



**REHABILITATION OF WATER BEARING INFRASTRUCTURE HOERSKOOL
CENTURION**

**SITE SPECIFIC HEALTH AND SAFETY SPECIFICATIONS
01/CHS/2020**

Compiled based on Construction regulation 2014

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1.0 **INTRODUCTION AND BACKGROUND**

1.1 **Background to the Health and Safety Specification**

Historically, the Construction Industry has had poor health and safety record. Due to the complex and potential dangerous operations being undertaken, there is a risk of incidents and injuries. In many instances poor adherence to the Occupational Health and Safety Act (OHSA) has resulted in severe consequences for Health and Safety performances. The client is determined that the highest health and safety standards will prevail throughout the site and that there will be full commitment from all parties to achieving best practices recognized internationally.

To achieve this goal, the client has prepared and published a Site Specific Health and Safety Specification (SSHSS) for this project. This Health and Safety Specification sets out guidelines and minimum levels of awareness and guidelines for Health and Safety. Responsibility for adherence rests with Contractors and in particular with all employees who are encouraged to be pro-active. The client is committed to ensuring the highest health and safety standards for all work undertaken on site.

Contractors as employers are fully responsible and accountable for compliance with all health and safety requirements.

The Site Specific Health and Safety Specification (SSHSS) have been prepared to include in the Tender and Contract Documents for construction work.

The employer's personnel will be responsible for the auditing of the implementation of the Site Specific Health and Safety Specification (SSHSS) and maintaining the document control and record systems associated with this Site Specific Health and Safety Specification.

1.2 **Purpose of the Site Specific Health and Safety Specification**

The purpose of this site Specific Health and Safety Specification (SSHSS) is to comply with the duties of the Client base on construction regulation 5, to provide health and safety information about specific project risks known by the client and the Site Specific Health and Safety Specification must be included in the tender documents. It is also there to assist towards achieving compliance with Occupational Health and Safety Act No. 85 of 1993 and Regulations in order to reduce incidents and injuries.

The Site Specific Health and Safety Specification (SSHSS) will be implemented during the whole construction phases of the project.

This will also assist in ensuring that all cost related to the compliance with Occupational Health and Safety Act No. 85 of 1993 and Regulations as well as this site specific health and safety specification are taken into consideration at Tender stage.

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This Site Specific Health and Safety Specification (SSHSS) is a performance specification to ensure that CLIENT as well as bodies that enter into formal agreement with the client, Consultants, Contractors, Sub-contractors, achieve an acceptable level of OHS performance.

No advice, approval of any document required by this Site Specific Health and Safety Specification (SSHSS) such as hazard identification and risk assessments action plan or any other form of communication from the client shall be construed as an acceptance by client of any obligation that absolves the contractor from achieving the required level of performance and compliance with legal requirements. Further, there is no acceptance of liability by the client that may result from the contractor failing to comply with the SSHSS unless the client issued an instruction to any requirement, i.e. the contractor remains responsible for achieving the required performance levels.

1.3 **Implementation of the Site Specific Health and Safety Specification**

This SSHSS forms an integral part of the contract, and the Principal Contractor is required to make it an integral part of their contracts with Sub-Contractors and Suppliers. It will be disseminated by the client to persons responsible for the design of the infrastructure works, which will ensure that contractors shall incorporate the requirements of the SSHSS.

The contractor shall sign a Mandatory Agreement to acknowledgement that he / she has familiarized him / herself with the contents of this SSHSS and that he/ she shall comply with all his / her obligation in respect thereof.

2.0 **SITE SPECIFIC HEALTH AND SAFETY SPECIFICATION**

2.1 **SCOPE**

This Health and Safety Specification covers the requirements for eliminating and mitigating incidents and injuries within the Construction site of Centurion Hoerskool.

The scope also addresses legal compliance, hazards identification and risk control, promoting a health and safety culture amongst those working on site and affected by the activities taking place in and around them.

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Health and Safety is everyone's responsibility, report Unsafe Act and Unsafe Condition to your superior immediately.

2.2 INTERPRETATIONS

2.2.1 Applications

This Site Specific Health and Safety Specification SSHSS contains clauses that are generally applicable to construction and to impose proactive controls associated with activities that impact on human health and safety as it relates to plant and machinery.

Compliance to the requirement of the Occupational Health and Safety Act is in addition to the requirement of this SSHSS and part of the contractor's responsibility.

CLIENT will monitor that the contractor/s complies with the requirements of the Occupational Health and Safety Act No 85 of 1993 and Regulations and will advise the contractor how such compliance is achieved.

2.2.2 Definitions

For the purpose of the Site Specific Health and Safety Specification (SSHSS) the definitions, acronyms given hereunder shall apply:

Construction work means any work in connection with

- a) The construction, erection, alteration, renovation, repair, demolition or dismantling of or additional to a building or any similar structure:
- b) The construction of sewer or water reticulation system or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work.

Construction work permit

Means a document issued in terms of construction regulation 3.

Construction Site

Means a work place where construction work is being performed. Hazard Identification and Risk Assessment and Risk Control

Means a documented plan, which identifies hazards, assesses the risk and detailing the control measure and safe working procedures, which are to be used to mitigate and control the occurrence of hazards and risk during construction or operation phases.

The Act

Means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

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Hazard

Means a source of or exposure to danger (source which may cause injury or damage to persons, or property)

Risk

Means the probability or likelihood that a hazard can result in injury or damage.

Contractor's Responsible Person

Means any person appointed in writing by the Contractor to supervise construction work. The appointment shall be as required by the OHS Act which shall stipulate health and safety responsibilities, area of responsibility and the proposed duration of the project.

Chief Executive Officer

In relation to a body corporate or an enterprise conducted by the state, means the person who is responsible for the overall management and control of the business of such body corporate or enterprise.

Danger

Means anything, which may cause injury or damage to a person or property.

Employee

Means, subject to the provisions of Subsection (2), any person who is employed by or works for any employer and who receives or is entitled to receive any remuneration or who works under the direction or supervision of an employer or any other person.

Employer

Means, subject to the provisions of Subsection (2), any person who employ or provides work for any person or remunerates that person or expressly or tacitly undertakes to remunerate him, but exclude a labour broker as defined in section 1 (1) of the Labour Relation Act, 1953(Act No. 28 of 1956).

Healthy

Means free from illness or injury

Machinery

Means any article or combination of articles assembled, arranged or connected and which is used or intended to be used for converting any form of energy to performing work, or which is used or intended to be used, whether incidental thereto or not, for developing, receiving, storing, containing, confining, transforming, transmitting, transferring or controlling any form of energy.

Medical Certificate of fitness

Means a certificate contemplated in regulation 7(8).

Mobile Plant

Means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site.

Properly used

Means used with reasonable care, and with due regard to any information, instruction or advice supplied by the designer, manufacturer, importer, seller or supplier.

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User

In relation to plant or machinery, means the person who uses plant or machinery for his own benefit or who has the right of control over the use of plant or machinery, but does not include a lessor of, or any person employed in connection with the plant or machinery.

Reasonable Practicable

Means practicable having regard to:

The severity and scope of the hazard or risk concerned,

The state of knowledge reasonably available concerning that or risk and any means of removing or mitigating that hazard risk.

The availability and suitability of means to remove or mitigate that hazard or risk, and

The cost of removing or mitigating that hazard or risk in relation to the benefits deriving there from.

Safe

Mean free from any hazard.

Client

Means any person for whom construction work is performed and/or undertaken (i.e. Department of Infrastructure (CLIENT) for the purpose of this specification.

Agent

Means a competent person who acts as a representative for a client.

Competent person

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

Construction Manager

Means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site.

Contractor

Means an employer who performs construction work.

Health and Safety file

Means a file or other record containing the information in writing required by these regulations.

Health and Safety plan

Means a site, activity or project specific documented plan in accordance with the client's health and safety specification.

Health and Safety specification

Means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work.

Method statement

Means a document detailing the key activities to be performed in order to reduce as reasonable as practicable the hazards identified in any risk assessment.

Principal contractor

Means an employer appointed by the client to perform construction work.

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2.3 GENERAL HEALTH AND SAFETY PROVISIONS

2.3.1 Construction Work Permit (Construction Regulation 3)

2.3.1.1 A client who intends to have construction work carried out, must at least 30 days before that work is to be carried out apply to the provincial director in writing for a construction work permit to perform construction work if the intended construction work will— (a) exceed 180 days; (b) will involve more than 1800 person days of construction work; or (c) the works contract is of a value equal to or exceeding thirteen million rand or Construction Industry Development Board (CIDB) grading level 6.

2.3.2 Notification of intent to commence Construction Work (Construction Regulation 4)

The Contractor shall notify the Provincial Director of the Department of Labour in writing 7 days before the work begins if the tendered construction work will

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

Notification form or template can be found in the Construction Regulations, 2014 – **Annexure 2**

A copy of the notification letter from the Provincial Director shall be kept in the safety file at all times.

2.3.3 Preparing of Safety Plan and Safety File

The Contractor shall provide and demonstrate to the Client a suitable, sufficiently documented and coherent site specific health and safety plan based on the Client's Site Specific Health and Safety Specification (SSHSS) (Construction Regulation 7 (1)(a)).

The Contractor shall open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these regulations (Construction Regulation 7 (1) (b)).

The Contractor must include his or her letterhead on the safety plan and on all documentation in the safety file as these are legal documents which the contractor is legally bound to implement and can be used in a court of Law.

2.3.4 Assignment of Contractor's Management Team to Supervise on Site

The Contractor shall submit all supervisory appointment (contractor's management team) as well as safety Officer; the Contractor shall submit a competent certificate of the appointed safety officer who will be available on site full time. The safety officer must be appointed in writing. The safety officer will assist in the control of all safety related aspects on site. The safety officer will also be utilized to give input at the early stage of the project and input into the health and safety plan. The Contractor shall also submit a CV of the safety officer for approval by Safety Agent appointed by client and must be registered with SACPCMP or have proof of application prior the commencement of work on site.

2.3.5 Competency for Contractor's Management Team

The Contractor's management team shall be competent and proof of competency must be send to CLIENT before commencement, the safety officer must be appointed full time on site and have a proof of registration with a statutory body approved by the chief inspector (SACPCMP). The Contractor shall submit CV's of the contractor's management team for approval by the client prior the commencement of work on site.

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

Valid Letter of good standing with the compensation Insurer must be submitted with the Tender.

2.3.7 Occupational Health and Safety Policy

The Contractor shall submit a Health and Safety Policy signed by the Chief Executive Officer/ Managing Director. The Policy must outline objectives and how they will be achieved and implemented by the Contractor

2.3.8 Health and Safety Organogram

The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Sites Team as required and as related to the relevant appointment by the OHSA. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated, when there is a change in the site team.

2.3.9 Pregnancy Policy

The Contractor shall submit a Pregnancy Policy signed by the Chief Executive Officer/ Managing Director.

2.3.10 HIV Policy

The Contractor shall submit a HIV Policy signed by the Chief Executive Officer/ Managing Director

2.3.11 Risk Assessment

The Client shall prepare a Baseline Risk Assessment for the intended construction work projects and the risk identified and assessed shall form part of the health and safety specification.

The Contractor shall cause a hazard identification to be performed by a competent person before commencement of construction work, and the assessed risk shall form part of the health and safety plan applied on site and shall include the following:

- a) The identification of the risk and hazards to the health and safety to which persons may be exposed;
- b) The analysis and evaluation of the hazards identified;
- c) A documented plan and safe working procedures to mitigate, reduce or control the risk identified; and
- d) The monitoring and review plan of the risk and hazards.
- e) The relevant personal protective equipment or clothing

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

Hazard Identification Risk Assessment (HIRA) it's an on- ongoing process and must be reviewed regularly where changes are made to the design or when incident occurred or when starting a new activity on site. The Contractor must ensure that all employees under his or her control are informed, instructed and trained by a competent person regarding all hazard identified before any work commence.

The Health and Safety Representative(s), the Health and Safety Committee Member and (Contractor's Representative) shall be members of the HIRA Team and will ensure that all the identified hazards and risk are appropriately controlled and reviewed.

The Contractor shall be responsible for making sure that all employees under his/ her control are conversant with the content of the HIRA and what appropriate measures have been put in place to either eliminate or reduce the identified risk. The Contractor shall outline to employees what role they are expected to play in the HIRA and control measure process.

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The Contractor must ensure that copies of risk assessments for this site are available on site for inspection by interested parties' i.e. Client Agent

2.3.12 Health and Safety Representative(s)

The Contractor shall ensure that a Health and Safety Representative(s) are/ is elected and trained to carry out his / her functions. The appointment must be in writing. The Health and Safety Representative shall carry out regular inspection, keeps records and report to the supervisor to take appropriate action. He / she shall attend Health and Safety Committee Meetings and take part in investigating incidents and non-conformances.

2.3.13 Health and Safety Committees

Where two or more safety representative has been designated on site the Contractor shall establish one or more health and safety committee/committees. The Contractor shall ensure that monthly Health and Safety meetings are held and minutes are kept. The Contractor shall ensure that the safety officer and/ or safety representative attends these meetings. Minutes thereof must be available in the safety file.

2.3.14 Health and Safety Training

The Contractor shall conduct a training needs analysis quarterly to ascertain what health and safety training is required.

2.3.14.1 Induction

The Contractor shall ensure that all employees under his / her control have gone through health and safety induction before commencement on site. The Contractor shall make it a rule that the entrance to the induction training is a medical certificate of fitness and shall keep a copy of the attendance register of all his/ her employees who attended the induction. Provide employees with some form of proof of induction when on site i.e. cards

2.3.14.2 Awareness

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

2.3.14.3 Competency

After the Contractor has identified the training to be conducted as part of the competency and based on the HIRA. He/ she shall send the relevant person on appropriate courses and keep the certificate for reference.

2.3.15 General Record Keeping

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

2.3.16 General Inspection, Monitoring and Reporting

The Contractor shall carry out daily inspection and investigate all incident and report to client as required in

General Administrative Regulations 8, Annexure 1 must be must be emailed to client every time an incident is recorded. The Contractor shall be required to keep records of all inspections and investigations, which were undertaken, and any other inspections and investigations by person(s) authorized to do so.

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2.3.17 Internal Audits

The Contractor's personnel (Contractor's Responsible Person) shall conduct monthly health and safety audits to ensure compliance with the OHS Act and SSHS. Records of audits must be kept and non-conformance reported, investigation and corrective action must be taken to prevent re-occurrence.

2.3.18 External Audits

The Client's representative shall conduct monthly health and safety audits to ensure compliance with SSHS and any relevant Health and Safety Legislation (OHS Act). All documentation held by the Contractor shall be available for inspection. The Contractor shall provide any additional information required by the representative or Client.

2.3.19 Incentives

The Client representative shall develop some performance indicators to determine the Contractor's performance which can be incentives based on, or acknowledge the Contractor.

2.3.20 Penalties

The Client will impose spot fines on the Contractor if found to be infringing on the SSHS or any requirement of the OHS Act. The Contractor shall be advised in writing of the nature of the infringement and the amount of the spot fine. The Contractor shall also take necessary steps (e.g. training) to prevent recurrence of the infringement and shall advise the client accordingly. The Contractor is also advised that the imposition of spot fines does not replace any legal proceedings the Client, Authorities, or Members of the public may institute against the Contractor. Spot fines shall be between R250 and R2000, depending upon severity. The amount of the spot fine will be determined by the client representative and will be final. In addition to the spot fine, the Contractor shall make good any damage caused as a result of the infringement at his own expense.

Infringements for which spot fines will be imposed, but are not limited to, are given below:

- ✓ Not keeping a copy of the OHS Act on site
- ✓ Expired Letter of Good Standing
- ✓ Not keeping a fully stocked First Aid Box
- ✓ Failure to use Personal Protective Equipment or Clothing
- ✓ Failure to adhere to the safe work procedure as per Hazard Identification and Risk Assessments
- ✓ Failure to conduct inspections
- ✓ Failure to keep records of inspection of equipment or machinery
- ✓ Failure to adhere to Occupational Health and Safety signage posted on site
- ✓ Failure to report incidents as per legal requirements and as per CLIENT reporting of investigation procedures,
- ✓ Littering on site – not adhering to on site housekeeping,
- ✓ Failure to provide or use ablution facilities
- ✓ Being on site without having gone through Health and Safety Induction and
- ✓ Use of machinery by non-authorized personnel.

Receipts for fines shall be issued and the appropriate documentation be placed in the safety file. Money

“raised” through fines may be used to fund health and safety incentive schemes and /or other social schemes of collective benefit.

A contravention of a requirement of this SSHSS shall be sufficient grounds for client to require the removal from site of the person responsible for the non-compliance and the contractor shall have no claim in respect of such removal.

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2.3.21 Emergency Procedures

The contractor must prepare an Emergency Procedure's for the site. The procedure shall detail the response plan including the following key personnel:

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

Emergency Procedures shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, etc. the contractor shall advise the client in writing of any on site emergencies, together with a record of action taken, within 24 hours of the emergency occurring. A contractor list of all service providers (Fire department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and available on the safety file.

2.3.22 First Aid Box and First Aid Equipment

The contractor shall appoint in writing a First Aid Attendant/s, the appointed First Aid Attendant/s are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on the safety file on site. The contractor shall provide an on-site First Aid Box, adequately stocked at all times, and ensure that the first aid box is accessible and fully controlled by a qualified first aid attendant.

2.3.23 Accident / Incident Reporting and Investigation

The contractor shall in addition to the prescribed requirements of the OHSA, investigate, record and report all reportable incidents as per the legal requirements. The Investigation shall be conducted by a qualified person or person who has sufficient knowledge to carry out an investigation.

2.3.24 Hazards and Potential Situations

The contractor shall immediately notify other sub-contractors after the client has been notified of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

2.3.25 Personal Protective Equipment (PPE) and Clothing

The contractor shall ensure that all workers are issued and wear Helmets, steel Toe Safety Shoes and overall as a minimum requirement. The contractor shall carry out PPE or clothing needs analysis to determine the necessary PPE or clothing and as determined by the HIRA or clothing to be used during construction. The contractor shall make provision and keep adequate quantities of SAN approved PPE or clothing on site at all times. The contractor shall outline procedure to be taken when PPE or clothing is:

- Lost or stolen
- Worn out or damage

2.3.26 Occupational Health and Safety Signage

The contractor shall, ascertain and provide adequate on site OHS signage. OHS signage shall be included, but shall not be limited to, hard hat/ helmet area, safety shoes must be worn, dust masks in areas where there might be exposure to dust, ear plugs/muffs where there might be exposure over a certain limit,

gloves, safety goggles, safety harness, etc. the contractor shall be responsible to maintain the quality and replacement of signage.

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2.3.27 Permits

The contractor shall ensure that a written work permit is obtained from client before commencing with any work to be undertaken. A permit shall be issued for all hazardous or dangerous activities to be carried during construction. Client representative shall sign the permit before the contractor commence on site, the following is a list of hazardous activities, which need a permit:

- Hot works/ welding
- Working in confined space
- Carrying out excavation more than 1.5m deep
- Use of hazardous chemical substance, e.g. Asbestos, Lead
- Demolition work
- Use of explosive and blasting; and
- Piling

2.3.28 Management of Sub-contractors

The contractor shall ensure that all sub-contractors under his/ her control are complying with this SSHSS; the OHSWA requirements; and any relevant legislation which may relate to the activities directly or indirectly.

2.4 OCCUPATIONAL SAFETY

2.4.1 Demolition Work

Prior to any demolition work being carried out, the contractor shall submit a safe working procedure and a detailed engineering survey for approval by the client; acceptance will then be issued to the contractor to proceed with the demolition work. The contractor shall ensure that demolition work complies with Construction Regulation 14 at all times and where there is asbestos to be demolished comply with asbestos regulation 21.

2.4.2 Excavation, Shoring, Dewatering or Drainage

The contractor shall make provision in his/her tender for shoring, dewatering or drainage of any excavation unless otherwise stipulated elsewhere in the contracts. If an excavation is more than 1.5 meters long / deep a safe working procedures shall be submitted for approval by client. A permit will be issued to the contractor to proceed with the excavation work. The contractor shall make sure that:

- a) The excavation/s are inspected before the shift starts and record is kept;
- b) There are no unguarded excavations regardless of depth;
- c) The safe working procedures has been communicated to the workers; and
- d) The safe working procedures is enforced and maintained by the contractor's responsible person at all times.

2.4.3 Explosive and Blasting

The contractor shall ensure that the use of explosive and blasting (where required) be undertaken by a specialist contractor or a sub-contractor with proven track record in the type of work to be performed. A safe working procedure (SWP) shall be submitted for approval by client before commencement of work.

2.4.4 Barricading of construction and walk way

Areas where the restriction or prevention of unauthorized persons/members of public is required

- Name and contact detail of person and Contractor Company that is responsible for the barricading shall be posted on the actual barricading.
- All barricading shall be of the rigid type.
- All openings and edges must be barricaded with solid barricading to withstand an impact of at least 100

kg.

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- Only solid (scaffolding or standalone) barricading with Orange “Snow Netting” will be allowed.
- Physical barriers to prevent persons falling into openings in floors, stairwells, staircases, open-sided buildings and any structure in the course of erection, where dangerous openings exist.
- Contractors must pre-plan the delivery of floor grating, stair treads, landings and handrails to ensure safe access and protection for persons working on structures.
- Contractor will properly barricade their work place separating it from the school using + - 1,8 high diamond fence plus 80% shade netting to avoid been seen by school children and school personnel and always ensure that the barricading is properly in place and offer optimal separation.

N.B The contractors barricading standard procedures must accompany the SHE plan.

2.4.5 Piling

The Contractor shall ensure that piling (where required) is undertaken by a specialized contractor or a subcontractor with proven records in the type of work performed. A SWP shall be submitted for approval to the client, before commencement of this work.

2.4.6 Stacking of Materials

The Contractor shall ensure that a competent person is appointed in writing as stacking supervisor of all materials on site, provide adequate storage area, demarcate storage area and keep the storage and storage areas neat and under control.

Housekeeping means a place for everything and everything in its place.

2.4.7 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 his/her suppliers shall be regulated to a maximum of 30km/h or as directed by notices and signs.

2.4.8 Hazardous Chemical Substances (HCS)

The Contractor shall provide the necessary training and information regarding the use and storage of HCS. The Contractor shall ensure that the use and storage of HCS is carried out as prescribed by the HCS Regulation. The Contractor shall ensure that all chemicals brought to site have a Material Safety Data Sheet (MSDS) on site and the users are made aware of the Occupational hazard and precautions that need to be taken when using the chemicals through training and proof must be available in the safety file. The First Aid Attendant must be made aware of the MSDS and how to treat HCS incidents appropriately.

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2.5 Plant and Machinery

2.5.1 Construction Plant

“Construction Plant” encompasses all types of plant including but not limiting to, cranes, piling frames, boring machines, excavators, draglines, dewatering equipment and road vehicles with or without lifting equipment. The Contractor shall ensure that all such plant complies with the requirements of the OHSA. The Contractor shall inspect and keep records of inspections of the tools and equipment used on site. Only authorised persons are to use machinery under proper supervision. Appropriate PPE and clothing and as specified by the HIRA, shall be provided and maintained in good condition at all times.

2.5.2 Vessels under Pressure (VuP) or Gas Bottles including Operations

The Contractor shall comply with Vessels under Pressure Regulation, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing;
- Providing and maintain appropriate signage in areas where VuP are used;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate firefighting equipment (Fire Extinguishers).

2.5.3 Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, serviced regularly, fire extinguishers located at strategic points in site where the contractor is engaged in construction activity. The Contractor shall keep spare serviced portable fire extinguishers where required. Safety signage shall be posted up in all areas where fire extinguishers are located. The Contractor shall have adequate persons trained or competent to use the Fire Fighting Equipment.

2.5.4 Hired Plant and Machinery

The Contractor shall ensure that any hired plant and machinery brought to the site is safe for use. The necessary requirements as stipulated by the OHSA as well as those that are stipulated by this SSHSS, shall apply. The Contractor shall ensure that operators hired with the machinery undergoes health and safety induction, have their certificate of fitness and competency, have appropriate tool box talks and be issued with the necessary PPE clothing.

2.5.5 Scaffolding/ Working on heights including roof work

Working on heights includes any work, which is 1,5 metres above ground level. The Contractor shall ensure that a detailed HIRA has been undertaken and submitted for approval by the client before commencement on site. The Contractor shall appoint and train a scaffold inspector and erector to control the safety of the scaffolding at all times. The Contractor shall ensure that all scaffolding including freestanding scaffolding, complies with the requirement of the General Safety Regulations and the Construction Regulations.

2.5.6 Fall Risk Position, Structures and Temporary Work

When Working on fall risk position the Contractor shall ensure that a fall protection plan which includes risk assessment and a rescue plan is prepared by a competent person appointed in writing, the Contractor must ensure that the fall protection plan is implemented, amended where and when

necessary and maintained and must comply with the entire construction regulation 10.

When working on structures the Contractor shall ensure that all reasonable practicable steps are taken to prevent an uncontrolled collapse of any new or existing structure or any part thereof which can become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work and must comply with the entire construction regulation 11.

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When working on temporary works the Contractor shall ensure that a temporary work designer is appointed in writing to design, inspect and approve the erected temporary work on site before use and must comply with the entire construction regulation 12.

2.5.7 Lifting Machinery and Tackle

The Contractor shall ensure that lifting machinery and tackle is inspected before use and monthly. There shall be a lifting machinery and tackle inspector who will inspect the equipment daily or before use, taking into account that:

- All lifting machinery and tackle have a safe working load clearly indicated,
- Regular inspection and servicing is carried out,
- Records are kept of inspections and of service certificates,
- There is proper supervision in terms of guiding the loads, which includes a trained banksman to direct and check lifting tackle if it is safe for use.

2.5.8 Ladder and Ladder work

The Contractor shall ensure that all ladders are numbered and inspected regularly keeping records of inspections. It should be noted that Aluminum ladders are preferred to wooden ladders. Wooden Ladders shall not be painted. Painted ladders shall be removed from site.

2.5.9 General Machinery

The Contractor shall comply with the Driven Machinery Regulation and Construction Regulations, which includes inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance and the medical and psychological testing of operators.

2.5.10 Portable Electrical Tools / Explosive Power Tools

The Contractor shall ensure that use and storage of all explosive powered tools and portable electrical tools are in compliance with relevant legislation. The Contractor shall consider that:

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

2.5.11 High Voltage Electrical Equipment

The Contractor shall ensure that, where the work is under, on or near high voltage electrical equipment on site the Electrical Regulations are complied with.

2.5.12 Public Health and Safety

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

Both the client and the Contractor have a duty in terms of the OHS Act to do all that is reasonably practicable

to prevent members of the public and others being affected by the construction processes to be aware and put preventative measures in place. The public or visitor shall go through a brief health and safety induction detailing hazards and risks they may be exposed to what measures are in place to control these hazards and risks.

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2.5.13 Night Work

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

2.5.14 Construction employee's facilities

The Contractor in addition with the facility regulations, 2004 shall provide within reasonable access of every construction site the following clean, hygienic and maintained facilities

1. Shower facilities at least one shower for 15 people
2. Sanitary facility for each sex and for every 30 workers
3. Changing facility for each sex
4. Sheltered eating facility with tables and chairs

The weather conditions might be unsuitable for workers to be exposed to e.g. in rainy season. In terms of the OHS Act, employers have to provide employees with facilities for safekeeping.

2.5.15 Transport of Workers

The contractor shall comply with the National Road Transport Regulations, 2000. The Contractor shall, and not be limited to:

- Not transport person together with goods or tools unless is an appropriate area or section to store them.
- Not transport persons in a non- enclosed (top) vehicle, e.g. truck, there must be a proper canopy (properly covering the back and the top) with suitable sitting area. Workers shall not be permitted to stand or sit at the edge of the transporting vehicle.
- Not transporting workers in a bakkie.
- Provision of a serviced portable fire extinguisher at all times

It is vital that all those exposed to the hazards or risk are made aware of the risk what control measures have been put in place to prevent the occurrence of incidents.

2.6 Occupational Health

Exposed of workers to occupational health and hazards and risk are very common in any work environment, especially in construction. Occupational health hazards and risk exposed is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks. The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust,
- Ingestion through swallowing maybe through food intake.
- Absorption through the skin (pours) e.g. panting or use of thinners.

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2.6.1 Provision of Medical Certificates and Medical Treatment

2.6.2 The Contractor shall be required to:

- Ensure that all his or her employees have valid medical certificates of fitness specific to the construction work to be performed and issued by an occupational health practitioner as defined in the construction regulation 7(8).

The Contractor shall ensure that a facility is identified close to the site for medical treatment under the following situations

- Injury on duty (IOD) referred to here as First Aid, Medicals and Disabling Incidents.
- Emergency Response

2.7. Traffic Accommodation

The Contractor must comply with the requirements of the Road Traffic Act (Act 93 of 1996) as well as the requirements of relevant authorities at all times with attention to signage and flagmen

2.8. Heavy Rain, Lightning and Flooding

The Contractor must take precautions against lightning by the use of lightning protection equipment and earthing mats, all of which shall be properly designed and installed to the satisfaction of the Engineer.

Metalwork and conductors on the Site shall be properly earthed.

No charging or blasting shall take place if the imminent approach of lightning to the Site is forecast. All charged areas shall be immediately evacuated.

Where there is a likelihood of flooding of the workplace measures for the timeous warning of flooding will be put in place. A critical consideration in this regard will be the protection of workers in the pipeline in the event of a flood and the contractor must prepare a Method Statement that will clearly indicate the intended means of addressing this possibility.

2.9 Cranes & Lifting Equipment

Lifting equipment will be designed and constructed in accordance with the manufactures/designers specification as well as generally accepted technical standard and operated, used, inspected and maintain in accordance with the manufactures requirements as well as that of the Driven Machinery Regulation 18.

The Driven Machinery Regulation requires that

- a. Lifting equipment will be clearly and conspicuously marked with the maximum mass load (MML) that it is designed to carry safely. When the MML varies with the condition of use, the table of maximum loads will be used by the driver or operator
- b. Each winch on a lifting machine will at all-time have at least three full turns of rope on the drum when the winch has been run to its lowest limit.
- c. Lifting equipment will be fitted with a brake or other applicable device capable of holding the MML. This brake or device must automatically prevent the downward movement of the load when lifting power is interrupted.
- d. Lifting equipment fitted with load limiting device that automatically arrest the lift when the load reaches its highest safe position or when the mass of the load is greater than the MML.

e. Every chain or rope on a lifting machine that forms an integral part of the machine will 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)

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- Fibre ropes - 10 (ten)
- f. Every hook or load attached device will be designed as such or fitted with a device that will prevent the load from slipping off or disconnecting.
- g. Every lifting machine will 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 will be in accordance with the chains, hook or other attaching devices, sheaves, brake and safety devices forming an integral part of a lifting machine will be inspected every 6 months by a competent person.
- h. All maintenance, repairs, alteration and inspection results will be recorded in a log book and each lifting machine must have its own log book and
- i. No person will be lifted by a lifting machine not designed for lifting persons unless in a cradle approved by an inspector of the Department of Labour.

2.10. Lifting Tackle

The contractor must ensure that only use lifting tackle that meet the following requirement as per client OHS Specification

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

2.11 Working over or close to water

When working over or close proximity to water or similar liquids such as wastewater and sludge the contractor must

- Appoint a competent person in writing to supervise, control and inspect any work on or over or in close proximity of the water as well as the construction, installation and dismantling of caissons and or cofferdams and/ or other support or safety structures
- Proof of competence of the above mentioned appointee will be available on site
- Risk assessment will be carried out by the competent person before any work is undertaken, mitigation measures will be documented, implemented and thereafter evaluated on the daily basics
- Induction and refresher training will be undertaken when necessary
- Measure for the timeous warning of flooding will be place
- Provisions will be made to prevent employees from falling into the water and rescuing of employees in danger of drowning
- Employees exposed to the risk of drowning by failing into the water will be provided with a lifejacket

- Applicable personal protective equipment's such as safety harnesses will be utilized