (b);
- ensure that the designer takes the prepared health and safety specification into consideration during the design stage;
- ensure that the designer carries out all responsibilities contemplated in regulation 6;

3 THE SHE FILE

As required by the applicable Construction Regulation the Principal Contractor / Contractors shall keep and maintain a Site Health And Safety File on the premises to be made available to the Employer or Inspector upon request, containing the following documents but not limited to::

- Notification of Construction Work;
- Copy of Act and applicable Regulations;
- Proof of Registration and letter of good standing with a compensation fund;
- Occupational Health & Safety Plan agreed with the Client including the underpinning Risk Assessment/s & (Copies of SHE Committee and other relevant Minutes;
- Copy of SHE policies, HIV/AIDS policy
- Accident and incident register and investigation forms
- Appointment forms
- Completed inspection checklists, audits
- Training and competency records
- Designs / drawings;
- Risk/Hazard assessment plan.
- A list of Contractors (Sub-Contractors) including copies of the agreements between the parties and the type of work being done by each Contractor
- Copies of 37(2) appointments in terms of Act
- Monthly Statistical monitoring of OHS incidents as per ELIDZ requirements
- Section 37.2 agreements
- Monthly contractor reports of close outs to OHS Non-conformities reported by SHE agents.

Upon completion of the Works, the Contractor shall hand over the consolidated health and safety file to the Employer.

4 LEGAL INSPECTION REGISTERS:

The Principal Contractor / Contractor shall conduct all prescribed inspections.. All registers shall be kept on file and EAST LONDON IDZ (SOC) LTD reserves the right to inspect all legal compliance registers.

- Accident/Incident Register (Annexure 1 of the General Administrative Regulations);
- OH&S Representatives Inspection Register;
- Asbestos Demolition & Stripping Register;
- Batch Plant Inspections;
- Construction Vehicles & Mobile Plant Inspections by Controller;
- Daily Inspection of Vehicles. Plant and other Equipment by the operator/Driver/User;
- Demolition Inspection Register;
- Designer's Inspection of Structures Record;
- Electrical Installations, -Equipment & -Appliances (including Portable Electrical Tools);
- Excavations Inspection;
- Explosive Powered Tool Inspection/Maintenance/Issue>Returns Register (incl. cartridges & nails);
- Fall Protection Inspection Register;
- First Aid Box Contents;
- Fire Equipment Inspection & Maintenance;
- Formwork & Support work Inspections;
- Hazardous Chemical Substances Record;
- Ladder Inspections;
- Lifting Equipment Register;
- Materials Hoist Inspection Register;
- Machinery Safety Inspection Register (incl. machine guards, lock-outs etc.);
- Scaffolding Inspections;
- Stacking & Storage Inspection;
- Inspection of Structures;
- Inspection of Suspended Platforms;
- Inspection of Tunnelling Operations;
- Inspection of Vessels under Pressure;
- Welding Equipment Inspections;
- Oxy-Acetylene equipment inspections;
- Inspection of Work conducted on or Near Water;
- All other applicable records;

5 SHE GOALS, OBJECTIVES & ARRANGEMENTS FOR MONITORING & REVIEW OF SHE PERFORMANCE

The Principal Contractor shall maintain incident/ injury statistics and report on this to EAST LONDON IDZ (SOC) LTD on a monthly basis.

Disabling Injury: is defined as any incident which arises directly out and in the course of duty, resulting in any occupational illness, injury or disease: giving rise to any related temporary or permanent disablement as determined by a medical practitioner. Furthermore, incidents shall be classified as **disabling** where one or more of the following criteria are applicable:

- ◆ The affected person is unable to continue with all of the task for which they were appointed responsible for, and which constitutes their normal work duties;
- ◆ The loss of one or more days or shifts following the shift during which the incident occurred, inclusive of weekends and scheduled off-duty days;
- ◆ All fractures and amputations, irrespective whether any days were lost (with exception of a hairline fracture which is certified by an attending physician as needing no further medical treatment, and provided no supportive materials are applied);
- ◆ Unconsciousness, irrespective of duration, resulting from workplace exposure or incident;
- ◆ Occupational illness which necessitates medical treatment resulting in restricted duties; and
- ◆ Any bone damage except close damage to the tuft of the terminal phalanx (e.g. closed fracture, amputation of the tip of a finger)

The Contractor shall report monthly incident/injury statistics in the following manner;

$$a) \text{ Disabling Injury Frequency Rate (DIFR)} = \frac{\text{Number of Disabling injury cases} \times 200\,000}{\text{Number of man-hours worked;}}$$

$$b) \text{ First Aid Treatment Frequency Rate (FTFR)} = \frac{\text{Number of First aid treatments} \times 200\,000}{\text{Number of Man-hours}}$$

$$d) \text{ Fatality Frequency Rate (FFR)} = \frac{\text{Number of fatalities} \times 200\,000}{\text{Number of Man-hours}}$$

Number of Man-hours worked

Each contractor must maintain and provide a monthly summary register of incidents in the following tabulated format

Contractor Name	Month
FATAL	
LTI	
MT	
FA	
Man hours worked for the month	

FATAL = Fatal injury
 LTI = Lost time injury
 Mt = Medical Treatment
 FA = First aid

These statistics are to be completed month on month representative of a calendar month. These statistics are to be submitted within the first week of the new month to the ELIDZ SHE Manager or representative

Non-conformities and corrective actions

Non-conformities are raised by appointed SHE agents representing the ELIDZ. These are typically reported on a daily or weekly basis for action by the contractors. Contractors are to summaries these non-conformities onto the following tabulation and submit comments re' close out of these at the end of each calendar month to the SHEM of the ELIDZ:

PROJECT	DATE	SIGNIFICANT OPEN NON-CONFORMANCES/ INCIDENTS	CORRECTIVE/PREVENTIVE ACTION/ COMMENTS	STATUS Complete open
OHS agent inspections/ audits				
Environmental non-conformances - construction				

Employer's Incentive Programme

The Employer, through the Engineer may, develop and implement an incentive system from time to time to award, or acknowledge Contractor's health and safety performance.

PENALTIES

The Contractor shall be penalised R1000.00 for commencing works on site without requisite approved method statements and safe working procedures.

The Contractor shall be penalised R200.00 for each day on which work continues without requisite approved method statements.

Penalties arising out of lack of method statements shall be deductible from monthly payment certificates.

The tabulation below

Minor: Penalty: R50/count	Medium: Penalty: R200/count or non-conformance	Severe Penalty: R5000/count, non-conformance and/or activity stoppage
Non-use of PPE supplied	Toilets not supplied or regularly serviced; lack of drinking water	Contractors working without Health and Safety Plan approval
Non completion of registers for plant and equipment on site	Contractors not audited	Workers transported in contravention of the OHS plan or legal requirements
Lack of H&S signage at work areas	Working without training or the appropriate H&S method statements	Invalid Letters of Good Standing
Tools and equipment identified in poor condition during inspections	Legal non-conformances identified during the previous audit and not addressed within the agreed time frame	Failure to adhere to requirements of fall protection and fall arrest controls
Minor at risk actions and or conditions of a continuous nature.	No monthly OHS report at site meeting to report on	Scaffolding and or formwork not inspected, signed off and grossly non-compliant to the SANS codes and legal requirements
	No certificates of fitness for workers as required	Deep excavations not inspected, signed off and grossly non-compliant to legal requirements
	General non-compliance to developed procedures, forms, appointments and other requirements of the contractors OHS plan	Continued or repeated gross at risk actions and or conditions.

16 NOTIFICATION OF CONSTRUCTION WORK

(Construction Regulation: Applicable)

The Principal Contractor shall, where the Contract meets the requirements laid down in the Construction Regulation, within 5 working days of appointment, notify the Department of Labour of the intention to carry out construction work and use the applicable form (from applicable Construction Regulations) for the purpose. A copy shall be kept on file.

Address of the Provincial Director

EASTERN CAPE, EAST LONDON
The Executive Manager
Private Bag X9005, East London, 5200
Tel: (043) 701 3287/3259
Fax: (043) 701 3066

17 TRAINING, AWARENESS, PROMOTION AND COMPETENCE

The Principal Contractor/Contractor shall include training certificates of appointed/designated personnel in the Health and Safety Plan.

Site Specific SHE Induction Training

The Principal Contractor / Contractor shall develop project specific SHE Induction Training based on the Risk Assessments and ensure that all employees receive induction training. No employees shall be allowed on site unless in possession of valid proof of induction training and identification at all times. The Principal Contractor / Contractor shall present him/herself for EAST LONDON IDZ (SOC) LTD site specific induction training at the SHEQ department office prior to commencement of work.

Other Training

All operators, drivers and users of construction vehicles, mobile plant and other equipment shall be in possession of valid proof of training.

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

Failure to adhere to the above mentioned will result in the operator's eviction from site and no delay claims will be entertained by the client.

OH&S Training Requirements: (as required by the applicable Construction Regulations and as indicated by the OH&S Specification & the Risk Assessment/s):

- General Induction (Section 8 of the Act)
- Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
- Site/Project Manager
- Construction Supervisor
- SHE Representatives (Section 18 (3) of the Act)
- Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation)
- Basic Fire Prevention & Protection (Applicable Environmental Regulations and Construction regulation)
- Basic First Aid (General Safety Regulations)
- Storekeeping Methods & Safe Stacking (Construction Regulation)
- Emergency, Security and Fire Co-coordinator

Awareness & Promotion

The Principal Contractor / Contractor shall develop and implement a SHE promotion and awareness scheme for all employees and others affected by work activities. The following are some of the methods that may be used:

- Toolbox Talks
- SHE Posters
- Videos
- Competitions
- Suggestion schemes
- Participative activities such as SHE circles.

Competence

The Principal Contractor / Contractor shall ensure that his and other Contractors personnel appointed are competent and that all training required to do the work safely and without risk to health, has been completed before work commences. The Principal Contractor / Contractor shall ensure that follow-up and refresher training is conducted as construction work progresses and the work situation changes.

Records of all training shall be kept in the OH&S file for auditing purposes.

18 CONSULTATION, COMMUNICATION AND LIAISON

All SHE liaison between the Client, the Principal Contractor, other Contractors, the Designer, the Principal Agent and other concerned parties shall be through the SHE committee.

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

Consultation with the workforce on SHE matters shall be through their Supervisors, SHE Representatives, the SHE committee and their elected Trade Union Representatives, if any.

The Principal Contractor / Contractor shall be responsible for the dissemination of all relevant SHE information to other Contractors e.g. design changes agreed with the Client 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.

19 AUDITING, REPORTING AND CORRECTIVE ACTIONS

Monthly Audit by EAST LONDON IDZ (SOC) LTD / Agent (*Applicable Construction Regulation*)

Occupational Health and Safety Audits will be conducting monthly to ensure that the principal Contractor has implemented and is maintaining the agreed and approved SHE Plan.

Other Audits and Inspections by EAST LONDON IDZ (SOC) LTD / Agent

EAST LONDON IDZ (SOC) LTD reserves the right to conduct other ad hoc audits and inspections as deemed necessary.

Conducting an Audit

A representative of the Principal Contractor / Contractor shall accompany EAST LONDON IDZ (SOC) LTD / Agent on all Audits and Inspections and may conduct his / her own audit / inspection at the same time.

Contractor's Audits and Inspections

The Principal Contractor / Contractor shall conduct monthly internal audits to verify compliance with his own occupational health and safety management systems and procedures.

Inspections by SHE Representative's and Other Appointees

Occupational Health and Safety Representatives shall conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as specified in their appointments e.g. vehicle, plant and machinery drivers, operators and users must conduct daily inspections before start-up.

Recording and Review of Inspection Results

All the results of the abovementioned inspections are to be reported in writing, reviewed by the Occupational Health and Safety Committee, endorsed by the chairman of the meeting and kept on file.

19.
20 INCIDENT REPORTING

Reporting Of Accidents And Incidents (Section 24 and General Administrative Regulation 8 of the Act)

Subject to the provisions of this section of the Act, the Contractor shall within seven days after having received notice of an accident or having learned in some other way that an employee has met with an accident, report the accident to the commissioner in the prescribed manner

The Principal Contractor / Contractor shall provide EAST LONDON IDZ (SOC) LTD with copies of all internal and external accident / incident investigation reports including the reports contemplated above and below within 7 days of the incident occurring.

21 ACCIDENT AND INCIDENT INVESTIGATION

(General Administrative Regulation 9 of the Act)

The Principal Contractor / Contractor shall investigate all accidents / incidents where employees and non-employees were injured to the extent that he / she / they had to be referred for medical treatment by a doctor, hospital or clinic and results recorded on file.

The Principal Contractor / Contractor shall investigate all minor and 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 accidents in future.

The Principal Contractor / Contractor shall investigate all road traffic accidents and keep a record of the results of such investigations including the steps taken to prevent similar accidents in future.

EAST LONDON IDZ (SOC) LTD reserves the right to hold its own investigation into any incident or call for an independent external investigation.

22. EMERGENCY PREPAREDNESS, CONTINGENCY PLANNING AND RESPONSE

The Principal Contractor / Contractor shall appoint a competent person to act as Emergency Controller/Coordinator.

The Principal Contractor / Contractor shall conduct an emergency identification exercise and establish what emergencies could possibly develop. He/she shall then develop detailed contingency plans and emergency procedures, taking into account any emergency plan that EAST LONDON IDZ (SOC) LTD may have in place.

The Contractor shall establish in the interest of his employees and any other person who may be affected by his/her acts or omissions an on-site emergency plan, which must be adhered to during the construction work.

The plan shall include: -

- Emergency response for seriously injured people under his/ her control requiring the assistance of an **ambulance service**.
- An emergency plan containing a procedure for the reporting and the cleaning up of any hazardous substance spillage.
- A firefighting emergency plan.
- Discuss the emergency plan with his/her employees, and subcontractors.
- Reviewing of the on-site emergency plan and, where necessary, update the plan.
- Signing of a copy of the on-site emergency plan in the presence of two witnesses, who shall attest the signature;
- Ensure that the on-site emergency plan is readily available at all times for implementation and use;
- Ensure that all his/her mandatories are conversant with the on-site emergency plan; and
- Cause the on-site emergency plan to be tested in practice at least twice a year during the construction contract and keep a record of such test.

23 FIRST AID

(General Safety Regulation 3 of the Act)

The Principal Contractor / Contractor shall provide First Aid equipment (**including a stretcher**) and have qualified First Aider/s as required by General Safety Regulation 3 of the Act.

The first aid box shall be checked by a responsible person, who shall be appointed by the Contractor, and a record shall be kept of the contents. Any deficient medical supplies shall be promptly replenished by the Contractor.

The Contractor shall provide a safety notice board where safety notices, site regulations concerning safe working practices and information on the nearest first aid station, ambulance, doctor and telephone numbers of the safety officer and other relevant persons can be conspicuously displayed to all its staff.

The Contingency Plan of the Principal Contractor / Contractor shall include the arrangements for speedily and timeously transporting injured / ill person/s to a medical facility or of getting emergency medical aid to person/s that may require it.

The Principal Contractor / Contractor shall have firm arrangements with his other contractors in place regarding the responsibility of the other Contractor's injured / ill employees.

24 SECURITY

The Principal Contractor / Contractor shall comply with EAST LONDON IDZ (SOC) LTD site access rules.

The Contractor's employees are not allowed to enter any of the EAST LONDON IDZ (SOC) LTD tenant facilities except the areas demarcated as construction areas, as defined in the scope of work within the contract. Failure to comply with this instruction will result in the Contractor's employees being escorted from EAST LONDON IDZ (SOC) LTD premises.

25 FIRE PREVENTION AND PROTECTION

Subject to the provisions of the Environmental Regulations for Workplaces promulgated by Government Notice No. R.2281 of 16 October 1987, as amended. The Principal Contractor / Contractor shall at all times ensure that:

- All appropriate measures are taken to avoid the risk of fire;
- Sufficient and suitable storage is provided for flammable liquids, solids and gases;
- Smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- In confined spaces and other places in which flammable gases, vapours or dust can cause danger—
 - Only suitably protected electrical installations and equipment, including portable lights, are used;
 - There are no flames or similar means of ignition;
 - There are conspicuous notices prohibiting smoking;
 - Oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and
 - Adequate ventilation is provided;
- Combustible materials do not accumulate on the construction site;
- Welding, flame cutting and other hot work are done only after the appropriate precautions as required have been taken to reduce the risk of fire;

- Suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- The fire equipment is inspected by a competent person, who has been appointed in writing, in the manner indicated by the manufacturer thereof;
- A sufficient number of workers are trained in the use of fire- extinguishing equipment;
- Where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- The means of escape is kept clear at all times;
- There is an effective evacuation plan providing for all:
 - Persons to be evacuated speedily without panic;
 - Persons to be accounted for; and
 - Plant and processes to be shut down; and
 - A siren is installed and sounded in the event of a fire.

6 CONSTRUCTION WELFARE FACILITIES AND LIVING ACCOMODATION

The Contractor shall ensure that the requirements governing Construction welfare facilities as indicated here below are carried out in terms of the applicable Construction Regulations.

The contractor shall, depending on the number of workers and the duration of the work, provide at or within reasonable access of every construction site, the following clean and maintained facilities:

- At least one shower facility for every 15 workers;
- At least one sanitary facility for every 30 workers;
- Changing facilities for each sex; and
- Sheltered eating areas.

The Contractor shall submit to the engineer for approval plans for the layout of temporary construction buildings, facilities, fencing, access routes and anchoring systems, 10 days before installation of such temporary structures.

Fencing

The contractor shall provide temporary fencing around the site camp and for all works carried out in areas of active utilization by members of the public. The Contractor shall note that the Site perimeter is currently being walled and fenced under a separate contract, which will run concurrently with this Contract. Therefore the Contractor should not include the cost of perimeter fencing in the tender, but should include any other temporary fencing around his installations.

Signage

Signs warning of presence of construction hazards and requiring unauthorized persons to keep out of the construction area shall be posted on the fencing.

Living Accommodation

No employee accommodation will be allowed on site.

7 PERSONAL & OTHER PROTECTIVE EQUIPMENT

(Sections 8, 15 & 23 of the Act)

The Principal Contractor / Contractor shall identify the hazards in the workplace and deal with them. Personal Protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered.

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

It is a further requirement that the Contractor maintain the said equipment, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment

was prescribed but an alternative solution has to be found that may include relocating or discharging the employee.

The Contractor may not charge any fee to an employee for protective equipment prescribed by him/her but may charge for equipment under the following conditions:

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

All employees shall, as a minimum, be required to wear the following PPE on site:

- Hard hats - All employees of the Contractor shall wear hard hats in areas where appropriate hazard notices are displayed. The Representative/Agent shall have the right to ban certain colours if they are similar to the Client's identifying colours. Hard hats shall not be painted or otherwise defaced.
- Eye protection - Suitable eye protection shall be worn in areas where appropriate hazard notices are displayed, or when grinding, chipping, breaking, drilling, arc-welding, cutting with oxyacetylene equipment of similar activities are taking place.
- Hearing protection - Suitable hearing protection shall be worn in areas where appropriate hazard notices are displayed.
- Foot wear - All employees of the Contractor shall wear undamaged, laced-up safety boots or safety shoes, suitable for the intended purpose, in prescribed areas where appropriate hazard notices are displayed.
- Gloves - All employees of the Contractor's shall wear suitable protective gloves in areas where appropriate hazard notices are displayed or when handling hot or hazardous materials or chemicals.
- Clothing - All employees of the Contractor shall wear suitable protective clothing when working in proximity of machinery, power tools, hazardous materials or chemicals.

8 PUBLIC HEALTH & SAFETY

(Section 9 of the Act)

The Contractor shall ensure that each person visiting a site, or the public, particularly the community residing in the surrounding area, shall be made aware of the dangers likely to arise from on-site activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times. Appropriate signage shall be posted to this effect and all employees on site shall be instructed on ensuring that non-employees are protected at all times. All non-employees entering the site shall receive induction into the hazards and risks and the control measures for these.

The Employer, Engineer and the Contractor have a duty in terms of the OHSA to do all that is reasonably practicable to prevent members of the public and others being affected by the construction processes and to be aware and put preventative measures in place.

Pest and Vermin Control

All Contractors enclosed workplaces, including residential accommodation for staff on site shall be maintained so far as reasonably practical, to prevent entrance and harborage of rodents and pests and other vermin. An effective extermination programme shall be instituted where the presence of such vermin is detected.

Epidemics

The Contractor shall ensure that all modifiable disease occurring on their site are reported to the relevant health authorities and proper precautions implemented to contain the disease, in accordance with the regulations promulgated under the National Health Act No. 61 of 2003.

Table 3

Medical condition	Medical condition	Medical condition	Medical condition	Medical condition
Acute flaccid paralysis	Food poisoning	Meningococcal infection	Tetanus	Typhus fever – rat lead born
Anthrax	Haemophilus Influenza type B	Paratyphoid fever	Trachoma	
Brucellosis	Lead Poisoning	Plague	Tuberculosis – Primary	Viral hepatitis type A
Cholera	Legionellosis	Poisoning agricultural stock remedies	Tuberculosis – Pulmonary	Viral hepatitis type B
Congenital syphilis	Leprosy	Poliomyelitis	Tuberculosis – other	Viral hepatitis non A non B
Crimean Congo Haemorrhagic Fever and other Haemorrhagic diseases of Africa	Malaria	Rabies – Human	Typhoid	Viral hepatitis unspecified
Diphtheria	Measles	Rheumatic fever	Typhus fever – Lice borne	Whooping cough
				Yellow Fever

29 . Night Work

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

30. HIV/AIDS MANAGEMENT

HIV/AIDS Policy

The Contractor shall submit to the Engineer a HIV/AIDS policy signed by the Chief executive of the Company.

The HIV/AIDS Policy shall address but not limited to the following:

- HIV prevention and precaution programme;
- Education and awareness programme;
- Statements on job access for applicants with HIV;
- Statement on job security of employees;
- Statement on HIV testing of employees and applicants;

- Confidentiality and or disclosure policy; and
- Statement on safety of co-workers.

HIV/AIDS Management Plan

The Contractor shall submit a HIV/AIDS management plan to the Engineer within 10 days of receiving a letter of appointment and before commencement of work.

PART B – SITE SPECIFIC REQUIREMENTS

31. FALL PROTECTION

(Applicable Construction Regulation)

A pre-emptive Risk Assessment shall be required for any work carried out above two metres from the ground or any floor level and will be classified as “Work in Elevated Positions”.

As far as is practicable, any person working in an elevated position shall work from a platform, ladder or other device that is at least as safe as if he/she is working at ground level and whilst working in this position be wearing a single belt with lanyard that shall be worn to prevent the person falling from the platform, ladder or other device utilized.

This safety belt shall be, as far as is possible, secured to a point away from the edge over which the person might fall and the lanyard shall be of such a length that the person will not be able to move over the edge.

Alternatively any platform, slab, deck or surface forming an edge over which a person may fall may be fitted with guard rails at two different heights as prescribed in SANS 1085: Code of Practice for the Design, Erection, Use and Inspection of Access Scaffolding.

Where the above mentioned requirement is not practicable, the person shall be provided with a full body harness that shall be worn and attached above the wearer’s head at all times and the lanyard must be fitted with a shock absorbing device. Only double lanyard fall arrest harnesses are permitted on site.

Where the above-mentioned requirements are not practicable, a suitable catch net shall be erected. Workers working in elevated positions shall be trained to use this safely and without risk to safety and health. Where work on roofs is carried out, the Risk Assessment shall take into account the possibility of persons falling through fragile material, skylights and openings in the roof.

Where ladders are used – they are to be of good construction, sound material and adequate strength and suitable to the purpose for which it is used (e.g. electricians shall use suitable insulated ladders). Fitted with non-skid devices at the bottom of the stiles or with hooks or similar devices at the tops of the stiles.

Except for extension ladders, no ladder shall be used which is longer than 4,5m and no ladder shall have its reach extended by tying together two or more ladders. All ladders shall be inspected weekly and a log shall be kept of the inspections.

2. STRUCTURES

(Applicable Construction Regulation)

The Principal Contractor / Contractor shall ensure that:

- All reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing pipe work or structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying of construction work.
- No structure will be overloaded that it may become unsafe.
- He/she has received from the designer the following information:
 - Information on known or anticipated hazards relating to the construction
 - work and the relevant information required for the safe execution of the construction work.
 - A geo-scientific report (where applicable).
 - The loading the structure is designed to withstand.
 - The methods and sequence of the construction process.
- Drawings will be kept on site and made available for inspection by an inspector, contractors, client, client's agent or employee.

33. TEMPORARY WORKS

(Applicable Construction Regulation)

- A contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.
- A contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.
- A contractor must ensure that—
 - all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;
 - all temporary works structures are done with close reference to the structural design drawings, and when any uncertainty exists the structural designer should be consulted;

detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, the client, the client's agent or any employee;

- all persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;
- all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;
- all temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any other imposed load and at least on a daily basis until the temporary works structure has been removed and the
- results have been recorded in a register and made available on site;
- no person may cast concrete, until authorization in writing has been given by the competent person contemplated in paragraph (a);

34 . EXCAVATIONS

(Applicable Construction Regulation)

Hidden Hazards Penetration

In order to minimize the impact of hidden hazards when performing penetration or excavation activities the following process should be followed:

- a drawing review of the affected area,
- a site investigation,
- detection using instrumentation (as appropriate),
- the use of appropriate tools
- the use of PPE.

Workers engaging in excavation or penetration activities shall use tools, which are in good working condition and utilise PPE, electrically rated gloves and double insulated tools as appropriate.

To mitigate risk, the contractor shall ensure that adequate site investigation, utilising methods that would not penetrate hidden hazards (e.g. visual inspection, detection using instrumentation) is performed prior to any excavation or penetration activity. If hidden hazards cannot be identified through site investigation, the Client shall be notified prior to excavation or penetration activities and appropriate PPE shall be worn during the work activity.

Authorisation

Where excavations will exceed 1,5 m in depth, the Principal Contractor / Contractor shall submit a Method Statement for approval before commencing with the excavation. Permission to proceed will only be granted once the Risk Assessment and Method Statement are approved.

The Principal Contractor / Contractor shall ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing.

The Principal Contractor / Contractor shall evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

Every Principal Contractor / Contractor who performs excavation work shall:

- Take suitable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;
- Not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where:
 - The sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or such an excavation is instable material: Provided that:-
 - a) Permission being given in writing by the appointed competent person contemplated in applicable *Construction Regulation* upon evaluation by him or her of the site conditions; and
 - b) Where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations shall be decisive and such a decision shall be noted in writing and signed by both the competent person contemplated in the applicable *Construction Regulation* and the professional engineer or technologist, as the case may be;
- Take steps to ensure that the shoring or bracing contemplated in the above paragraph is designed and constructed in such a manner rendering it strong enough to support the sides of the excavation in question;
- Ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it is likely to cause its collapse and thereby endangering the safety of, any person, unless precautions such as the revision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
- Ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, the steps are taken that may be necessary to ensure the stability of such building, structure or road and the safety of persons;
- Cause convenient and safe means of access to be provided to every excavation in which persons are required to work and such access shall

not be further than 6m from the point where any worker within the excavation is working;

- Ascertain as far as is reasonably practicable the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and shall before the commencement of excavation work that may affect any such service, take the steps that may be necessary to render the circumstances safe for all persons involved;
- Cause every excavation, including all bracing and shoring, to be inspected:
 - daily, prior to each shift;
 - after every blasting operation;
 - after an unexpected fall of ground;
 - after substantial damage to supports; and
 - after rain.

by the competent person contemplated in sub regulation (1), in order to pronounce the safety of the excavation to ensure the safety of persons, and those results are to be recorded in a register kept on site and made available to an inspector, client, client's agent, contractor or employee upon request;

- Cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be:
 - Adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and
 - Provided with warning illuminants or any other clearly visible boundary indicators at night or when visibility is poor

Upon entering an excavation the requirements of General Safety Regulation 5 of the Act shall be observed:

Underground Storage Tanks

Underground storage tank installation and maintenance operations shall comply with all International standards, DWAF, SANS and local By-law requirements. A Certified Contractor shall perform work activities on underground storage tanks. If an unanticipated underground storage tank is discovered during construction activity, the responsible EAST LONDON IDZ (SOC) LTD Project Engineer is to be notified.

Extract from the General Safety Regulation:

1. The Contractor or a user of machinery shall take steps to ensure that a confined space is entered by an employee or other person only after the air therein has been tested and evaluated by a person who is competent to pronounce on the safety thereof, and who has certified in writing that the confined space is safe and will remain safe while any person is in the confined space, taking into account the nature and duration of the work to be performed therein.
2. Where the provisions of sub-regulation (1) cannot be complied with the employer or user of machinery, as the case may be, shall take steps to ensure that any confined space in which there exists or is likely to exist a hazardous gas, vapour, dust or fumes, or which has or is likely to have, an oxygen content of less than 20 per cent by volume, is entered by an employee or other person only when:
 - a) Subject to the provisions of sub-regulation (3), the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken; and
 - b) The confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks, which are a potential source of danger, have been locked and securely fastened by means of chains and padlocks
3. Where the provisions of sub-regulation (2)(a) cannot be complied with, the employer or user of machinery shall take steps to ensure that the confined space in question is entered only when the employee or person entering is using breathing apparatus of a type approved by the chief inspector and, further, that:
 - a) The provisions of sub-regulation (2)(b) are complied with;
 - b) Any employee or person entering the confined space is using a safety harness or other similar equipment, to which a rope is securely attached which reaches beyond the access to the confined space, and the free end of which is attended to by a person referred to in paragraph (c).
 - c) At least one other person trained in resuscitation is and remains in attendance immediately outside the entrance of the confined space in order to assist or remove any person or persons from the confined space, if necessary; and
 - d) Effective apparatus for breathing and resuscitation of a type approved by the chief inspector is available immediately outside the confined space.
4. The Contractor or user of machinery shall take steps to ensure that all persons vacate a confined space on completion of any work therein.

5. Where the hazardous gas, vapour, dust or fumes contemplated in sub regulation (2) are of an explosive or flammable nature, the Contractor or user of machinery shall further take steps to ensure that such a confined space is entered only if:
 - a) The concentration of the gas, vapour, dust or fumes does not exceed 25 per cent of the lower explosive limit of the gas, vapour, dust or fumes concerned where the work to be performed is of such a nature that it does not create a source of ignition; or
 - b) Such concentration does not exceed 70 per cent of the lower explosive limit of the gas, vapour, dust or fumes where other work is performed.
6. The provisions of this regulation shall mutatis mutandis also apply, in so far as they can be so applied, to any work which is performed in any place or space on the outside of and bordering on or in the immediate vicinity of, any confined space, and in which place or space, owing to its proximity to the confined space, any hazardous article, oxygen-deficient atmosphere or dangerous concentration of gas, vapour, dust or fumes may occur or be present.
7. All pipes, ducts etc. that may leak into the confined space to be blanked off sufficiently to prevent any leakage or seepage.

35. DEMOLITION WORK

(Applicable Construction Regulation)

The Principal Contractor /Contractor shall ensure that the contractor appoint a competent person in writing to supervise and control all demolition work on site.

The Contractor shall ensure that prior to any demolition work being carried out, and in order also to ascertain the method of demolition to be used, a detailed structural engineering survey of the structure to be demolished is carried out by a competent person and that a method statement on the procedure to be followed in demolishing the structure is developed. During the demolition, a competent person shall check the structural integrity of the structure at intervals determined in the method statement contemplated in sub regulation (2), in order to avoid any premature collapses.

Every contractor who performs demolition work shall:

With regard to a structure being demolished, take steps to ensure that:

- No floor, roof or other part of the structure is overloaded with debris or material in a manner which would render it unsafe;
- All reasonably practicable precautions are taken to avoid the danger of the structure collapsing when any part of the framing of a framed or partly framed building is removed, or when reinforced concrete is cut; and
- Precautions are taken in the form of adequate shoring or such other means as may be necessary to prevent the accidental collapse of any part of the structure or adjoining structure;
- Not require or permit any person to work under overhanging material or

- structure, which has not been adequately supported, shored or braced;
- Where the stability of an adjoining building, structure or road is likely to be affected by demolition work on a structure, take such steps as may be necessary to ensure the stability of such structure or road and the safety of persons;
- Ascertain as far as is reasonably practicable the location and nature of electricity, water, gas or other similar services which may in anyway, be affected by the work to be performed, and shall before the commencement of demolition work that may affect any such service, take the steps that may be necessary to render circumstances safe for all persons involved;
- Cause every stairwell used and every floor where work is being performed in a building being demolished, to be adequately illuminated by either natural or artificial means;
- Cause convenient and safe means of access to be provided to every part of the demolition site in which persons are required to work; and
- Erect a catch platform or net above an entrance or passageway or above a place where persons work or pass under, or fence off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe where there is a danger or possibility of persons being struck by falling objects.
- The contractor shall ensure that no material is dropped to any point, which falls outside the exterior walls of the structure, unless the area is effectively protected.

Waste and debris shall not be disposed from a high place by a chute unless the chute:

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

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

The contractor shall ensure that equipment is not used on floors or working surfaces, unless such floors or surfaces are of sufficient strength to support the imposed loads.

Where the risk assessment indicates the presence of asbestos, the contractor shall ensure that all asbestos related work is conducted in accordance with the provisions of the Asbestos Regulations promulgated by Government Notice No. R.155 of 10 February 2002, as amended. Regulation 21:

- Demolition of asbestos may only be carried out by a registered (with the Department of Labour) Asbestos Contractor;

- All asbestos materials likely to become airborne must be identified;
- A Plan of Work must be submitted for approval to an Approved Asbestos Inspection Authority (AAIA) (approved by the Department of Labour) 30 days prior to commencement of demolishing work unless the Plan was drawn up by an AAIA and a signed (by all parties) copy must be submitted to the Department of Labour 14 days before commencement of the demolishing.

During Demolition Work:

- All asbestos containing material shall be disposed of safely.
- Employees shall be issued with appropriate PPE and the proper use thereof enforced.
- After the demolition has been completed the area/premises shall be thoroughly checked to ensure that all asbestos waste has been removed.
- No person is allowed to:
 - Use compressed air or permit the use of compressed air to remove asbestos dust from any surface or person;
 - Smoke, eat, drink or keep food or beverages in an area not specifically designated for this;
 - Apply asbestos by spraying.

Where the risk assessment indicates the presence of lead, the contractor shall ensure that all lead related work is conducted in accordance with the provisions of the Lead Regulations promulgated by Government Notice No. R.236 of 28 February 2002, as amended.

Where the demolition work involves the use of explosives, a method statement is to be developed in accordance with the applicable explosives legislation, by an appointed person who is competent in the use of explosives for demolition work and the procedures therein are adhered to.

The contractor shall ensure that all waste and debris is as soon as reasonably practicable removed and disposed of from the site in accordance with the applicable legislation.

36. TUNNELLING

(Applicable Construction Regulation)

To be performed in accordance with the Tunnelling Regulations as published under the Mines Health & Safety Act (29 of 1996).

Notwithstanding the provisions of sub regulation (1), no person shall enter a tunnel, which has a height dimension of less than 800 mm.

Definition of Tunnelling: “the construction of any tunnel beneath the natural surface of the earth for the purpose other than the searching for or winning of a mineral.

37. ACCESS SCAFFOLDING

(Applicable Construction Regulation)

Access Scaffolding shall be erected, used and maintained safely in accordance with Construction Regulation and SA Bureau of Standards Code of Practice, SANS 1085 entitled, "The Design, Erection, Use & Inspection of Access Scaffolding. Every contractor using access scaffolding, shall ensure that such scaffolding, when used, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act.

Detailed consideration shall be given to all scaffolding to ensure that it is properly planned to meet the working requirements, designed to carry the necessary loadings and maintained in a sound condition. It shall also be ensured that there is sufficient material available to erect the scaffolding properly.

The contractor shall ensure that all scaffolding work operations are carried out under the supervision of a competent person who has been appointed in writing and that all scaffold erectors, team leaders and inspectors are competent to carry out their work. The Contractor shall ensure that all contractors that erect scaffolding are in compliance to SANS 10085-1 and have on site a copy of SANS 10085-1 as amended.

- The Contractor shall ensure that all contractors that make use of scaffolding have on site a copy of SANS 10085-1 as amended.
- The Contractor shall ensure that all contractors ensure that all scaffolding is in compliance to SANS 1008-1.

NB The Contractor shall ensure that a notice board containing the names and contact details of their Scaffolding erectors and scaffolding inspectors are clearly displayed and securely fixed to their scaffolding.

38. SUSPENDED PLATFORMS & ROPE ACCESS

(Construction Regulations: Applicable)

The Principal Contractor / Contractor shall design, erect, use and maintain suspended platforms in accordance with the requirements of the applicable Construction Regulation.

The Contractor shall ensure that all suspended platform work operations are carried out under the supervision of a competent person who has been appointed in writing, and that all suspended platform erectors, operators and inspectors are competent to carry out their work.

No Contractor / Principle Contractor shall use or permit the use of a suspended platform, unless:

- The design, stability and construction thereof comply with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act;
- He or she is in possession of a certificate of system design issued by a professional engineer, certificated engineer or a professional technologist for the use of the suspended platform system; and
- He or she is, prior to the commencement of the work, in possession of an operational compliance plan developed by a competent person based on the certificate of system design contemplated in paragraph (b) and applicable to the environment in which the system is being used, this must include proof of the:
 - Competent person who has been appointed for supervision;
 - Competency of erectors, operators and inspectors;
 - Operational design calculations which should comply with the requirements of the system design certificate;
 - Performance test results;
 - Sketches indicating the completed system with the operational loading capacity of the platform;
 - Procedures for and records of inspections having been carried out; and
 - Procedures for and records of maintenance work having been carried out: Provided that sub regulation (2) shall only become applicable six months from the date of promulgation of these regulations.

The contractor making use of a suspended platform system shall forward a copy of the certificate of system design issued by a professional engineer, certificated engineer or professional technologist including a copy of the design calculations, sketches and test results, to the provincial director before commencement of the use of the system and must further indicate the intended type of work the system would be used for.

The contractor need not re-submit a copy of the certificate of system design contemplated in sub regulation (3) for every new project: Provided that the environment in which the system is being used does not change to such an extent that the system design certificate is no longer applicable and, should uncertainty exist of the applicability of the system design certificate, the decision of a professional engineer, certificated engineer or professional technologist shall be decisive.

The contractor shall ensure that the outriggers of each suspended platform:

- Are constructed of steel or any other material of similar strength and have a safety factor of at least four in relation to the load it is to carry; and
- Have suspension points provided with stop devices or other effective devices at the outer ends to prevent the displacement of ropes.

The contractor shall ensure that:

- The parts of the building or structure on which the outriggers are supported, are checked by means of calculations to ensure that the required safety factor is adhered to without risk of damage to the building or structure;
- The suspension wire rope and the safety wire rope are separately connected to the outrigger;
- Each person on a suspended platform is provided with and wears a safety harness as a fall prevention device which must at all times, be attached to the suspended platform or to the anchorage points on the structure whilst on the suspended platform;
- The hand or power driven machinery to be used for the lifting or lowering of the working platform of a suspended platform is constructed and maintained in such a manner that an uncontrolled movement of the working platform cannot occur;
- The machinery referred to in the paragraph above is so situated that it is easily accessible for inspection;
- The rope connections to the outriggers are vertically above the connections to the working platform; and
- Where the working platform is suspended by two ropes only, the connections of the ropes to the working platform are of such height above the level of the working platform as to ensure the stability of the working platform.

The contractor shall ensure that the suspended platform:

- Is suspended as near as possible to the structure to which work is being done and,
- except when light work is being done, is secured at every working position to prevent horizontal movement between the suspended platform and the structure;

- Is fitted with anchorage points to which workers shall attach the lanyard of the safety harness worn and used by the worker and such anchorage connections shall have sufficient strength to withstand any potential load applied to it; and
- Is fitted with a conspicuous notice easily understandable by all workers working with the suspended platform, showing the maximum mass load that the suspended platform can carry.

The contractor shall cause:

- The whole installation and all working parts of the suspended platform to be thoroughly examined in accordance with the manufacturer's specification;
- The whole installation to be subjected to a performance test as determined by the standard to which the suspended platform was manufactured;
- The performance test contemplated in paragraph (b) to be done by a competent person appointed in writing with the knowledge and experience of erection and maintenance of suspended platforms or similar machinery and who shall determine the serviceability of the structures, ropes, machinery and safety devices before they are used, every time suspended platforms are erected;
- The performance test contemplated in paragraph (b) of the whole installation of the suspended platform to be subjected to a load equal to that prescribed by the manufacturer or, in the absence of such load, to a load of 110 per cent of the rated mass load, at intervals not exceeding 12 months and in such a manner that every part of the installation is stressed accordingly.

Notwithstanding the provisions of sub regulation (8), the contractor shall cause every hoisting rope, hook or other load-attaching device which forms part of the suspended platform to be thoroughly examined in accordance with the manufacturer's specification by the competent person contemplated in sub regulation (8) before they are used following every time they are assembled, and, in cases of continuous use, at intervals not exceeding three months.

- All connection bolts are secure;
- All safety devices are functioning;
- All safety devices are not tampered with or vandalized;
- The maximum mass load of the platform is not exceeded;
- The occupants in the suspended platform are using safety harnesses which have been properly attached;
- There are no visible signs of damage to the equipment; and
- All reported operating problems have been attended to.

The contractor shall ensure that all inspection and performance test records are kept on the construction site at all times and made available to an inspector, client, client's agent or employee upon request.

The contractor shall ensure that all employees required to work or to be supported on a suspended platform are:

- Physically and psychologically fit to work safely in such an environment by being in possession of a medical certificate of fitness;
- Competent in conducting work related to suspended platforms safely;
- Trained or had received training which include at least:
 - How to access and egress the suspended platform safely;
 - How to correctly operate the controls and safety devices of the equipment; Information on the dangers related to the misuse of safety devices; and
 - Information on the procedures to be followed in the case of:
 - An emergency;
 - The malfunctioning of equipment;
 - The discovery of a suspected defect in the equipment;and
 - Instructions on the proper use of safety harnesses.

Where the outrigger is to be moved, the contractor shall ensure that only persons trained and competent to effect such move, perform this task and that an inspection be carried out and the results thereof be recorded by the competent person prior to re-use of the suspended platform.

The Contractor shall ensure that the suspended platform is properly isolated after use at the end of each working day such that no part of the suspended platform will present a danger to any person thereafter.

Rope Access to be erected, used maintained and inspected in accordance with the requirements of the applicable Construction Regulation.

39. BULK MIXING PLANTS

(Applicable Construction Regulation)

The Principal Contractor / Contractor shall erect, operate and maintain Bulk Mixing Plants in accordance with the requirements of Construction Regulation 20

40. EXPLOSIVE POWERED TOOLS (EPT)

(Applicable Construction Regulation)

No contractor shall use or permit any person to use an explosive powered tool, unless—

- a) It is provided with a protective guard around the muzzle end, which effectively confines any flying fragments or particles; and
- b) The firing mechanism is so designed that the explosive powered tool will not function unless—

- i. It is held against the surface with a force of at least twice its weight; and
- ii. The angle of inclination of the barrel to the work surface is not more than 15 degrees from a right angle:
- iii. Provided that the provisions of this sub regulation shall not apply to explosive powered tools in which the energy of the cartridge is transmitted to the bolts, nails or similar relevant objects by means of an intermediate piston which has a limited distance of travel.

The Contractor or user shall ensure that:

- Only cartridges suited for the explosive powered tool and the work to be performed are used;
- The explosive powered tool is cleaned and examined daily before use and as often as may be necessary for its safe operation by a competent person who has been appointed;
- That the safety devices are in proper working order prior to use;
- When not in use, the explosive powered tool and the cartridges are locked up in a safe place, which is inaccessible to unauthorised persons;
- The explosive powered tool is not stored in a loaded condition;
- A warning notice is displayed in a conspicuous manner wherever the explosive powered tool is used;
- The issuing and collection of cartridges and nails or studs is—
 - Controlled and done in writing by a person having been appointed in writing; and
 - Recorded in a register and that the recipient has accordingly signed for the
 - receipt thereof as well as the returning of any spent and unspent cartridges.

No contractor shall permit or require any person to use an explosive powered tool unless such person has been—

- Provided with and uses suitable protective equipment; and
- Trained in the operation, maintenance and use of such a tool.

1. CRANES & LIFTING EQUIPMENT

(Applicable Construction Regulation)

Cranes and Lifting equipment shall be designed and constructed in accordance with generally accepted technical standards and operated, used, inspected and

maintained in accordance with the requirements of Driven Machinery Regulation 18 of the Act:

Notwithstanding the provisions of the Driven Machinery Regulations promulgated by Government Notice No. R.533 of 16 March 1990, as amended, the contractor shall ensure that where tower cranes are used—

- Account is taken of the effects of wind forces on the structure;
- Account is taken of the bearing capacity of the ground on which the tower crane is to stand;
- The bases for the tower cranes and tracks for rail-mounted tower cranes are firm and level;
- The tower cranes are erected at a safe distance from excavations;
- There is sufficient clear space available for erection, operation and dismantling;
- The tower crane operators are competent to carry out the work safely; and
- The tower crane operators are physically and psychologically fit to work in such an environment by being in possession of a medical certificate of fitness
- to be clearly and conspicuously marked with the maximum mass load (MML) that it is designed to carry safely. When the MML varies with the conditions of use, that a table should be used by the driver/operator;
- each winch on a lifting machine must at all time have, at least, three full turns of rope on the drum when the winch has been run to its lowest limit;
- every lifting machine shall, where practicable, be fitted with a brake or other device capable of holding the MML. This brake or device to automatically prevent the downward movement of the load when the lifting power is interrupted;
- every chain or rope on a lifting machine that forms an integral part of the machine must have;
- a factor of safety as prescribed by the manufacturer of the machine and where no standard is available the factor of safety must be:
 - chains – 4 (four);
 - steel wire ropes - 5 (five);
 - fibre ropes- 10 (ten).
- every hook or load attaching device shall be designed such or fitted with a device that will prevent the load from slipping off or disconnecting;
- every lifting machine shall be inspected and load tested by a competent person every time it has been dismantled and re-erected and every 12 months after that. The load test shall be in accordance with the manufacturers prescription or to 110% of the MML
- in addition all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices forming an integral part of a lifting machine must be inspected every 6 months by a competent person;
- all maintenance, repairs, alterations and inspection results shall be recorded in a log book and each lifting machine must have its own log book;

- no person may be lifted by a lifting machine not designed for lifting persons unless in a cradle approved by an inspector of the Department of Labour;
- every jib crane with an MML of 5 000 kg or more at minimum jib radius shall be provided with a load indicator or a load lifting limiting device;

2. LIFTING TACKLE

- to be manufactured of sound material, well-constructed and free from patent defects;
- to be clearly and conspicuously marked with ID number and MML;
- factor of safety:
 - Natural fibre ropes - 10(ten)
 - Man-made fibre ropes & woven webbing - 06(six)
 - Steel wire ropes – single rope - 06(six)
 - Steel wire ropes – combination slings - 08(eight)
 - Mild Steel chains - 05(five)
 - High tensile/alloy steel chains - 04(four)
- steel wire ropes shall be discarded (not used any further for lifting purposes) when excessive wear and corrosion is evident and must be examined by a competent person every three months or this purpose and the results recorded.

3. OPERATOR

- Every lifting machine operator shall be trained specifically for the type of lifting machine that he/she is operating;
- Operators of Jib cranes with a MML of 5 00 kg or more shall be in possession of a certificate of training issued by an accredited (by The Department of Labour) training provider.

4. CONSTRUCTION VEHICLES & MOBILE PLANT

(Applicable Construction Regulation)

Construction Vehicles and Mobile Plant shall be inspected by a competent person prior to being allowed on a project site and suppliers of hired vehicles, plant and equipment will be required to comply with this specification as well as the Act and Regulations.

Construction Vehicles and Mobile Plant (CV&MP) to be:

- Are of acceptable design and construction;
- Are maintained in good working order;
- Are used in accordance with their design and intention for which they were designed, having due regard to safety and health;
- Are operated by workers who -

- Have received appropriate training and been certified competent and been authorised to operate such machinery; and
- Are physically and psychologically fit to operate such construction vehicles and mobile plant by being in possession of a medical certificate of fitness;
- Have safe and suitable means of access;
- Are properly organised and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- Are prevented from falling into excavations, water or any other area lower than the working surface by installing adequate edge protection, which may include guardrails and crash barriers;
- Where appropriate, are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- Are equipped with an electrically operated acoustic signalling device and a reversing alarm; and
- Are on a daily basis inspected prior to use, by a competent person who has been appointed in writing and the findings of such inspection is recorded in a register.

CV&MP to be fitted with two head and two taillights whilst operating under poor visibility conditions;

The contractor shall furthermore ensure that—

- No person rides or be required or permitted to ride on any construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- Every construction site is organised in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- The traffic routes are suitable for the persons using them, sufficient in number, in suitable positions and of sufficient size;
- Every traffic route is, where necessary indicated by suitable signs for reasons of health or safety;
- All construction vehicles and mobile plant left unattended at night, adjacent to a freeway in normal use or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- Bulldozers, scrapers, loaders, and other similar mobile plants are, when being repaired or when not in use, fully lowered or blocked with controls in a neutral position, motors stopped and brakes set;
- Tools and material are secured in order to prevent movement when transported in the same compartment with employees;

- Vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- When workers are working on or adjacent to public roads, reflective indicators are provided and worn by the workers.
- Whenever visibility conditions warrant additional lighting, all mobile plants are equipped with at least two headlights and two taillights when in operation;
- Workers employed adjacent or on public roads shall wear reflective safety vests.
- All CV&MP inspection records shall be kept in the OH&S File.
- All vehicles of the Contractor shall display a name board bearing the Contractor's name. Hired vehicles shall bear an identifying sticker.

Speed Restrictions and Protection

The Contractor shall ensure that all persons in their employ and all those that are visiting the site are aware and comply with the site speed restriction(s). On site gravel or earth roads and within 500m of the Site, the vehicles of the Contractor and their suppliers shall be regulated to a maximum of 35km/h.

5. ELECTRICAL INSTALLATIONS

(Applicable Construction Regulation)

The installation of temporary electricity for Construction shall be in accordance with the Construction Regulation and the Electrical Installation Regulations.

Notwithstanding the provisions contained in the Electrical Installation Regulations promulgated by Government Notice No. R.2920 of 23 October 1992 and the Electrical Machinery Regulations promulgated by Government Notice No. R.1953 of 12 August 1988, respectively, as amended, the contractor shall ensure that—

- Before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- All parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- In working areas where the exact location of underground electric power lines is unknown, employees using jackhammers, shovels or other hand tools which may make contact with a power line, are provided with insulated protective gloves or otherwise that the handle of the tool being used is insulated;

- All temporary electrical installations are inspected at least once a week and electrical machinery on a daily basis before use on a construction site by competent persons and the records of these inspections are recorded in a register to be kept on site; and
- The control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing.

6. ELECTRICAL & MECHANICAL LOCK-OUT

An electrical and mechanical lock-out procedure shall be developed and implemented. This lock-out procedure to be adhered to by all Contractors on site.

7. USE & STORAGE OF FLAMMABLES

(Applicable Construction Regulation)

The contractor shall ensure that—

- Where flammable liquids are being used, applied or stored at the workplace concerned, this is done in such a manner which would cause no fire or explosion hazard, and that the workplace is effectively ventilated: Provided that where the workplace cannot effectively be ventilated—
- Every employee involved is provided with a respirator, mask or breathing apparatus of a type approved by the chief inspector, and Steps are taken to ensure that every such employee, while using or applying flammable liquid, uses the apparatus supplied to him or her;
- No person smokes in any place in which flammable liquid is used or stored, and such contractor shall affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- Flammable liquids on a construction site is stored in a well-ventilated reasonably fire resistant container, cage or room and kept locked with proper access control measures in place;
- An adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- Only the quantity of flammable liquid needed for work on one day is to be taken out of the store for use;
- All containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, to be removed from the construction site and safely disposed of;
- Where flammable liquids are decanted, the metal containers are bonded or earthed; and
- No flammable material such as cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids.
- Stored in a locked well-ventilated reasonably fire resistant container, cage or room conspicuously demarcated as “Flammable Store – No Smoking or Naked Lights”;

- the flammables store to be constructed of two-hour fire retardant walls and roof and separated from adjoining rooms or workplaces by means of a two-hour fire retardant fire wall;
- All electrical switches and fittings to be of a flameproof design;
- Any work done with tools in a flammables store or work areas to be of a non-sparking nature;
- The flammable store to be designed and constructed to, in the event of spillage of liquids in the store, to contain the full quantity + 10% of the liquids stored;
- A sign indicating the capacity of the store to be displayed on the door;
- Containers (including empty containers) to be kept closed to prevent fumes/vapours from escaping and accumulating in low lying areas;
- Welding and other flammable gases to be stored segregated as to type of gas and empty and full cylinders.
- Bulk fuel bowsers, must be installed as per the BCMM by-laws and suitably permitted by the local fire safety authority.

8. HOUSEKEEPING

(Applicable Construction Regulation)

The Principal Contractor / Contractor to ensure that:

- Housekeeping is continuously implemented;
- Materials & equipment are properly stored;
- Scrap, waste & debris are removed regularly;
- Materials placed for use are placed safely and not allowed to accumulate or cause obstruction to free flow of pedestrian and vehicular traffic;
- Waste & debris not to be removed by throwing from heights but by chute or crane;
- Construction sites in built-up areas, adjacent to a public way, are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons;
- A catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under, or fence off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.
- An unimpeded work space is maintained for every employee;
- Every workplace is kept clean, orderly and free of tools etc. that are not required for the work being done materials;
- As far as is practicable, every floor, walkway, stair, passage and gangway is kept in good state of repair, skid-free and free of obstruction, waste and materials;
- The walls and roof of every indoors workplace is sound and leak-free;
- Openings in floors, hatchways, stairways and open sides of floors or buildings are barricaded, fences, boarded over or provided with protection to prevent persons from falling.

9. STACKING & STORAGE

(Applicable Construction Regulation)

Extract from the General Safety Regulation:

The Contractor shall require or permit the building of stacks that consist of successive tiers, one on top of another, unless—

- The stacking operation is executed by or under the personal supervision of a person with specific knowledge and experience of this type of work;
- The base is level and capable of sustaining the weight exerted on it by the stack;
- The articles in the lower tiers are capable of sustaining the weight exerted on them by the articles stacked above them;
- All the articles which make up any single tier are consistently of the same size, shape and mass;
- Pallets and containers are in good condition; and
- Any support structure used for the stacking of articles is structurally sound and can support the articles to be stacked on it.

The Contractor shall not permit—

- Articles to be removed from a stack except from the topmost tier or part of that tier; and
- Anybody to climb onto or from a stack, except if the stack is stable and the climbing is done with the aid of a ladder or other safe facility or means.

The Contractor shall take steps to ensure that—

- Persons engaged in stacking operations do not come within reach of machinery which may endanger their safety;
- Stacks that are in danger of collapsing are dismantled immediately in a safe manner; and
- The stability of stacks is not endangered by vehicles or other machinery or persons moving past them.

Unless a stack is otherwise supported the Contractor shall take steps to ensure that tiers of stacked material consisting of sacks, cases, cartons, tins or similar containers—

- Are secured by laying up articles in a header and stretcher fashion and that corners are securely bonded; and
- Are stepped back half the depth of a single container at least every fifth tier or that, alternatively, successive tiers are stepped back by a lesser amount: Provided that at least the same average angle of inclination to the vertical is achieved: Provided further that where the containers are of

a regular shape and their nature and size are such that the stack will be stable, they may be stacked with the sides of the stack vertical if the total height of the stack does not exceed three times the smaller dimension of the underlying base of the stack.

Notwithstanding the provisions of sub-regulation (4), free standing stacks that are built with the aid of machinery may, with the approval of an inspector, be built to a height and in a manner permitted by the nature of the containers being stacked: Provided that—

- The stacks are stable and do not overhang; and
- The operator of the stacking machinery is rendered safe as regards falling articles.
- Adequate storage areas are provided and demarcated;
- The storage areas are kept neat and under control;
- Cartons and other containers that may become unstable due to wet conditions are kept dry;
- Pallets and containers are in good condition and no material is allowed to spill out;
- Structures for supporting stacks are structurally sound and able to support the mass of the stack;

50. PORTABLE ELECTRICAL TOOLS & EQUIPMENT

(Electrical Machinery Regulation 9 of the Act)

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

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

- Regular inspections by a competent person appointed in writing;
- Inspection results must be recorded in a register;
- Only competent authorized persons are allowed to use portable electrical tools and equipment;
- The correct protective equipment is worn/used whilst operating portable electrical tools and equipment.
- All power tools and machinery driven by belts, gears, ropes, chains, couplings and similar drives shall be adequately guarded. The Contractor shall prohibit the use of any equipment with a damaged, missing or inadequate guard.

Portable Electrical Tools

- Shall be maintained in good condition at all times to prevent an electrical shock to the user. The main source shall incorporate an earth leakage protection device or receive power through a double wound transformer or be double insulated and clearly marked as such.
- All equipment shall be fitted with a switch to allow for safe & easy starting and stopping.
- The Contractor shall ensure that all his electrical equipment conforms to operational and safety requirements.
- All earth leakage units shall be tested at intervals of not more than one month and signed for by a qualified electrician.

Portable Lights

- Shall be fitted with a robust non-hygroscopic non-conducting handle;
- Live metal parts/parts which may become live must be protected against contact;
- The lamp must be protected by a strong guard;
- The cable lead-in must withstand rough handling;
- It is suggested that a register be kept for each piece of equipment and findings of regular inspections must be entered;
- Inspections must concentrate on plug, cord, switch and any obvious faults;
- When used in wet/damp/metal container conditions, it must be protected as for portable electrical tools, above.

51. HAZARDOUS CHEMICAL SUBSTANCES

The Principal Contractor / Contractor shall ensure that:

- Employees receive the necessary information & training to be able to use and store HCS safely;
- Employees obey lawful instructions regarding:
- the wearing and use of protective equipment;
- the use and storage of HCS;
- the prevention of the release of HCS;
- the wearing of exposure monitoring and measuring equipment;
- the cleaning up and disposal of materials containing HCS;
- housekeeping, personal hygiene and the protection of the environment;
- the Risk Assessments required in terms of the applicable Construction Regulation include employee exposure to HCS and that the necessary steps to protect persons from being detrimentally affected by HCS present or used in the workplace, are taken;
- suppliers to provide the necessary information in the form of a Material Safety Data Sheet (MSDS) regarding an HCS required to ensure the safe use and storage of that HCS;
- an up-to-date list is kept on site of HCS's stored and used together with the MSDS's of the said HCS's;
- HCS containers are clearly marked as to the contents and main hazardous category "Flammable" or "Corrosive" and the reference number of the HCS on the list indicated above;

- HCS e.g. Asbestos dust is not cleared by the use of compressed air but is vacuumed;
- No person eats or drinks in a HCS workplace;
- HCS waste is disposed of safely in terms of hazardous waste disposal requirements;

2. ENVIRONMENTAL

All Construction debris/rubble is to be stored in a skip.

In the event of large demolition or excavation work and where this is not possible, debris/rubble is to be stored in a safe manner, to prevent any form of injury to personnel or equipment.

When transporting rubble to a landfill site, reasonable care is to be taken to ensure that spillage of rubble from such skip or truck is avoided.

Timber, brick-work, dry walling, non-asbestos insulation, clean concrete, and similar debris shall be transported to a landfill, authorized to receive such waste. Reasonable effort shall be made to separate recoverable metals from construction debris.

Personnel waste such as papers and food containers should be bagged, removed from the site, and properly disposed of by the Contractor.

Fluorescent, sodium, mercury vapour and incandescent light bulbs shall be removed from light fixtures and managed as Chemical waste. These items shall be boxed and then labelled to identify the contents.

Equipment containing oil or other petroleum products shall be drained of oil, and managed as residue material. Drained oil shall be managed as chemical waste.