



# MOHOKARE LOCAL MUNICIPALITY

**BID NUMBER: SCM/MOH/10/2023**

**ZASTRON/MATLAKENG: THE CONSTRUCTION OF A  
SEWER NETWORK IN REFENGKHOTSO FOR 900 ERVEN  
(MIS: 422896)**

**TENDER DOCUMENT**

**VOLUME 2**

February 2023



**Prepared by:**  
Proper Consulting Engineers (Pty) Ltd  
Bloemfontein

NAME OF TENDERER : \_\_\_\_\_

TELEPHONE NO : \_\_\_\_\_ FAX NO : \_\_\_\_\_

TENDER AMOUNT : \_\_\_\_\_

TIME OF COMPLETION : \_\_\_\_\_(Weeks)

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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**BID NUMBER: SCM/MOH/10/2023**

**ZASTRON/MATLAKENG: THE CONSTRUCTION OF A  
SEWER NETWORK IN REFENGKHOTSO FOR 900 ERVEN  
(MIS: 422896)**

## **THE CONTRACT: PART C3 PART 3 (OF 5): SCOPE OF WORKS**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## C3.1: DESCRIPTION OF THE WORKS

### C3.1.1 EMPLOYER'S OBJECTIVE

The old sewer network will be removed and demolished, and a new sewer reticulation network will be constructed to serve 900 erven in Refengkgotso.

Zastron and Matlakeng are fully serviced with a waterborne sewer network. The sewage from Zastron gravitates directly to the waste water treatment works south-east of Matlakeng while the sewage from some 3,450 erven in the Matlakeng gravitates to three sewer pump stations.

There are frequent blockages in the sewer reticulation network of Refengkgotso (situated in Matlakeng as seen in Figure 1 above), which cause sewage to overflow at various manholes and house connections.

An investigation was carried out in June 2012 by Isa & Partners Consulting Engineers in order to determine the cause of the blockages. An additional investigation was carried out in July 2013 by Pro-Plan Consulting Engineers whom provided a comprehensive report on their findings. In short, the investigation revealed that numerous lengths of the pipe network are seriously deformed.

These deformations cause sections of pipe to have a reverse gradient, where there are depositions of silt and other debris. Additionally, there are instances of cracked or broken pipes.


The Employer desires that the construction sewer reticulation networks be of high quality and completed as soon as possible.


### C3.1.2 OVERVIEW OF THE WORKS


The scope of the project entails the reconstruction of the sewer network for 900 erven in Refengkgotso and includes the following:


- Site clearance
- Dismantling and removing of old sewer network
- Pipe trenches
- Bedding and backfill
- Sewer reticulation mains
- Manholes
- Erf connections
- Road crossings and other associated works
- Associate Works
- Health and Safety


The Contractor's obligations under the Contract comprise the construction, completion and maintenance of the Works. The provision of all labour, materials, construction plant, temporary works and everything, whether of a temporary or permanent nature required in and for such construction, completion and maintenance so far as the necessity for providing the same is specified in or reasonably to be inferred in the Contract.


  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### C3.1.3 EXTENT OF THE WORKS

#### C3.1.3.1 Dismantling and removing of old sewer network

The old sewer network that needs to be dismantled and removed is as follows:

- Old Sewer Line — 3800m
- Manholes 65 No.
- Dealing and controlling of the sewer water of 40% of the original sewer systems outfall

See **Figure 1** below indicating the master plan layout of the old network



#### C3.1.3.2 Sewer Reticulation:

The new sewer reticulation network will connect to the existing sewer pump station North East (Pump Station No. 1) of the development.

The sewer reticulation network will consist of the following:

- 110mm dia — 180m
- 160mm dia — 4300m
- 200mm dia — 650m
- 250mm dia — 180m
- 315mm dia — 900m
- Main Outfall Sewer line 315mm dia — 1 000m
- Total Length of pipe — 6210m
- Manholes — 90 No.
- Erf Connections 500 No.

All the reticulation pipes will be Solid Wall Class 34. The reticulation network makes allowance to drain 85% of the erven.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### C3.1.4 LOCATION OF WORKS

The Mohokare Local Municipality is a Category B municipality situated within the Xhariep District in the south-eastern Free State. It is the smallest of three municipalities in the district, making up a quarter of its geographical area.

Zastron is perhaps the best-known of the three villages in this area. At the foot of the Aasvöelberg is the famous Eye of Zastron, a 9m-wide hole through a sandstone rock. Examples of Bushman art can be found on the various farms in the area. Zastron is very close to Lesotho and a great place to start exploring.

Smithfield has a peaceful, splendidly vast, unpolluted countryside, tucked neatly into a horseshoe of hills. Established in 1848 and named after Sir Harry Smith, then Governor of the Cape, Smithfield is the third-oldest town in the Free State province.

Rouxville is in the middle of a number of other interesting places such as Smithfield, Aliwal, Xhariep and Zastron, and boasts the impressive Maloti Mountains as a backdrop. Situated on the N6, Rouxville was founded by Petrus Wepenaar in 1863 on the farm Zuurbult. It was named after Reverend Pieter Roux, who travelled throughout the eastern Free State for many years holding church services for local communities. During the Anglo-Boer War, all of its citizens were called up and the town was completely deserted for two years.

**Area:** 8 776km<sup>2</sup>  
**Cities/Towns:** Rouxville, Smithfield, Zastron  
**Main Economic Sectors:** Agriculture, tourism

See **Figure 2 & 3** below indicating the location of Mohokare Local Municipality,



\* Free State Province



\* Mohokare Local Municipality

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The geographic co-ordinates of Refengkgotso are as follows:

**Latitude:** 30°17'19.88"S

**Longitude:** 27°5'44.59"E

See **Figure 4** below indicating the location of Refengkgotso,



### C3.1.5 CHARACTER OF STRATA AND MATERIALS ON SITE

The specific area of Bergville is characterized by rock of the Karoo dolerite suite. The material consists of a network of dolerite sills, sheets and dykes, mainly intrusive into the Karoo Supergroup. As shown in in **Finger 5** below.



Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The site is located in an area of mountainous topography.

The regions climate is dry sub-humid according to the Thornthwaite Moisture index and considered to be Cfb according to the Köppen-Geiger climate classification. The maximum average temperature is 20.3°C in January and the minimum average temperature of 6.4°C in June. The average rainfall is 843 mm.

The relationship between the mean annual precipitation of 682 mm and the mean annual temperature of 14.0°C of the area suggests that a “moderate” decomposition of the bedrock should be expected (Fookes et al, 1971). The Weinert's 'N' value is between than 2 and 5.

### **C3.1.6 BULK SEWER CONNECTION**

A sewer outfall with a nominal diameter of 315mm will gravitate from the proposed development and connect to the existing sewer pump station No. 1. The location for the bulk sewer outfall connection to the existing pump station is shown on Drawing 6... PCE 302.

### **C3.1.7 TEMPORARY WORKS**

#### **C3.1.7.1 Special Water Hazards Control**

The contours of the site indicate that the area in the south is high raised areas resembling that of a spur/dome like structures. The slopes protruding from these areas are steeper in the south-westerly and south-easterly direction compared to those leading towards the north-west. The surface of the site hosts small/localized excavated area or areas which have been changed through human activity and erosion, these processes have altered the topography of the natural land surface.

The site is located at an elevation between 1640m and 1644m above mean sea level and the area represents slopes between 2° and 6°.

#### **C3.1.7.2 Other Services (Telecommunications, Electricity, etc.)**

The Contractor shall ensure that the position of all existing services affected by the Works have been verified before construction works commences. Should it be necessary to lower or relocate any service, the Contractor will be required to make the necessary arrangements with the relevant service provider and to advise the Employer's Agent accordingly.

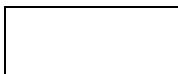
#### **C3.1.7.3 Survey Beacons and Benchmarks**

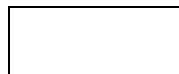
The Contractor shall be responsible for the preservation of all land survey, erf or other pegs, benchmarks and beacons. If damage or disturbance of any such pegs or beacons is caused by the operations of the Contractor or his subcontractors, the pegs are to be replaced by a Registered Land Surveyor at the cost of the Contractor. Information regarding the position of all such pegs will be made available to the Contractor by the Employer's Agent.

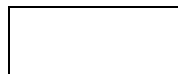
The Contractor is to ensure that no spoil is placed over erf pegs or benchmarks, and that these are adequately protected for the full duration of the Contract.

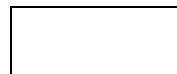
Where disturbances of boundary pegs are unavoidable due to excavation or other operations adjacent to the pegs, the Contractor shall advise the Employer's Agent or his Representative immediately, and agreement is to be reached that the disturbance of the peg is unavoidable and a strict record of such disturbed pegs is to be kept. Such pegs are to be replaced by a Registered Land Surveyor as described above and the Contractor is to submit proof of the cost of replacement of pegs. The Contractor will be reimbursed on a basis pro-rata to the total cost of peg replacement as determined on completion of the Works.

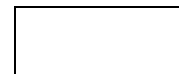
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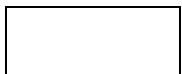
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

#### **C3.1.7.4 Protection of Existing Works**

The Contractor shall take all necessary steps to ascertain the location of existing services before commencing any section of the works and shall exercise the greatest care when working in the vicinity of such services. No more than three weeks and not less than one week before commencing his operations in any particular area, the Contractor shall request in writing from the Employer's Agent the latest available drawings showing the location of services already installed. The Contractor will also be responsible for contacting the various service providers, arranging meetings and verifying all known, as well as possibly unknown, services on site.

The Contractor shall take all necessary steps to protect any existing works whatsoever against damage which may arise as a result of his operations on Site. The Contractor shall bear the cost of the repair of damage to any service, the existence of which could reasonably have been ascertained by him in good time. Where the Contractor is responsible for damage for which repairs have to be carried out by the Employer or an outside Authority, the costs of these repairs will be recovered by means of a deduction from the Contractor's monthly Payment Certificate. The Employer will attend to the payment of monies due to outside authorities, should the Contractor not make direct payment timeously.

#### **C3.1.7.5 Tidying up of the Works**

The Contractor shall take note that progressive and systematic finishing and tidying will form an essential part of this contract. On no account shall spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate in such a manner as to unnecessarily be a hindrance to or impede the activities of other contractors or service providers. In the event of this occurring, the Employer shall have the right to withhold payment for as long as may be necessary in respect of the relevant works in the area(s) concerned.

Upon completion of the Works or any portion thereof, the ground, fences, gates and any structures that have been interfered with are to be carefully restored to their original condition and all rubbish, tools, tackle, plant and material must be removed so as to leave the Site in a clean and orderly condition. No additional payment shall be made for work described in this sub-section.

#### **C3.1.7.6 Wayleaves**

Applications for any wayleaves will be done by the contractor as part of the contract's site hand-over and inspection stage of the project.

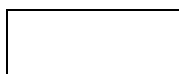
### **C3.1.8 LABOUR ENHANCED CONSTRUCTION METHODS**

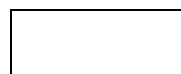
#### **C3.1.8.1 General**

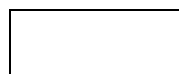
It is the primary intention of this Contract that where possible, work can be carried out by Labour Enhanced Construction Methods. The adoption of this method of construction will in no way lessen the responsibilities of the Contractor nor will it permit any deviation from the technical specifications of the Works.

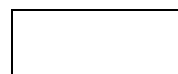
Construction shall be planned so that those operations that can reasonably be done by hand shall be done so. The Contractor shall utilize a core of artisans, supervisors and specialist labour to supervise work on site, with the bulk of the labour force being recruited from the local community. The actual persons to be employed shall be done in consultation with the Community Liaison Officer. For labour intensive construction to be successful and feasible, a high degree of community participation must be exercised throughout the process.

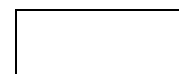
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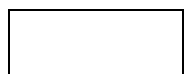
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### C3.1.8.2 Control of Construction

The Contractor shall provide from his own staff, a full time agent on site to the District Municipality Areas, sufficient skilled foremen in the District Municipality Areas to supervise all aspects of the work and sufficient skilled working charge hands and artisans to carry out the work. The "labour force" shall comprise of residents from the different communities where the work is undertaken.

### C3.1.8.3 Labour Enhanced Activities

The following types of activities have been identified as suitable for labour intensive construction methods on this project:

- Accommodation of Traffic.
- Clearing and grubbing.
- Dismantling and removing of old sewer network
- Excavation by hand
- Compacting of bedding
- Erecting of sewer pipe
- Construction of Manholes
- House connections

### C3.1.8.4 Payment

The following be included in the pricing instructions for construction works contracts, if appropriate:

Those parts of the contract to be constructed using labour-intensive methods have been marked in the bill of quantities with the letters L in a separate column filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The sections marked with the letters L are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over- over-ride any of the requirements in the generic labour intensive specification in the scope of works.

No payment will be made for work that is scheduled to be carried out by labour enhanced methods and which is carried out by machine unless specific prior instructions to use mechanical methods have been given by the Engineer.

No claims will be entertained arising from the productivity of the labour force or result from inadequate performance of whatever nature.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## C3.2: ENGINEERING

### C3.2.1 DESIGN SERVICES AND ACTIVITY MATRIX

#### Works designed by, per design stage

<i>Concept, feasibility and overall process</i>	<i>Employer's Agent for Employer</i>
<i>Basic engineering and detail layout to tender stage</i>	<i>Employer's Agent for Employer</i>
<i>Final design to approved for construction stage</i>	<i>Employer's Agent for Employer</i>
<i>Temporary works:</i>	<i>Contractor</i>
<i>Preparation of as-built drawings</i>	<i>Employer's Agent for Employer</i>
<i>(Contractor to provide as-built information to Employer's Agent)</i>	

### C3.2.2 EMPLOYER'S DESIGN

The design of the water and sewer networks will be completed prior to the Assignments being submitted to the Contractors.

All design will be done by the Employer's Agent responsible for the contract management of the assignment, unless otherwise stated.

### C3.2.3 DESIGN BRIEF

The Employers design brief is that all infrastructure are to be designed to comply with the following design standards:

- The design standards as set out in the "Guidelines for Human Settlement Planning and Design" (Red Book)
- Matjhabeng Municipality technical standards and bylaws
- The SANS 1200 series of standardised specifications for civil engineering construction will apply

Designs will be the sole responsibility of the Employer's Agent and must be all acquire the approval of the Employer.

### C3.2.4 DRAWINGS

Additional construction drawings will, in terms of Clause 5.9 of the General Conditions of Contract (2015), be issued to the Contractor by the Employer's Agent / Employer on the commencement date and from time to time as required.

A set of drawings are attached to C4.1 – Book of Drawings.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### C3.3: PROCUREMENT

#### C3.3.1 PAYMENT CERTIFICATES DISPUTES

Should there be a dispute between the value of the certificate submitted by the applicable nominated Sub-Contractor, EME or QSE and the value calculated by the Main Contractor, the nominated Sub-Contractor, EME or QSE will be paid the amount determined by the Main Contractor, all still within 14 days.

A meeting with the Mentor, Clients representative, Main Contractor and appointed Enterprise may then be called to discuss and resolve the differences, the meeting CANNOT be held longer that required, the client's representative must control the duration of the meeting.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## C3.4: CONSTRUCTION

### C3.4.1 APPLICABLE SANS 2001 OR SANS 1200 STANDARDS FOR CONSTRUCTION WORKS

Where reference is made to the standard specifications in the contract document, it shall mean the Standardization Specifications for Civil Engineering Construction (SANS 1200), as published by the South African Bureau of Standards.

The Standard Specifications might not cover all the different types of work included in the Contract. The general requirements for portions of the Works not covered by the Standard Specifications are described in the Particular Specifications under section 4.3.3.


The clauses under section 4.3.3 are numbered "PS" followed by a letter and a number corresponding to the number of the relevant clause in the Standard Specifications. New clauses not covered by clauses in the Standard Specifications, if included here, are also designated "PS" followed by a letter and a number. These numbers follow on the last clause number used in the relevant sections of the Standard Specifications.


### C3.4.2 APPLICABLE NATIONAL AND INTERNATIONAL STANDARDS


For the purpose of this Contract, the latest issues of the following Standard Specifications for Civil Engineering Construction, applicable at the date of tender advertisement, shall apply.


#### CIVIL AND STRUCTURAL ENGINEERING


SANS 1200 A	:	General
SANS 1200 AB	:	Employer's Agent's Office
SANS 1200 C	:	Site Clearance
SANS1200 D	:	Earthworks
SANS1200 DA	:	Earthworks (Small Works)
SANS1200 DB	:	Earthworks (Pipe trenches)
SANS1200 DK	:	Gabions and Pitching
SANS1200 DM	:	Earthworks (Roads; Subgrade)
SANS 1200 G	:	Concrete (Structural)
SANS1200 GA	:	Concrete (Small Works)
SANS 1200 L	:	Medium Pressure Pipelines
SANS1200 LB	:	Bedding (Pipes)
SANS1200 LC	:	Cable Ducts
SANS1200 LD	:	Sewers
SANS1200 LE	:	Stormwater Drainage
SANS 1200 LF	:	Erf Connections (Water)
SANS1200 M	:	Roads (General)
SANS1200 ME	:	Sub-base
SANS 1200 MF	:	Base
SANS1200 MH	:	Asphalt Base and Surfacing
SANS1200 MJ	:	Segmented Paving
SANS1200 MK	:	Kerbing and Channelling
SANS1200 MM	:	Ancillary Roadworks


  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### **C3.4.3 AMENDMENTS TO THE STANDARD SPECIFICATIONS**

The following variations and additions to the Standard Specifications will be applicable to this Contract.

#### **C3.4.3.1 PARTICULAR 1 GENERIC SPECIFICATIONS**

Should any requirement of section C.3.4.3.1 conflict with any requirement of the Standardised Specifications then the requirements of section C.3.4.3.1 shall prevail.

**C3.4.3.1.1** The term "project specifications" appearing in any of the SANS 1200 Standardised Specifications must be replaced with the terms "scope of work".

**C3.4.3.1.2** The variations and additions to the Standard Specifications are as follow.

### **C3.4.3 PROJECT SPECIFICATIONS RELATING TO STANDARD SPECIFICATIONS**

This part of the project specifications deals with matters relating to the standard specifications. Where reference is made in the standard specifications to the project specifications this part shall also contain the relevant information e.g. the requirements where a choice of materials or construction methods are provided for the standard specifications.

In certain clauses the standard specifications allow a choice to be specified in the project specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains some additional specifications and amendments of the standard specifications required for this particular contract.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## **PSA GENERAL (SANS 1200 A)**

### **PSA5 CONSTRUCTION**

The rates shall cover the cost of supplying all materials and equipment necessary and for painting and reflectorizing, protection, setting out and pre-marking of the road markings.

#### **PSA 5.2 Watching, Barricading and Lighting**

Add the following

“The contractor shall comply in all aspects with the requirements of the Occupational Health and Safety Act (Act 85 of 1993)”.

#### **PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES**

##### **PSA 5.4.1 Location of existing services**

Before underground or excavation work is carried out, the contractor shall ascertain the presence and position of all services likely to be damaged or interfered with by his activities. He shall obtain up-to-date plans from the Employer's Agent for this purpose, showing the position of services in the area where he intends to work. As services can often not be reliably located from such plans, the contractor shall determine the exact position of such services by means of careful hand excavation where necessary in order to expose the services at the positions of possible interference by his activities. This procedure shall also be followed in respect of services not shown on the plans but believed to be present.

All such services, the positions of which have been located at the critical points, shall be designated as 'known' services and their positions shall be indicated on a separate set of Drawings, a copy of which shall be furnished to the Employer's Agent.

While he is occupying the Site, the contractor shall be liable for all damage caused by him to known services as well as for consequential damage, whether caused directly by his operations or by the lack of proper protection.

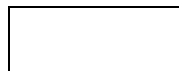
##### **PSA 5.4.2 Protection during construction**

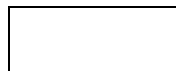
The contractor shall exercise all the necessary care to prevent damage to known services during construction. Where applicable, major excavating equipment and other plant shall not be operated dangerously close to these services. Where necessary, excavation in close proximity to these services shall be carefully carried out with suitable hand tools, excluding picks wherever their use could damage the services. No additional payment will apply to such more difficult work.

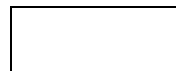
Services left exposed shall be suitably protected from damage.

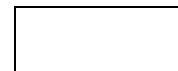
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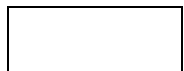
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### **PSA 5.4.3 Alterations and repairs to existing services**

Unless the contrary is clearly specified or ordered, the contractor shall not carry out alterations to existing services. When this is necessary, the contractor shall inform the Employer's Agent who will either make arrangements for such work to be executed by the owner or the service, or instruct the contractor to make such arrangements himself.

When existing services are damaged by the contractor, he shall immediately inform the Employer's Agent, or when this is not possible, the relevant authority, and obtain instructions as to who should carry out repairs. In urgent cases the contractor shall take the necessary steps to minimize damage to and interruptions of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted.

The Employer will accept no liability for damages due to a delay in having such alterations or repairs affected. The contractor shall provide all reasonable opportunity, access and assistance to persons carrying out alterations or repairs of existing services."

### **PSA 5.9 Accommodation of Traffic**

Temporary traffic signs shall be erected at all open excavations and trench crossings.

The **number and layout** of the traffic signs shall comply with the Site Manual entitled "**Safety at Roadworks in Urban Areas**", as published by the Department of Transport.

Traffic signs shall have a yellow background with either a red or black border.

### **PSA 5.10 SITE MEETINGS**

The contractor will be required to attend regular site meetings, normally held once a month to discuss general progress, quality of work, problems, claims, payments, etc., but not matters concerning the day-to-day running of the Contract."

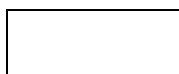
### **PSA 7 TESTING**

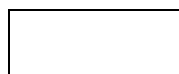
#### **PSA 7.2 Approved Laboratories**

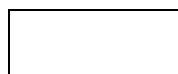
Delete the clause and replace with the following

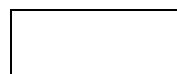
All checks/testing conducted by the contractor and additional acceptance control testing as required by the Employer's Agent, will be done by a South African National Accreditation System (SANAS) accredited laboratory.

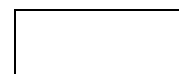
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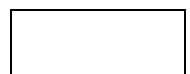
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

## **PSA 8 MEASUREMENT AND PAYMENT**

### **PSA 8.3.2 Facilities for the Contractor**

The tendered rate shall include all costs as listed in SANS 1200 A 8.3.2.2 (a) to (i)

### **PSA 8.4 Scheduled Time-Related Items**

#### **PSA 8.4.1 Contractual Requirements**

The contractor shall tender a lump sum in the Schedule of Quantities to cover his time related establishment costs. The amount tendered and paid shall be full compensation to the Contractor for:

- (i) The maintenance of his whole organization as established for this Contract.
- (ii) The maintenance of all insurances, indemnities and guarantees required in terms of the Conditions of Contract or Tender where applicable.
- (iii) Compliance with all general conditions and requirements which are not specifically measured elsewhere for payment in these Contract Documents.

The Contractor shall tender a lump sum for the abovementioned items. Payment of the lump sum shall be made monthly in compliance with the method laid down in Sub-clause 8.2.2 of SANS 1200:A.

The contractor will not be paid Time-Related Preliminary and General charges for any Special Non-Working Days, as stipulated in the Appendix, which shall be deemed to have been allowed for in his rates.

#### **PSA 8.4.2 Adjusted Payment for Time-Related Items**

The payment to the contractor for Time-Related Items shall be adjusted in accordance with the following formula in the event of the Contract being extended by means of a variation order:

Sum of Tendered amounts  
for Time Related Items x  $\frac{\text{Extension of Time authorised by variation order}}{\text{Tender contract period}}$

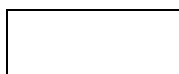
\*For the purposes of applying this formula "Extension of Time" will exclude the contractor's December/January close-down period, if applicable.

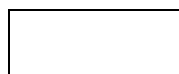
The abovementioned adjustment of the payment for Time-Related Items shall be made in the Completion Payment Certificate and shall be the only payment for additional Time-Related costs irrespective of the actual period required to complete the Contract including its authorised extensions.

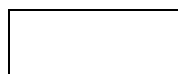
In the case of fixed price contracts, the amount by which the Time-Related Items is adjusted shall not be subject to the Contract Price Adjustment formula.

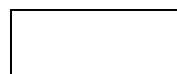
In the case of contracts subject to Contract Price Adjustment the amount by which the time-related items are adjusted shall be subject to the Contract Price Adjustment formula.

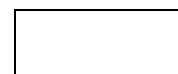
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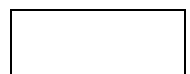
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

**PSA 8.4.2.2 (k) Maintaining eating facilities for workers** .....Unit:  
Month

Maintaining eating facilities for workers for duration **of contract**

#### **8.4.5 Other Time-related Obligations**

**PSA 8.4.5.1 Provision of Security Personnel** ..... Unit: month

This item shall cover the cost of providing such security personnel the Contractor deems appropriate, taking cognizance of the location of the site and the historical record of incidents of crime in the area.

**PSA 8.4.6 Compensation in terms of Clause 5.12.2.4 of the General Conditions of Contract - 2015 and Clause 9.1.4 of the Contract Data, for delays incurred**

- (a) Plant .....Unit: Sum per working day
- (b) Labour .....Unit: Sum per working day
- (c) Supervision .....Unit: Sum per working day
- (d) Other services, facilities etc.  
not covered by (a), (b) and (c) .....Unit: Sum per working day

The sum tendered for each item shall cover the full and final standing cost per day of delaying the specified resource or facility and no additional compensation shall apply, notwithstanding any provisions to the contrary in the contract documents, or in respect of any extension of time granted in relation to the circumstances described in Clauses 5.12.2.4, 9.1.1 and 9.1.2 of the General Conditions of Contract - 2015.

For the purposes of calculating the total delay, a working week shall be held to consist of five working days and a working day is 9 hours.

Payment for partial standing of any of the scheduled resources for a day or part thereof, or the standing of a complete resource for a part day, will be made pro-rata in proportion to an appropriate factor assessed by the Employer's Agent.

The amount by which compensation for delays is adjusted shall be subject to the contract price adjustment formula as defined in the General Conditions of Contract - 2015.

This payment item shall only apply to delays which in the opinion of the Employer's Agent are due to the circumstances described in Clauses 5.12.2.4, 9.1.1 and 9.1.2 of the General Conditions of Contract - 2015.

The cost of delays incurred for all other circumstances shall be treated as provided for in the General Conditions of Contract -2015.

The provision of this clause shall in no way prejudice the rights of either the Employer or the Contractor to terminate the contract in terms of the provisions in clause 9 of the General Conditions of Contract - 2015.

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ContractorWitness 1Witness 2EmployerWitness 1Witness 2

The Contractor shall take note that no payment will be considered for any additional cost incurred in protecting his plant and site establishment, as well as for costs incurred in respect of damage to constructional plant and equipment.

**PSA 8.4.6.1 Standing Time / Delays Due to Community Disruption \***

- (a) Plant .....Unit: Sum per working day
- (b) Labour .....Unit: Sum per working day
- (c) Supervision .....Unit: Sum per working day
- (d) Other services, facilities etc.  
not covered by (a), (b) and (c) .....Unit: Sum per working day

The sum tendered for each item shall cover the full and final standing cost per day of delaying the specified resource or facility and no additional compensation shall apply, notwithstanding any provisions to the contrary in the contract documents, or in respect of any extension of time granted in relation to the circumstances. This payment item shall only apply to delays which in the opinion of the Employer's Agent are due to the circumstances described in Clauses 5.12.2.4 resulting from community disruptions.

For the purposes of calculating the total delay, a working week shall be held to consist of five working days and a working day is 9 hours.

Payment for partial standing of any of the scheduled resources for a day or part thereof, or the standing of a complete resource for a part day, will be made pro-rata in proportion to an appropriate factor assessed by the Employer's Agent.

The amount by which compensation for delays is adjusted shall be subject to the contract price adjustment.

The cost of delays incurred for all other circumstances shall be treated as provided for in the General Conditions of Contract 2015.

The provision of this clause shall in no way prejudice the rights of either the Employer or the Contractor to terminate the contract in terms of the provisions in clause 9 of the General Conditions of Contract 2015.

**PSA 8.5 Sums Stated Provisionally by Employer's Agent**

**PSA 8.5.1 Additional Testing required by the Employer's Agent .....Unit: Provisional Sum**

The provisional sum provided in the Bill of Quantities is to cover the payment of the SANAS registered soils laboratory to conduct any additional tests as directed by the Employer's Agent.

**PSA 8.5.2 Overhead, charges, profit etc. on item PSA 8.5.1 .....Unit: %**

The percentage tendered shall be paid to the Contractor on the actual amount paid to the soils laboratory and shall cover the following:

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- All costs involved in arranging the tests with the laboratory.
- Setting out the positions for the tests to be taken by the laboratory as indicated by the Employer's Agent.
- Making good all test holes.
- The cost of all overheads, charges and profits.

**PSA 8.5.3 Relocation of municipal services .....Unit: Provisional Sum**

The provincial sum is to cover the costs payable by the contractor to service providers, on the Employer's Agent's instruction only, for the relocation of existing services which impede construction activities.

**PSA 8.5.4 Overhead charges, profit, etc on item PSA 8.5.3 .....Unit: %**

The percentage tendered shall be paid to the contractor on the actual amount paid to the service provider and shall cover the cost of contacting the set-vice provider and arranging for the relocation of the services, as well as briefing the service provider on the presence of other underground services which may affect their work, ensuring that the service providers workmen are correctly inducted on site and maintaining a competent supervisory presence whilst relocating work takes place.

**PSA 8.5.5 Provide cell phone for Employer's Agent use .....Unit: Provisional Sum**

**PSA 8.5.6 Overhead charges, profit, etc. on item PSA8.5.5 .....Unit: %**

The Employer's Agent will provide details of requirements in this regard. The contractor will provide cell phone equipment that meets the requirements. The cell phone will revert back to the contractor on completion of the contract. The contractor will be responsible for insurances and other cost relating to the cell phone.

**PSA 8.5.7 Community Liaison Officer (CLO) remuneration .....Unit: Provisional Sum**

The provisional sum is to cover the cost of the CLO's monthly salary for the duration of the Contract

**PSA 8.5.8 Overhead charges, profit, etc. on item PSA 8.5.7 .....Unit: %**

The percentage tendered shall cover the office administration of the CLO's employment contract as well as on site management of the CLO, for the duration of the contract.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**PSA 8.5.9      Student remuneration .....Unit: Provisional Sum**

The provisional sum is to cover the cost of a student seeking experiential training to assist the SMME's on site on a daily basis at a maximum monthly salary of R 5000 per month the duration of the contract.

**PSA 8.5.10      Overhead charges, profit, etc. on item PSA 8.5.9 .....Unit: %**

The percentage tendered shall cover the office administration of the student's employment contract as well as on site management of the student, for the duration of the contract.

**PSA 8.5.11      Construction Mentor .....Unit: Sum**

The provisional sum shall cover the cost of the Construction Mentor to be employed on a half monthly basis per month for the duration of the contract.

The construction mentor shall report to site 16 hours a week, this does not say the mentor MUST spend a full day (8 hours) on site but the 8 hours can be divided depending on the need. If the mentor spends more than 8 hours on site, this needs to be recorded by the contractor stating reasons for which the time was spent. These hours DO NOT include monthly progress meetings, where the mentor tables an independent report on progress and growth of SMMEs SMME construction mentor requirements:

- The mentor to have an accredited National Diploma in the Built Environment OR a minimum of 10 years relevant working experience in the construction industry;
- Shall have the ability to transfer skills and assess SMME capabilities;
- Competent in rate build-up;
- Competent in commercial aspects of construction contracting;
- Competent in construction contracting administration; and
- It's an added advantage if he/she is registered with a professional body in the built environment.

**PSA 8.5.12      Overhead charges, profit, etc. on item PSA 8.5.11 .....Unit: %**

The percentage tendered shall cover overhead costs, for the duration of the contract.

**PSA 8.5.13      Employment of Local Labour .....Unit: Sum**

The sum shall cover the cost for drawing up temporary employment contracts, complying with EPWP reporting and & management of local (C5.4 & C5.4.2).

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**PSA 8.8 Temporary Works**

**PSA 8.8.2 Accommodation of Traffic**

A specific item has been included in the Schedule of Quantities to allow the Contractor to cover the costs of accommodating traffic on the adjacent roads at all times.

The sum shall cover the effect on the Contractor's programme, delay in the works, damage to or loss of a deviation, supply, erection and moving and re-erection of all necessary traffic signs, drums, barricades, the provision of flagmen and any other operation or equipment, plant or labour necessary.

Temporary traffic signs shall be erected at all diversions. The number and layout of the traffic signs shall comply with the Site Manual entitled "**Safety at Roadworks in Urban Areas**", as published by the Department of Transport. Traffic signs shall have a yellow background with either a red or black border. Payment under this item will be made on a pro-rata basis to the duration of the contract.

Flagman (costs for flagman to be included in tendered amount)

The tendered rate shall include full compensation for two flagman who is required to control traffic by way of flags or portable STOP and GO-RY signs and shall include the provision of flags and safety jackets.

**PSA 8.8.4 Existing Services**

Add the following:

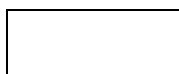
"The rate to expose existing services shall include excavation by hand, arranging for the service authority to be in attendance, if required, recording, the position and level of the service when found, backfilling, and compaction to 90% Mod AASHTO supervision, plant and any equipment required to execute the work."

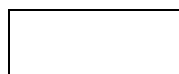
**PSA 8.8.7 Prime Cost sums**

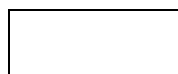
(a) Dealing with water .....Unit: Sum

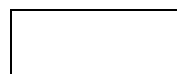
The sum shall cover the cost for the provision, operation, maintaining and removal of all plant and materials required to deal with any water anywhere on site as required in terms of Subclause 5.1.3 of SABS 1200 D and Subclause 5.1.2 of SABS 1200 DB. No additional payment will be made for "Special water hazards".

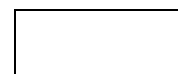
The sum shall cover the cost of providing the necessary plant or materials, or both, fully erected and operative on the Site, the cost of operating and maintaining pumps, well points, sheeting, close timbering, and other equipment, as applicable, for 24 hours a day, 7 days a week, throughout the period during which the facilities are required, and the cost of removing such goods and restoring the Site to its original condition on completion of that part of the project for which the temporary works were erected.

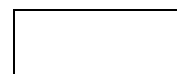
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

Two equal payments will be made, one with the first and the other with the last payment certificate.

(b) Dealing with sewer water from old sewer network .....Unit: Sum

The sum shall cover the cost for the provision, operation, maintaining and removal of all plant and materials required to deal with any sewer water anywhere on site from the old network as required in terms of Subclause 5.1.3 of SABS 1200 D and Subclause 5.1.2 of SABS 1200 DB. No additional payment will be made for "Special water hazards".

The sum shall cover the cost of providing the necessary plant or materials, or both, fully erected and operative on the Site, the cost of operating and maintaining sewer pumps, well points, sheeting, close timbering, and other equipment, as applicable, for 24 hours a day, 7 days a week, throughout the period during which the facilities are required, and the cost of removing such goods and restoring the Site to its original condition on completion of that part of the project for which the temporary works were erected.

Two equal payments will be made, one with the first and the other with the last payment certificate.

**PSA 8.9**

**Compliance with OHS Act and Regulations  
(Including the Construction Regulations 2014) .....Unit: sum**

The Contractor shall comply with the requirements of the Health and Safety Specification under Section 4.3 of the document. The tendered rates for the different H&S obligations shall include full compensation to the contractor for compliance with all the requirements of the OHS Act and Regulations (including the Construction Regulations 2014) at all times for the full duration of the Contract. The successful tenderer shall provide the Employer's Agent with a complete breakdown of his tendered rates.

The time-related sums tendered will be paid to the contractor in equal pro-rata monthly amounts subject to proper/substantial compliance. Compliance will be monitored by the H&S Agent through regular monitoring inspections and audits.

Any excavation needs barricaded according to the Department of Labour specifications and standards."

**PSA 8.10**

**Testing of Materials and Workmanship .....Unit: No.**

When instructed to do so by the Employer's Agent, the Contractor shall arrange with an approved SANAS laboratory to carry out various tests on materials or elements submitted by the contractor for testing. Tests shall be carried out strictly in accordance with the relevant SANS specification. The Employer's Agent will be afforded open access to the laboratory concerned and will be allowed to inspect the laboratory's premises and methods of testing, if so desired.

The rates submitted shall include for the full cost of the test, including all transport costs, sampling and storing.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**"PSA 8.11 Compliance with requirements of the Environmental Management Plan (EMP) .....Unit: sum**

The contractor shall comply with the requirements of the Environmental Management Plan when relevant. The contractor shall tender the lump sums in the Bill of Quantities to cover his initial obligations in respect to the Occupational Health and Safety act and Construction Regulations. The tendered sums shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and Regulations (including the Construction Regulations 2014) at all times for the full duration of the Assignment. The sums as listed will be paid to the Contractor in equal monthly amounts subject to proper/substantial compliance. Compliance will be monitored by an Environmental Control Officer through regular audits."

**"PSA 8.12 HIV Aids Awareness .....Unit: sum**

The contractor shall comply with the requirements of the HIV Aids Specification as specified by the HIV/AIDS Awareness Programme and Training Manual as published by Department of Public Works, October 2004. The sums will be paid to the contractor in equal monthly amounts subject to proper/substantial compliance. Compliance will be monitored by regular audits."

**"PSA 8.13 Provision of Security Personnel at Site offices, pump stations, valve chambers, buildings works etc .....Unit: sum**

This item shall cover the cost of providing such security personnel the Contractor deems appropriate, taking cognizance of the location of the site and the historical record of incidents of crime in the area."

**"PSA 8.14 Temporary protection of works, excavations, trenches etc.....Unit: sum**

This item shall cover the cost of providing such security personnel the Contractor deems appropriate, taking cognizance of the location of the works and the historical record of incidents of crime in the area. Any excavation needs barricaded according to the Department of Labour specifications and standards"

**"PSA 8.15 c) Engineer's accommodation and transportation charges...  
Unit: Provisional Sum**

Payment under subitem 1.3.3 shall be the amounts actually paid for the Engineer's Accommodation charges and shall be made in accordance with the provisions of the Conditions of Contract.

The percentages tendered for subitem 1.3.4 shall be the percentages of the amounts actually reimbursed to the contractor under subitems 1.3.3 shall be in full and final compensation in respect of the contractor's handling costs, profit, mentoring, record-keeping, reporting and all other charges in connection with providing the services.

Payment under subitem 1.3.3 shall be the amounts actually paid for the Transportation for the engineer's labourers and shall be made in accordance with

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

the provisions of the Conditions of Contract.

The percentages tendered for subitem 1.3.4 shall be the percentages of the amounts actually reimbursed to the contractor under subitems 1.3.3 shall be in full and final compensation in respect of the contractor's handling costs, profit, mentoring, record-keeping, reporting and all other charges in connection with providing the services."

**PSA 8.16**

**e) Engineer's additional Monitoring and Quality Control Charges**

.Unit: Provisional Sum

Payment under subitem 1.3.5 shall be the amounts due to the Engineer's for additional site monitoring and quality control charges for 3 months and shall be made in accordance with the provisions of the Conditions of Contract.

The percentages tendered for subitem 1.3.6 shall be the percentages of the amounts actually reimbursed to the contractor under subitems 1.3.5 shall be in full and final compensation in respect of the contractor's handling costs, profit, mentoring, record-keeping, reporting and all other charges in connection with providing the services."

**PSA 8.17**

**Accredited Training**

(a) Engineer's accommodation and transportation charge.Unit: Provisional Sum

The following should be displayed on the quotation: Course detail and training scope that is offered, Amount per person, Minimum number of people to attend, Maximum number of people to attend and NQF level of course (if applicable).

Payment under subitem 1.3.7 shall be the amounts actually paid to the accredited training service provider and shall be made in accordance with the provisions of the Conditions of Contract.

The percentages tendered for subitem 1.3.8 shall be the percentages of the amounts actually reimbursed to the contractor under subitems 1.3.7 shall be in full and final compensation in respect of the contractor's handling costs, profit, mentoring, record-keeping, reporting and all other charges in connection with providing the services."

**PSAB**

**EMPLOYER'S AGENT'S OFFICE**

**PSAB 3**

**MATERIALS**

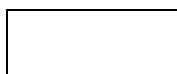
**PSAB 3.1**

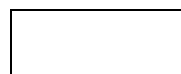
**Nameboards**

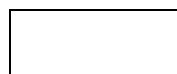
Delete: "The standard board of the South African Institution of Civil Engineers" and replace by "the standard name-board of the Engineer's Department, in accordance with Drawing PSA 2 of the Engineer's Department's Standard Details revised edition, July 2007".

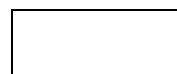
Add: "In addition, the •contractor shall provide and erect two Identity Boards in accordance with the drawing included for in the Book of Drawings". They shall be placed and moved, as directed by the Employer's Agent's Representative.

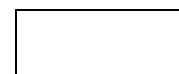
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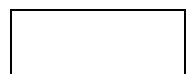
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### **PSAB 3.2 Office Building(s)**

Add the following:

"As an alternative, the contractor may supply a 6m x 2,5x 2,5m high marine container, specially converted for use as an office. If this type of office is supplied, it shall be protected by an elevated waterproof roof, constructed over the container, and approximately 300 mm above the top of the container. The office shall be fitted with an air-conditioning unit. The office shall be furnished with a desk, book shelf and 4 chairs.

### **PSAB 3.3 Car Port**

A car port of minimum size 6 x 3m shall be erected abutting the Employer's Agent's office. Height to underside of roof beams shall be 2.3m minimum. The roof of the carport shall be constructed using corrugated galvanized steel sheeting, or similar water-resistant materials. The sides of the carport shall be open. The contractor shall also provide a floor to the carport, and a pathway between the carport and the Employer's Agent's office, constructed of a 50 mm thick layer of 19mm concrete stone.

### **PSAB 4 PLANT**

#### **PSAB 4.1 Telephone**

The Contractor shall provide a cellular telephone to the Engineers Representative and shall settle all the accounts for official telephone calls during the construction period.

#### **PSAB 4.2 Computers**

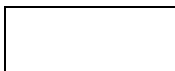
The Contractor shall supply the Engineer with two laptops and Windows Office 2016 Home and Business Edition packages at the commencement of construction, the laptops shall have the following or similar specifications:

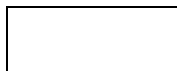
**Acer® Travelmate P2 Series Notebook:** TMP259-MG-7706 - Intel® Core™ i7-6500U, 3.1Ghz 8GB Low Voltage DDR4 Memory, NVIDIA® GeForce® 940MX 2G-GDDR5, 8 GB DDR4 Memory, 1TB HDD, 15.6" Full HD 1920 x 1080, high-brightness Acer ComfyView™ LED-backlit TFT LCD, Dual-channel DDR4 SDRAM support: Up to 16 GB of DDR4 system memory, upgradable to 32 GB using two soDIMM modules, 8x DVD-Super Multi double-layer drive, HD camera with 1280 x 720 resolution, 720p HD audio/video recording, and High dynamic range imaging (HDR), Windows 10 Pro 64-bit, Intel® Dual Band Wireless-AC, 802.11ac/a/b/g/n wireless LAN with Acer Nplify™, featuring 2x2 MIMO technology

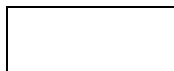
#### **PSAB 4.3 Printer**

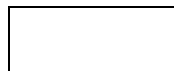
The Contractor shall supply the Engineer with a printer at the commencement of construction and ensure the proper working conditions of the printer throughout the duration of the contract, the printer shall have the following or similar specifications:

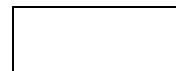
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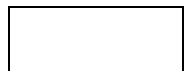
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

HP DESKJET 4675 INK ADVANTAGE ALL IN ONE PRINTER or similar approved.

Print speed up to 9.5 ppm

Paper handling: 100-sheet input tray

connectivity: standard 1 Hi-speed USB 2.0;1 wi-fi 802.11n

Fax capability

Mobile Printing

2-Sided Printing

35-page Automatic document feeder

4.5 cm(2.2 Inch) touchscreen

**PSAB 5 CONSTRUCTION**

**PSAB 5.5 Survey Assistants**

The Employer's Agent' Representative will occasionally need the assistance of a survey laborer to help with testing, survey, etc., envisaged at approximately 4 hours (non-consecutive) per week.

**PSAB 8 MEASUREMENT AND PAYMENT**

**PSAB 8.2.3 Survey Assistant**

Payment for the survey assistant shall be included in the rate for Tools and equipment.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**PSC SITE CLEARANCE**

**PSC 3 MATERIALS**

**PSC 3.1 Disposal of Material**

Add the following to SANS 1200 C Clause 8.2.1:

"Debris arising from clearing and grubbing or from the demolition of structures on site shall be removed by the contractor and disposed of at a Municipal approved tip-site.

The rate tendered shall allow for any fees to be paid at the tip-site.

**PSC 3.2 Take down existing fences and re-erecting as directed including storage**

Rate shall cover the cost of taking down the fencing material, storing and re-erecting. The contractor shall be responsible of taking photographic evidence of the condition of the fence before removal and erect it to at least the same standard as before.

**PSC 8 MEASUREMENT AND PAYMENT**

**PSC 8.1 Clear and Grub (Sub-clause 8.2.2)**

The area to be cleared shall be the length of the works and will be of sufficient width of minimum 1.5 meters to enable the works to continue. The rate for clear and grub shall include for the transport of materials for an unlimited free haul distance for disposal.

**PSC 8.2 Removal and Conservation of Topsoil**

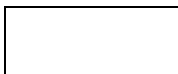
The rate for return of topsoil to borrow pit areas shall cover the cost of loading from stockpile, transporting and spreading as specified and shall be extra over the rate for stripping and stockpiling.

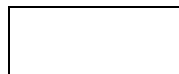
**PSC 8.2.13 Take down existing fences and re-erecting as directed including storage**  
The rates to cover taking down, re-erect or dispose within 3km free haul. Unit: m

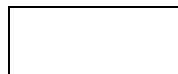
**PSC 8.2.14 Dismantle and remove concrete manholes** .Unit: No.

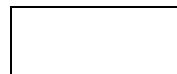
The sum shall cover the cost of providing the necessary plant or materials, as well as personnel, to dismantle, lift, and dispose of each manhole in the old sewer network in all depths and manhole sizes, as determined by the Engineer on site. The rate must include full compensation for excavating in the various classes of excavation, loading, transporting the material (concert rings, etc.) over the haul distance, off-loading, and disposal of the material at a designated dumpsite. The rate must also include the additional cost of precautionary measures required during the excavation in the surrounding area.

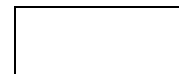
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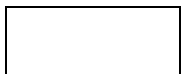
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

**PSC 8.2.14      Dismantle and remove old sewer pipelines (not encased in concrete)**

.Unit: m.

The sum shall cover the cost of providing the necessary plant or materials, as well as personnel, to dismantle, lift, and dispose of each sewer pipe in the old sewer network in all depths and pipe sizes, as determined by the Engineer on site. The rate must include full compensation for excavating in the various classes of excavation, loading, transporting the material (concrete rings, etc.) over the haul distance, off-loading, and disposal of the material at a designated dumpsite. The rate must also include the additional cost of precautionary measures required during the excavation in the surrounding area.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**PSD                      EARTHWORKS**

**PSD 3                    MATERIALS**

**PSD 3.1                Classification for Excavation Purposes**

Delete SANS 1200:D Clause 3.1 and replace with the following:

**PSD 3.1.1            Method of Classifying**

Replace with the following:

"The contractor may use any method he chooses to excavate any class of material but his chosen method of excavation shall not determine the classification of the excavation. The Employer's Agent or his Representative will decide on the classification of the materials. In the first instance, classification will be based on inspection of the material to be excavated and on the criteria given in PSD 3.1.2(a) and (b)."

**PSD 3.1.2            Classes of Excavation**

Replace with the following:

"All materials encountered in any excavation for any purpose including restricted excavation will be classified as follows:

(a) Hard rock excavation

Hard rock excavation shall be excavation in material (including undecomposed boulders exceeding 0.17 cubic metres in individual volume) that cannot be efficiently removed without blasting, wedging and splitting, or hydraulic hammers.

This classification includes materials such as:


- solid un-fractured rock occurring in bulk
- solid ledges thicker than 200mm
- igneous rock intrusions
- cemented sedimentary rocks.


(b) Soft excavation


Any material which can be removed by bulldozers or backhoes, shall be classified as soft excavation.


Soft excavation shall be material not falling into the category of hard rock excavation


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Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

**PSD 5 CONSTRUCTION**

**PSD 5.2 Methods and Procedures**

**PSD 5.2.1 Site Preparation**

**PSD 5.2.1.2 Conservation of Topsoil**

Add the following to Clause 5.2.1.2:

Topsoil shall not be stockpiled higher than 2,0m. Care shall be exercised to prevent the contamination and compaction of topsoil in any way especially by vehicles travelling over such material."

Topsoil shall consist of fertile, friable soil of loamy character obtained from areas having a good coverage of natural vegetation, preferably grasses. It shall be free from deleterious matter such as large roots, stones, refuse, stiff or heavy clays and the seeds of noxious weeds.

Topsoil shall be obtained from wherever suitable material occurs on the site or borrow areas. The Employer's Agent shall indicate the areas from where topsoil is to be removed, and unless otherwise permitted by the Employer's Agent topsoil shall be taken from within 400 mm of the surface. If the Contractor fails to stockpile the topsoil indicated, he shall obtain suitable topsoil from other sources at no extra cost to the Employer.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**PSDB EARTHWORKS (PIPE TRENCHES)**

**PSDB 3 MATERIALS**

**PSDB 3.1 Classes of Excavation**

Delete the contents of Clause 3.1 and replace with the following:

" The classification shall be as described in PSD 3.1".

**PSDB 3.5 Backfill Materials**

Delete the contents of Clause 3.5(b) and replace with the following:

"Materials used in the reinstatement of trenches beneath or within a new roadway, up to underside of the road layers, shall be 37,5mm basecourse quality material conforming to SABS 1200 MF compacted in 150mm layers to 98% Mod. AASHTO density. The area subject to loads from road traffic shall be held to apply for a width of 150mm beyond the back of kerb."

**PSDB 5 CONSTRUCTION**

**PSDB 5.1 Unstable trench bottom**

The Engineer may, upon consideration of the condition of the trench bottom, particularly with regard to the properties of the soil materials, order the use of a crushed stone layer in order to provide a stable platform for placing of the pipe bedding and laying the pipe in certain sections of the trenches. The stone layer shall consist of 19 mm single-sized crushed stone, and shall have a specified thickness of 150 mm over the specified minimum base width.

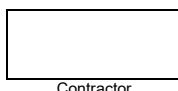
Should the material in the trench bottom or the bedding material be of such a nature that it can penetrate the stone layer, the Engineer may instruct the Contractor to enclose the stone layer completely within a geotextile filter blanket which shall be of the non-woven type, with a mass of 150 to 200 g/m<sup>2</sup> and with a strength of at least 5.9 kN/m in all directions.

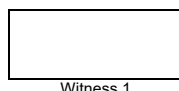
**PSDB5.3 Depositing material excavated from trench**

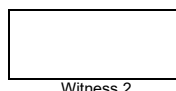
Unless otherwise ordered by the Engineer, all excavated material shall be so deposited as not to interfere with or endanger the Works (for example, by causing the sides of the excavation to collapse), other property or traffic. The toe of the bank of excavated material shall be trimmed well back from the edge of the trench so as to leave a minimum 0,6 m clearance between the toe of the bank and the edge of the trench. The Contractor shall keep this strip clear of excavated material at all times.

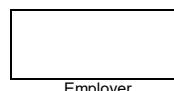
The Engineer may, in terms of Sub-clauses 5.6.3 and 5.6.4, order the Contractor to remove any material which he considers liable to endanger or interfere with the Works, private property, traffic, or pedestrians, and to place such material at some other approved position. If the necessity for such removal is, in the opinion of the Engineer, a result of some default on the part

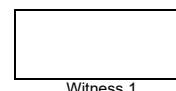
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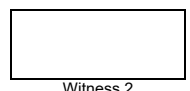
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

of the Contractor, the cost thereof shall be borne by the Contractor, otherwise the cost will be borne by the Employer at a sum pre-agreed with the Engineer or measured as Daywork.

The Contractor shall take steps to avoid burying or contaminating topsoil which shall be set aside for replacing, as far as practical, on the surface from which it was excavated.

**PSDB 5.6.3**

**Disposal of Soft Excavation Material**

Delete the contents of Clause 5.6.3. and replace with the following:

"Excess material arising from the excavations will be disposed of at a designated tip site. The rate for spoiling of excess material shall include for the loading and carting of material, and the off-loading at the tip site. The Contractor shall be responsible for all charges levied at the tip site. The current charges applicable may be obtained from the Municipality's Cleansing Division.

Where topsoil is encountered this will be set aside on site and re-used later."

**PSDB 5.6.6**

**Completion of Backfilling**

**Add:** "If in the opinion of the Employer's Agent's Representative the contractor is lagging in the backfilling of trenches, he will be entitled to order that no further excavation takes place until the backfilling operation has caught up."

**PSDB7**

**Testing**

**PSDB7.1**

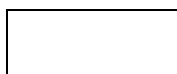
**Testing the compaction of backfill to trenches and reinstatement of surfaces (Sub-clause 7.1)**

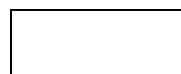
The Contractor shall carry out density tests as specified in TMH1, in the positions indicated by the Engineer, to determine the compaction of the backfill material in the trenches and the material used for reinstating the road construction layers. No single test result which is below the specified density, will be accepted.

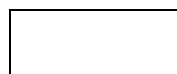
In the case of trenches in areas subject to traffic loads, the Contractor shall, notwithstanding the terms of the second sentence of Sub-clause 7.1, bear the cost of all density tests carried out except as follows. Where the test results are equal to or exceed the specified density, the Employer will bear the cost of that number of those tests ordered by the Engineer in excess of one test per 20 m<sup>3</sup> of compacted material, based on the total volume of backfill and reinstated road layers, including the replacement of any over-excavation, in areas subject to traffic loads.

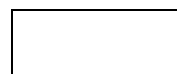
The Contractor shall also bear the cost of those density tests, carried out by the Engineer, of which the test results are below the specified density.

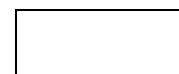
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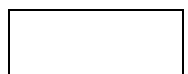
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

**PSDB 5.9.8 Safety**

**PSDB 8 MEASUREMENT AND PAYMENT**

**PSDB 81 Basic Principles**

In Sub-clause 8.1.2(c), amend the last sentence to read:

"The ground surface will be that existing after any bulk excavation has been carried out and before any embankment has been constructed, unless a portion of the embankment has to be constructed in order to achieve an acceptable cover over a pipe that is to be installed, in which case, measurement will be made from the level of embankment that produces an acceptable minimum cover over the pipe."

**PSDB 8.2 Excavation**

The rates for excavation of trenches shall cover all costs of:

- i) the work listed in Sub-clause 8.3.2(a) of SANS 1200 DB, irrespective of the method of excavation used,
- ii) the work listed in Sub-clause 8.3.3.3 of SANS 1200 DB,
- iii) selection as specified in PSDB3.1, and
- iv) density testing in accordance with PSDB7.1.

Excavation in hard rock will be measured for payment "extra-over" the rates for soft excavation.

Any excavation needs barricaded according to the Department of Labour specifications and standers

**PSDB 8.3 Crushed stone bedding layer and geofabric blanket**

Where the use of a layer of crushed stone in the trench bottom has been authorized by the Engineer, it will be measured by volume calculated according to the length multiplied by the specified thickness and specified minimum base width.

The rate shall cover the cost of all additional excavation and preparation of the trench bottom to accommodate the layer of stone, the removal of unsuitable material, the supply and placing of a layer of stone at least the specified thickness over at least the specified width and all related activities in order to produce a stable platform.

Where the Engineer has authorized the use of geotextile filter blanket, this shall be measured by area as:

Area = 2 x (specified thickness + minimum base width) x net length.

The rate shall include the cost of supply, placing and losses as a result of overlaps and over excavated trench widths.

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**PSDB8.4          Extra-over payment for excavation classification**

Excavation will be classified either as “Soft” or “Hard” excavation. All excavation that can be achieved using an excavator, TLB or similar plant will be classified as “Soft” excavation. Where it is necessary to employ pneumatic hammer excavation, either by means of hand pneumatic hammers or mounted on an excavator, blasting or other means, that excavation will be classified as “Hard” excavation.

**“PSDB 8.3.4          Control and prevent sewer water inflow to trench from old network.**

1.) Provide Equipment

.Unit: Sum

The sums for the provision and removal of equipment for controlling sewer water shall cover the cost of providing the necessary plant (sewer pumps) or materials or both, fully erected and operative on the site, and of removing such goods and restoring the site to its original condition on completion of that part of the project for which the temporary works were erected.”

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**PSL-B BEDDING (PIPES)**

**PSLB 3 MATERIALS**

**PSLB 3.1 Selected Granular Material**

Delete Subclause 3.1 and replace with the following:

Selected granular material shall be an aggregate, sand, or granular material, all of a non-cohesive nature, the grading analysis of which shows 100% passing a 9,5 mm sieve and not more than 5% passing a 0,075mm sieve (metric sizes). The Compact ability Factor shall not exceed 0,4.

**PSLB 3.2 Selected Fill Blanket**

Where expansive clay is encountered in the trench bottom, the material in the selected fill blanket shall be selected granular material.

**PSLB 8 MEASUREMENT AND PAYMENT**

**PSLB 8.1.3 Volume of Bedding Materials**

**Add:** The volume of bedding material will be measured net, by deducting the volume of the pipe or pipes, using the manufacturer's catalogued external diameter.

**PSLB 8.2.2.3 Supply bedding by importation from commercial sources**

Add: (c) Clean washed 13mm single size stone .....Unit: m<sup>3</sup>

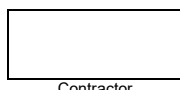
**PSLB 8.2.6 Provision of stone and geofabric to deal with water .....Unit: m<sup>3</sup>/m<sup>2</sup>**

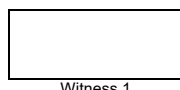
If in the opinion of the Employer's Agent, the contractor complied with the requirements for dealing with water as specified in PSA 8.8.7, the Employer's Agent may instruct the installation of crushed stone and filter fabric. Payment for these items will only be made where instruction was given in writing by the Employer's Agent.

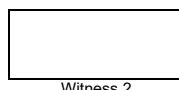
The provision of crushed stone bedding material will be measured by volume based on the specified trench width and a maximum layer thickness of 150 mm unless a greater depth has been specified by the Employer's Agent.

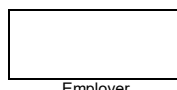
The unit rate shall cover the cost of supplying and laying the crushed stone.

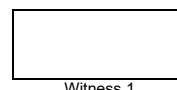
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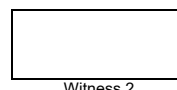
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

**PSLD SEWERS**

**PSLD 3 MATERIALS**

**PSLD 3.1 Pipes and specials. (Subclause 3.1)**

Pipes and specials for sewer pipes shall be of solid wall class 340 or similarly approved.

**PSLD3.2 Dolomitic aggregate**

Dolomitic aggregate and dolomitic sand, complying with the requirements of SANS 1200 G, shall be used for the manufacture of precast concrete sections and for concrete, mortar, benching and plaster used in manholes. material to give a black colour."

**PSLD 3.3 Marker posts. (Subclause 3.6)**

Marker posts shall be manufactured from 1,5 m long R25 bars hooked at one end and cast into Grade 15 MPa/19 mm concrete blocks not less than 300 x 300 x 300 mm in size.

Each post shall have a 150 mm wide band painted at the top using an approved exterior enamel paint to indicate the service.

**PSLD 5 CONSTRUCTION**

**PSLD 5.1 Manholes. (Subclause 5.6)**

Manholes shall be precast concrete rings with sealed joints as detailed on the drawings, and shall be installed according to the manufacturer's specifications. After installing the rings and sealing has been done according to Subclause 3.5.2 the joints shall be covered on the outside by a double wrapping of polyethylene adhesive tape.

Benching shall be constructed at a slope of 1 (vertical): 4 (horizontal).

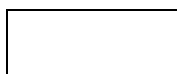
The top of the manhole cover shall be 100 mm above finished ground level, where the manhole is not within the road reserve, and 50 mm above finished ground level where the manhole is in the road reserve but not in the road.

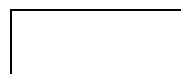
All manhole joints on sections to be watertight and must be wrapped with an approved bitu mastic or densyl mastic strip.

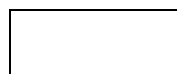
**PSLD5.2 Connection into existing manholes or sewers. (Subclause 5.9.2)**

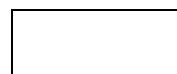
Where new sewers connect into existing manholes or pipelines the Contractor shall ascertain the exact position and existing invert level at the connecting point before excavating affected pipe trenches upstream. Any discrepancy apparent in the design data shall be brought to the attention of the Engineer without delay.

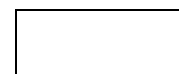
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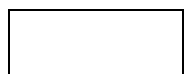
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

**PSLD5.3            Marker posts. (Subclause 5.9.2)**

At the time of backfilling and while the end of the service pipe is still exposed the marker posts shall be installed at the end of the house connection and vertically above its centreline. The post shall protrude 0,5 m above ground level or as otherwise specified by the Engineer.

The depth of the invert level below ground level shall be painted in black letters on a yellow background on a metal tag fixed to the top of the post.

**PSLD 7            TESTING**

**PSLD 7.1           General**

**PSLD 7.1.6**       Delete wording of Clause (c) and replace by: "A torch and mirror test shall be carried out on all pipe lengths, in both directions".

**PSLD 7.2.6        Water tightness of Manholes**

Especially in areas where the water table is low a test, as detailed hereafter, to verify the water tightness of any manhole may be requested by the Employer's Agent's Representative.

Infiltration: The excavation surrounding the manhole shall be flooded to approximately the top of wall level and this depth of water maintained for at least 48 hours. The manhole will have satisfied the test requirements provided there is no sign of infiltration of water.

Exfiltration: The manhole shall be filled with water to the top of its wall level and this depth maintained for at least 24 hours. Water may be added to maintain this level.

At the end of the subsequent 24-hour period the drop-in water level is to be measured. The manhole will have satisfied the test requirement provided the drop is less than 75 mm per meter in depth of the manhole measured from channel invert to the original height of the water. At the discretion of the Employer's Agent's Representative a shorter testing time, minimum 3 hours, will be allowed in which case a 'drop in level' pro rata to the time tested, shall be used.

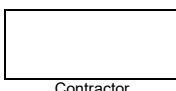
**PSLD 8            MEASUREMENT AND PAYMENT**

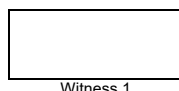
**PSLD8.1           Manholes, inspection chambers, etc. (Subclauses 8.2.3, 8.2.4 and 8.2.5)**

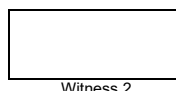
The two sentences appearing under Subclause 8.2.5, reading "Separate items .... details shown on the drawings.", apply to each of Subclauses 8.2.3, 8.2.4 and 8.2.5.

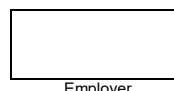
For the purpose of measurement and payment, the depth of a manhole, inspection chamber, etc, is defined as the depth from the top of the cover to the invert level of the manhole, inspection chamber, etc.

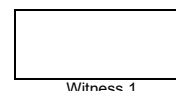
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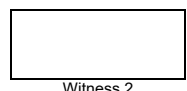
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

The tendered rate for manholes shall include the supply and installation of the complete manhole, the construction of the brickwork shaft, heavy duty concrete cover ("Rocla" or equal approved with steel mounting ring) and frame and concrete footings for the prevention of flotation where applicable, materials, specials, labour, benching and breaking of manhole ring for incoming pipework at the correct level.

In addition to this:

The newly constructed manhole will be connected with a pipe, size and length to be determined on site, to the existing manhole at a 90 ° angle. The Contractor is to demolish the old benching and re-construct the benching, allowing the sewage to enter the existing manhole and pass straight through it into the new pipe, which will then convey the sewage into the new manhole and then into the new pipeline.

The Tendered sum should include all material, specials, labour, excavation, pipework, bedding, blanket, compaction, backfill, breaking of old manhole for pipework inlet, demolishing of old benching and re-constructing the benching as shown in the drawings.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **4.3.4 PLANT AND MATERIALS**

##### **4.3.4.1 Plant and materials supplied by the employer**

The Employer will not supply any materials or plant to the contractor. The contractor shall be responsible for procuring all plant and materials required for construction of the works.

##### **4.3.4.2 Materials and samples**

The contractor shall timeously provide the Employer's Agent with samples and/or test results of all materials he intends to use in the works. All materials are to be approved by the Employer's Agent in writing before being used in the Works. Such approval shall not relieve the contractor of his obligation to ensure that materials supplied comply with the specifications.

The contractor shall ensure that all materials are ordered timeously so as not to result in delays to the programme. Delays in delivery of materials necessary for completion of the works shall not be considered grounds for compensation. The contractor shall allow for any anticipated lead times or delays in procuring specific materials.

##### **4.3.4.3 Requirements for equipment**

The Employer will not provide any plant or equipment. The contractor shall be responsible for the selection, supply, operation and maintenance of all plant and equipment together with competent operators, maintenance crews and logistical support necessary for construction of the works within the construction period available.

#### **4.3.5 EXISTING SERVICES**

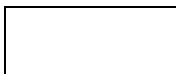
##### **4.3.5.1 Known services**

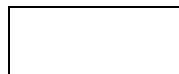
The positions of existing services, insofar as they are known, are shown on the drawings. Items have been allowed in the Bill of Quantities for dealing with and protecting services.

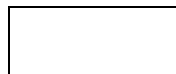
The known existing services comprise stormwater pipes, sewer mains, water mains, Telkom cables and manholes.

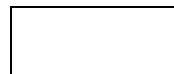
The contractor shall be responsible for ensuring that all necessary permits and way leaves to work in the area have been obtained.

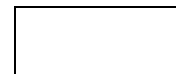
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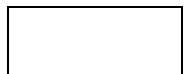
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

#### **4.3.5.2 Treatment of existing services**

The exact location and depth of all existing services, such as sewers, stormwater pipes, culverts, water mains, manholes, valve boxes, conduits, cables for electricity and telephone lines, electricity, lightning and telephone poles and any other services or features on the ground which may infer the existence of services, must be verified prior to the commencement of any excavations — either for trench excavations or for the relocation or adjustment of existing services.

The contractor shall take whatever precautions as deemed necessary to protect these services from damage during the period of the Contract.

#### **4.3.5.3 Use of detection equipment for the location of underground services**

The contractor will not be required to provide any specialist detection equipment for locating existing services. During the detailed proving phase of the works, existing services are to be physically located through reference to surface features, drawings and if necessary, through direct consultation with the relevant service authority, followed by careful hand excavation to expose the service.

Once located, the contractor shall provide the Employer's Agent with an accurate surveyed position, level and description of the services uncovered, and shall then close the exploration hole.

#### **4.3.5.4 Damage to services**

The contractor shall take whatever precautions are required to protect all existing services from damage during the period of the Contract and will be held responsible for damage to existing services and any damage caused by or arising out of the contractor's operations shall be made good at his own expense.

#### **4.3.5.5 Reinstatement of services and structure damaged during construction**

The contractor shall liaise directly with the responsible Municipal Services Silos and Telkom with regard to the reinstatement of existing services. The contractor shall take whatever actions are required to have damaged services repaired by Municipal Services Silos and Telkom as soon as possible.

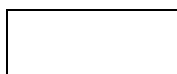
### **4.3.6 SITE ESTABLISHMENT**

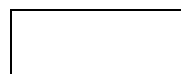
#### **4.3.6.1 Service and facilities provided by the employer**

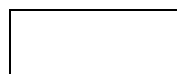
##### **(i) Source of Water Supply**

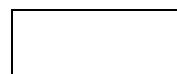
The contractor may make application to the Municipality's Water Division for a clean water supply point, but shall bear all the costs for the installation of such supply point. Water used by the contractor from the Employer's mains will be charged for at the tariffs ruling at the time of use.

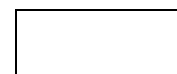
The contractor shall make himself thoroughly acquainted with the regulations relating to the use of water and shall take adequate

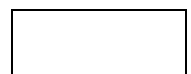
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

measures to prevent the wastage of water.

The Employer accepts no responsibility for the shortage of water due to any cause whatsoever, nor additional costs incurred by the contractor as a result of such shortage.

The contractor shall take note that no direct payment will be made for any costs incurred for the provision of a water supply point nor for the cost of water drawn. Payment for the aforementioned shall be deemed to be covered by the rates and prices tendered and paid for the various items of work included under the Contract.

(ii) Source of Power Supply

The contractor is to make his own arrangements with the Electricity Department for a supply of electricity, if required, and shall pay establishment and consumption costs at the tariffs ruling at the time.

(iii) Location of Camp and Materials storage area

The camp site and storage area will be indicated to tenderers at the site inspection for the contract.

The contractor shall confine his camp and storage of materials to the areas designated. On completion of the construction works the surface of the areas utilised shall be re-instated.

#### **4.3.6.2 Facilities provided by the contractor**

(i) Temporary Offices

An office for the Employer's Agent is required. The type of office required for the Employer's Agent is specified in clauses AB 3.2 and PSAB 3.4.

Site meetings will be held in the contractor's site office.

(ii) Sanitary Facilities

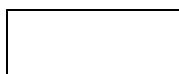
The contractor shall supply chemical toilets for use by his workmen. The number of toilets shall be based on one toilet per fifteen personnel on site.

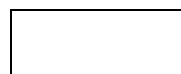
Under no circumstances will the contractor's staff be allowed to use public toilet facilities.

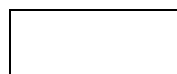
#### **4.3.6.3 Storage and laboratory facilities**

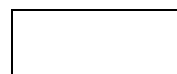
Storage of materials on site should conform to the General Safety Regulations promulgated by Government Notice No. RI 031 dated 30 May 1986.

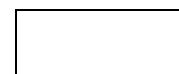
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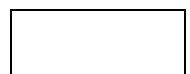
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

#### **4.3.6.4 Vehicles and equipment**

The contractor shall ensure that vehicles and working equipment on site are maintained regularly to avoid delays that may occur due to faulty equipment.

#### **4.3.6.5 SITE USAGE**

The contractor will be responsible for the site for the duration of the contract and it will revert to the Employer after the completion of the contract.

#### **4.3.6.6 PERMITS AND WAY LEAVES**

Way-leaves for working in the proximity of any existing services shall be the Contractor's responsibility, although the Employer's Agent may provide some of this information.

#### **4.3.6.7 ALTERATIONS, ADDITIONS, EXTENSIONS AND MODIFICATIONS TO EXISTING WORKS**

The contractor must confirm in writing to the Employer's Agent timeously that the accuracy of all existing levels is compatible with the proposed works.

#### **4.3.6.8 INSPECTION OF ADJOINING PROPERTIES**

Where the contractor is working in the vicinity of existing residential properties, he shall take records (digital photographs) of the condition of existing walls, fences and other structures to eliminate the possibility of later claims against the Employer resulting from the contractor's work in the area.

Digital photographs shall be submitted to the Employer's Agent electronically (CD) before the work commences.

#### **4.3.6.9 SURVEY CONTROL AND SETTING OUT OF THE WORKS**

Before commencement of work, the contractor is to liaise with the Employer's Agent to establish exactly the status of all boundary pegs that may be affected by the Works. The position of all erf pegs found will be recorded on a marked-up print by the contractor and submitted to the Employer's Agent for safekeeping.

On completion of the Contract the Employer will replace the pegs that have been unavoidably disturbed. Pegs that have, in the opinion of the Employer's Agent, been disturbed due to the negligence of the contractor will be replaced at the Contractor's cost.

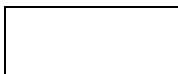
All survey benchmarks are to be protected. The contractor shall perform regular checks to ensure that benchmarks have not been disturbed.

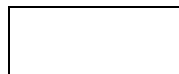
#### **4.3.7 COMMUNITY PARTICIPATION AND LIAISON**

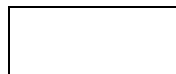
##### **4.3.7.1 Community or Liaison Officer (CLO)**

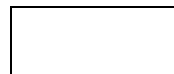
The Employer's Agent will employ a CLO for the duration of the contract. The

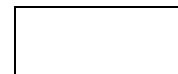
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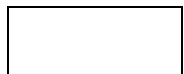
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

contractor will be required to source all short-term contract labour from the local community (excluding key personnel). The CLO will assist in providing the Contractor with a pool of people from which this labour can be selected. The selection will be made by the contractor.

It is a requirement of the Contract that the contractor maximise the use local short-term labour and the contractor will in this regard be required to perform certain specified activities, using labour-intensive methods.

Further, it is also required by the contract that short-term contract workers be employed in the following ratio and the contractor will strictly adhere to this requirement:

- One third Youth (i.e. persons under the age of 35 years)
- One third Male
- One third Female

The successful contractor will be required to provide the Employer's Agent with up to date and completed EPWP reporting forms on a monthly basis — Refer Section C1.7.

#### **4.3.7.2 Attending Community Meetings**

It is a requirement of this Contract that the contractor include in his rates the cost of attending an average of two community meetings each month. The meetings will not necessarily be during normal working hours and it is accepted that the contractor tendering for the Works is familiar with dealing with communities and understands the implications of keeping the communities informed.

#### **4.3.7.3 Construction of Ancillary Works**

##### Hand Methods

It is envisaged that hand methods will be used wherever possible. The following labor-intensive operations are envisaged:

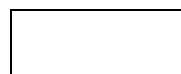
- excavation to search and relocate existing services,
- miscellaneous civil engineering works,
- steel fixing, shuttering, placing of concrete, etc,
- re-routing existing pipelines,
- hand excavation of pipelines, laying of pipelines, backfilling operations,
- construction of manholes and brick/concrete chambers,
- building work,
- construction of access roads, mountain bike and hiking trails,
- finishing off the site on completion of the Works, etc.

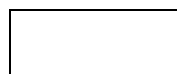
#### **4.3.7.4 Communication with Community**

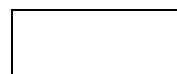
A Project Steering Committee will be formed to act as the communication channel between the Contractor and the Community. The contractor however remains responsible for communication and should the Project Steering

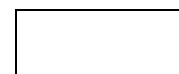
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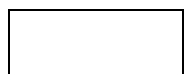
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

Committee not perform satisfactorily this will not excuse the contractor from performing the task required to successfully undertake the project.

The Project Steering Committee will generally consist of representatives from the following stakeholders:

Employer  
Employer's Agent or Project Manager  
Contractor  
Ward Councilor  
Ward Committee

In order to cope with the contractor's limited office accommodation, each of the above stakeholders will be represented by a maximum of two persons.

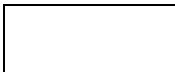
The Project Steering Committee will ensure that dialogue adheres to the following communication channel:

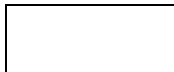
Community  
Project Committee  
Employer  
Employer's Agent or Project Manager  
Contractor

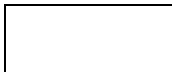
It should be noted that the Community Structures will be represented at the Technical Site Meetings by representative from the Ward Committee. Any issues that need to be brought to the attention of the Community will then be raised at the Project Steering Committee Meetings.

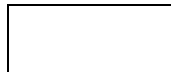
The Project steering Committee Meetings will take place separately from the Technical Site Meetings. The Technical Site Meetings are a forum only for the two contracting parties (viz. the Employer and the contractor), to communicate under the jurisdiction of the Employer' Agent or Project Manager.

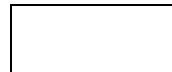
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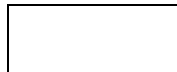
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

#### C3.4.4 ADDITIONAL SPECIFICATIONS

The following additional specifications included in Part C5: Annexures are applicable to this contract.

- C5.1: Health & Safety Specification
- C5.2: Environmental Management Plan (EMP)
- C5.3: EPWP Reporting Forms
- C5.4: HIV / AIDS awareness
- C5.5: COVID-19 OHS Specifications and Regulations

#### C3.4.5 CERTIFICATION BY RECOGNISED BODIES

Where materials to be used in the works are required to comply with a SANS/SANS specification, they will be accepted as complying with the SANS/SANS specification if one of the following is satisfied.

- The display of a SANS/SANS mark on the product with a copy of the SANS/SANS certificate that allows the manufacturer to use the mark, or
- All the criteria in the relevant SANS/SANS specification is measured and confirmed on site or in an approved laboratory.

The same will apply to materials specified to comply with ISO, BS, ASTM or other international specifications.

#### C3.4.6 AGRÉMENT CERTIFICATES

Agrément Certificated products are not anticipated for use in this project.

#### C3.4.7 PLANT AND MATERIALS

##### C3.4.7.1 Plant and materials supplied by the employer

The Employer will not supply any materials or plant to the contractor. The contractor shall be responsible for procuring all plant and materials required for construction of the works.

##### C3.4.7.2 Materials and samples

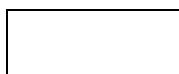
The contractor shall timeously provide the Employer's Agent with samples and/or test results of all materials he intends to use in the works. All materials are to be approved by the Employer's Agent in writing before being used in the Works. Such approval shall not relieve the contractor of his obligation to ensure that materials supplied comply with the specifications.

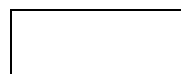
The contractor shall ensure that all materials are ordered timeously so as not to result in delays to the programme. Delays in delivery of materials necessary for completion of the works shall not be considered grounds for compensation. The contractor shall allow for any anticipated lead times or delays in procuring specific materials.

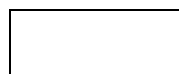
##### C3.4.7.3 Requirements for equipment

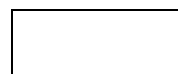
The Employer will not provide any plant or equipment. The contractor shall be responsible for the selection, supply, operation and maintenance of all plant and equipment together with competent operators, maintenance crews and logistical support necessary for construction of the works within the construction period available.

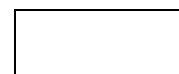
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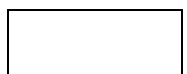
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### **C3.4.8 EXISTING SERVICES**

#### **C3.4.8.1 Known services**

The positions of existing services, insofar as they are known, are shown on the drawings. Items have been allowed in the Bill of Quantities for dealing with and protecting services. -

The known existing services comprise stormwater pipes, sewer mains, water mains, Telkom cables and manholes.

The contractor shall be responsible for ensuring that all necessary permits and way leaves to work in the area have been obtained.

#### **C3.4.8.2 Treatment of existing services**

The exact location and depth of all existing services, such as sewers, stormwater pipes, culverts, water mains, manholes, valve boxes, conduits, cables for electricity and telephone lines, electricity, lightning and telephone poles and any other services or features on the ground which may infer the existence of services, must be verified prior to the commencement of any excavations — either for trench excavations or for the relocation or adjustment of existing services.

The contractor shall take whatever precautions as deemed necessary to protect these services from damage during the period of the Contract.

#### **C3.4.8.3 Use of detection equipment for the location of underground services**

The contractor will not be required to provide any specialist detection equipment for locating existing services. During the detailed proving phase of the works, existing services are to be physically located through reference to surface features, drawings and if necessary, through direct consultation with the relevant service authority, followed by careful hand excavation to expose the service.

Once located, the contractor shall provide the Employer's Agent with an accurate surveyed position, level and description of the services uncovered, and shall then close the exploration hole.

#### **C3.4.8.4 Damage to services**

The contractor shall take whatever precautions are required to protect all existing services from damage during the period of the Contract and will be held responsible for damage to existing services and any damage caused by or arising out of the contractor's operations shall be made good at his own expense.

#### **C3.4.8.5 Reinstatement of services and structure damaged during construction**

The contractor shall liaise directly with the responsible Municipal Services Silos and Telkom with regard to the reinstatement of existing services. The contractor shall take whatever actions are required to have damaged services repaired by Municipal Services Silos and Telkom as soon as possible.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C3.4.9 SITE ESTABLISHMENT**

#### **C3.4.9.1 Service and facilities provided by the employer**

(i) Source of Water Supply

The contractor may make application to the Municipality's Water Division for a clean water supply point, but shall bear all the costs for the installation of such supply point. Water used by the contractor from the Employer's mains will be charged for at the tariffs ruling at the time of use.

The contractor shall make himself thoroughly acquainted with the regulations relating to the use of water and shall take adequate measures to prevent the wastage of water.

The Employer accepts no responsibility for the shortage of water due to any cause whatsoever, nor additional costs incurred by the contractor as a result of such shortage.

The contractor shall take note that no direct payment will be made for any costs incurred for the provision of a water supply point nor for the cost of water drawn. Payment for the aforementioned shall be deemed to be covered by the rates and prices tendered and paid for the various items of work included under the Contract.

(ii) Source of Power Supply

The contractor is to make his own arrangements with the Electricity Department for a supply of electricity, if required, and shall pay establishment and consumption costs at the tariffs ruling at the time.

(iii) Location of Camp and Materials storage area

The camp site and storage area will be indicated to tenderers at the site inspection for the contract.

The contractor shall confine his camp and storage of materials to the areas designated. On completion of the construction works the surface of the areas utilised shall be re-instated.

#### **C3.4.9.2 Facilities provided by the contractor**

(i) Temporary Offices

An office for the Employer's Agent is required. The type of office required for the Employer's Agent is specified in clauses AB 3.2 and PSAB 3.4.

Site meetings will be held in the contractor's site office.

(ii) Sanitary Facilities

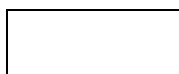
The contractor shall supply chemical toilets for use by his workmen. The number of toilets shall be based on one toilet per fifteen personnel on site.

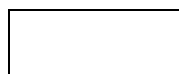
Under no circumstances will the contractor's staff be allowed to use public toilet facilities.

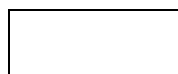
#### **C3.4.9.3 Storage and laboratory facilities**

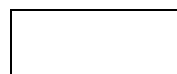
Storage of materials on site should conform to the General Safety Regulations promulgated by Government Notice No. RI 031 dated 30 May 1986.

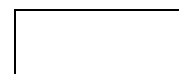
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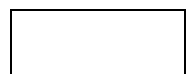
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

#### **C3.4.9.4 Vehicles and equipment**

The contractor shall ensure that vehicles and working equipment on site are maintained regularly to avoid delays that may occur due to faulty equipment.

#### **C3.4.10 SITE USAGE**

The contractor will be responsible for the site for the duration of the contract and it will revert to the Employer after the completion of the contract.

#### **C3.4.11 PERMITS AND WAY LEAVES**

Way-leaves for working in the proximity of any existing services shall be the Contractor's responsibility, although the Employer's Agent may provide some of this information.

#### **C3.4.12 ALTERATIONS, ADDITIONS, EXTENSIONS AND MODIFICATIONS TO EXISTING WORKS**

The contractor must confirm in writing to the Employer's Agent timeously that the accuracy of all existing levels is compatible with the proposed works.

#### **C3.4.13 INSPECTION OF ADJOINING PROPERTIES**

Where the contractor is working in the vicinity of existing residential properties, he shall take records (digital photographs) of the condition of existing walls, fences and other structures to eliminate the possibility of later claims against the Employer resulting from the contractor's work in the area.

Digital photographs shall be submitted to the Employer's Agent electronically (CD) before the work commences.

#### **C3.4.14 SURVEY CONTROL AND SETTING OUT OF THE WORKS**

Before commencement of work, the contractor is to liaise with the Employer's Agent to establish exactly the status of all boundary pegs that may be affected by the Works. The position of all erf pegs found will be recorded on a marked-up print by the contractor and submitted to the Employer's Agent for safekeeping.

On completion of the Contract the Employer will replace the pegs that have been unavoidably disturbed. Pegs that have, in the opinion of the Employer's Agent, been disturbed due to the negligence of the contractor will be replaced at the Contractor's cost.

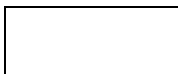
All survey benchmarks are to be protected. The contractor shall perform regular checks to ensure that benchmarks have not been disturbed.

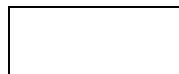
#### **C3.4.15 LABOUR INTENSIVE CONSTRUCTION**

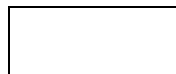
##### **C3.4.15.1 General**

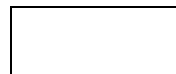
Any work or portion of work that can be undertaken by labour intensive methods on an efficient basis, shall be done in that manner, using targeted labour from the affected historically disadvantaged area, and shall be done in accordance with the requirements of the Expanded Public Works Programme (EPWP) of the Department of Labour.

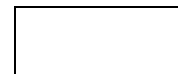
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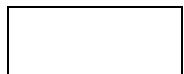
  
Contractor

  
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Witness 2

  
Employer

  
Witness 1

  
Witness 2

### **C3.4.15.2 Training of targeted labour**

The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health & safety.

### **C3.4.15.3 Records to be kept**

The contractor shall provide monthly production records showing the number of personnel employed using labour intensive construction methods, the wages paid and production measurement records. The SBD may change the requirements for reporting from time to time.

## **C3.4.16 COMMUNITY PARTICIPATION AND LIAISON**

### **C3.4.16.1 Community or Liaison Officer (CLO)**

The Employer's Agent will employ a CLO for the duration of the contract. The contractor will be required to source all short-term contract labour from the local community (excluding key personnel). The CLO will assist in providing the Contractor with a pool of people from which this labour can be selected. The selection will be made by the contractor.

It is a requirement of the Contract that the contractor maximise the use local short-term labour and the contractor will in this regard be required to perform certain specified activities, using labour-intensive methods.

Further, it is also required by the contract that short-term contract workers be employed in the following ratio and the contractor will strictly adhere to this requirement:

- One third Youth (i.e. persons under the age of 35 years)
- One third Male
- One third Female

The successful contractor will be required to provide the Employer's Agent with up to date and completed EPWP reporting forms on a monthly basis — Refer Section C1.7.

### **C3.4.16.2 Attending Community Meetings**

It is a requirement of this Contract that the contractor include in his rates the cost of attending an average of two community meetings each month. The meetings will not necessarily be during normal working hours and it is accepted that the contractor tendering for the Works is familiar with dealing with communities and understands the implications of keeping the communities informed.

### **C3.4.16.3 Construction of Ancillary Works**


#### **Hand Methods**


It is envisaged that hand methods will be used wherever possible. The following labor-intensive operations are envisaged:


- excavation to search and relocate existing services,
- miscellaneous civil engineering works,
- steel fixing, shuttering, placing of concrete, etc,
- re-routing existing pipelines,
- hand excavation of pipelines, laying of pipelines, backfilling operations,
- construction of manholes and brick/concrete chambers,


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Contractor

  
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Employer

  
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Witness 2

- building work,
- construction of access roads, mountain bike and hiking trails,
- finishing off the site on completion of the Works, etc.

#### **C3.4.16.4 Communication with Community**

A Project Steering Committee will be formed to act as the communication channel between the Contractor and the Community. The contractor however remains responsible for communication and should the Project Steering Committee not perform satisfactorily this will not excuse the contractor from performing the task required to successfully undertake the project.

The Project Steering Committee will generally consist of representatives from the following stakeholders:

- Employer
- Employer's Agent or Project Manager
- Contractor
- Ward Councillor
- Ward Committee

In order to cope with the contractor's limited office accommodation, each of the above stakeholders will be represented by a maximum of two persons.

The Project Steering Committee will ensure that dialogue adheres to the following communication channel:

- Community
- Project Committee
- Employer
- Employer's Agent or Project Manager
- Contractor

It should be noted that the Community Structures will be represented at the Technical Site Meetings by representative from the Ward Committee. Any issues that need to be brought to the attention of the Community will then be raised at the Project Steering Committee Meetings.

The Project steering Committee Meetings will take place separately from the Technical Site Meetings. The Technical Site Meetings are a forum only for the two contracting parties (viz. the Employer and the contractor), to communicate under the jurisdiction of the Employer' Agent or Project Manager.

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ContractorWitness 1Witness 2EmployerWitness 1Witness 2

## C3.5: MANAGEMENT

### C3.5.1 Applicable SANS 1921 standards

The following parts of SANS 1921 (Construction and management requirements for construction works) and associated specifications are applicable:

- SANS 1921-1: General engineering and construction works
- SANS 1921-2: Accommodation of traffic on public roads occupied by the contractor
- SANS 1921-3: Structural steelwork
- SANS 1921-4: third party management support in works contracts
- SANS 1921-5: Earthworks activities, which are to be performed by hand
- SANS 1921-6: HIV / AIDS awareness

The associated specification data are as follows:

SANS 1921-1: General engineering and construction works	
Clause No	Specification data
4.1.7	The requirements for drawings, information and calculations for which the contractor is responsible are:  As-Built Data
4.2.1	The responsibility strategy assigned to the contractor for the works is: A
4.2.2	The structural employer's agent is: Not Required
4.2.3	Drawings and other information are to be submitted in accordance with the contractor's programme.
4.3	<ul style="list-style-type: none"> <li>• The Contractor shall submit within the period stated in the Contract Data a suitable and realistic construction programme for the consideration of the Employer's Agent.</li> <li>• The programme shall be in the form of a Gant Chart and shall include the following details: <ul style="list-style-type: none"> <li>• A work breakdown structure, identifying the major activity groups.</li> <li>• For each activity group further details shall be provided with regard to the scheduled start and end dates of individual activities.</li> </ul> </li> <li>• The linkages between activities shall be clearly indicated and the logical network upon which the programme is based should be separately submitted to the Employer's Agent if requested. Any constraints shall be classified as being time related or resource-related.</li> <li>• The critical path(s) shall be clearly indicated and floats on non-critical activities shall be shown.</li> </ul>
	<ul style="list-style-type: none"> <li>• The contractor shall indicate the working hours per day, night, week and month allowed for in the programme.</li> <li>• Where relevant the contractor shall state the production rates for key activities, e.g. earthworks, etc.</li> <li>• Together with the programme as detailed above the contractor shall submit to the Employer's Agent a cash flow projection, indicating projected monthly invoice amounts. The cash flow projection shall be updated at monthly intervals to reflect actual payments to date and anticipated further payments.</li> </ul>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	<ul style="list-style-type: none"> <li>The programme shall be reviewed at the monthly site meetings at which the contractor shall provide sufficient detail that will allow the comparison of completed work per activity that has fallen behind. The updated programme shall be submitted to the Employer's Agent at least two days prior to the monthly meetings.</li> <li>If the programme has to be revised by reason of the contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the Works within the time for completion as defined in the General Conditions of Contract or any granted extension of time. Any proposal to increase the tempo of work shall be accompanied by positive steps to increase production by providing more labour and plant on site, or by using the available labour and plant on site, or by using the available labour and plant in a more efficient manner.</li> <li>Failure on the part of the contractor to submit the programme or to work according to the programme or revised programmes shall be sufficient reason for the Employer's Agent to take steps as provided in the General Conditions of Contract.</li> <li>The approval by the Employer's Agent of any programme shall have no contractual significance other than that the Employer's Agent will be satisfied that the work is carried out according to such programme and that the Contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right of the Employer's Agent to instruct the contractor to vary the programme if required by circumstances. The contractor is also referred to the applicable clauses of the General Conditions of Contract when drawing up his programme.</li> </ul> <p>The planning, program and method statements are to comply with the following:</p> <ul style="list-style-type: none"> <li>Microsoft Project format</li> </ul>
4.12.2	<p>The samples of materials, workmanship and finishes that the contractor is to provide and deliver to the employer are:</p> <ul style="list-style-type: none"> <li>None</li> </ul>
4.12.2	<p>The fabrication drawings which the contractor is to provide and deliver to the client are:</p> <ul style="list-style-type: none"> <li>None</li> </ul>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SANS 1921-1: General engineering and construction works	
Clause No	Specification data
4.14.3	The office accommodation, equipment, accommodation for site meetings and other facilities for the use by the employer and his agents are: Refer C3.4.9.2
4.12.2	The fabrication drawings which the contractor is to provide and deliver to the client are: <ul style="list-style-type: none"> <li>None</li> </ul>
4.14.3	The office accommodation, equipment, accommodation for site meetings and other facilities for the use by the employer and his agents are: <ul style="list-style-type: none"> <li>Refer C3.4.9.2</li> </ul>
4.14.6	The requirements for the provision and erection of sign boards are: <ul style="list-style-type: none"> <li>Refer to list of drawings</li> </ul>
4.17.1	The requirements for the termination, diversion or maintenance of existing services are: <ul style="list-style-type: none"> <li>C3.4.7; C3.4.8; C3.4.9</li> </ul>
4.17.3	Services that are known to exist on the site are shown on the drawings
4.17.4	The requirements for the detection apparatus are: <ul style="list-style-type: none"> <li>Not required.</li> </ul>
4.18	The additional health and safety requirements are: <ul style="list-style-type: none"> <li>Refer C5.1: Health &amp; Safety Requirements and Procedures</li> </ul>
4.22	The works to be undertaken by nominated and selected subcontractors comprise: <ul style="list-style-type: none"> <li>To be determined by the contractor as per C3.3</li> </ul>
<b>Variations:</b>	
4.1.10	Degree of accuracy II shall be applicable unless stated otherwise in the drawings or specification.
42.4	The time frame for acceptance is 10 working days
<b>Additional clauses:</b>	
4.1.1 p)	Add this new clause:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SANS 1921-1: General engineering and construction works	
Clause No	Specification data
	"Appoint a Community liaison officer (CLO) to assist with the community liaison with the beneficiary community."
4.23	<p>Add this new clause:</p> <p>"4.23 Community participation"</p> <p>Community participation consists of engagement of Project Steering Committees (PSC).</p> <p>A PSC will be established for the project, by the Ward Councilor.</p> <p>The functions of the PSC will be to:</p> <ul style="list-style-type: none"> <li>• Assist in monitoring the project.</li> <li>• Ensure that the community provide assistance to the contractor to ensure that he can execute the contract in accordance with the specifications and within time.</li> <li>• Encourage the community to participate in the Labour Intensive construction.</li> <li>• Identify skills, skilled personnel and suppliers in the towns.</li> </ul> <p>The PSC will not have the power to:</p> <ul style="list-style-type: none"> <li>• Give any instructions to the contractor, except through the employer's agent.</li> <li>• Become involved in the daily operations of the contractor or interfere with the contract works.</li> </ul> <p>A monthly meeting will be held with the PSC to discuss relevant matters. The site agent and employer's agent's representative will attend the meetings. The contractor will have to report on progress, deviations from the programme, financial matters community related aspects, general problems and co-operation at the meeting. The PSC members will not receive any remuneration for attending, and they must provide their own transport."</p> <p>The Contractor will receive no additional remuneration for attendance of PSC meetings.</p>

Contractor

Witness 1

Witness 2

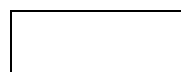
Employer

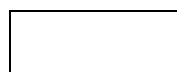
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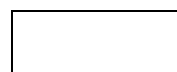
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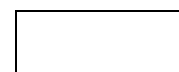
SANS 1921-2: Accommodation of traffic on public roads occupied by the contractor	
Clause No	Specification data
4.3.2	The contractor shall design all the temporary support work, scaffolding, barricading and the like.
4.6.1	The length of half-width roads under construction shall not exceed - N/A.
4.6.3	The length of road shall be limited to N/A.
4.10.1	<p>The contractor shall provide the following traffic control facilities:</p> <ul style="list-style-type: none"> <li>• Traffic-control devices such as flagmen, STOP and GO signs, traffic signals.</li> <li>• Statutory permanent and temporary road signs and barricades.</li> <li>• Channelization devices and barricades including delineators, cones, road studs, road marking, etc.</li> <li>• Barriers such as New Jersey, plastic movable barriers, etc.</li> <li>• Warning Devices on plant and construction vehicles.</li> <li>• Road markings.</li> </ul>
<b>Variations:</b>	
<b>Additional clauses:</b>	
4.1.4	<p>Add this new clause:</p> <p>"Failure to maintain road signs, warning signs, etc, in a good condition shall constitute ample reason for the Employer's Agent to bring the works to a stop until the road signs, etc, have been repaired to his satisfaction.</p> <p>The contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual Volume 2 Chapter 13.</p> <p>The contractor shall submit proposed Traffic Accommodation Plan in connection with directional signs to the Employer's Agent for approval by all relevant parties prior to construction."</p>

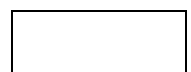
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

SANS 1921-5: Earthworks activities that are to be performed by hand	
Clause No	Specification data
5.1	The depth of the trenches to be excavated by hand is 1,5m.
<b>Variations:</b>	State variations, if any, for example specific compaction requirements
<b>Additional clauses:</b>	

SANS 1921-6: HIV / AIDS awareness				
Clause No	Specification data			
4.2.1 (a)	A qualified service provider is a service provider that is accredited by the Employer's Health and Social Development and appears on the list of recognized service providers of the Employer's Health and Social Development.			
	The contact particulars of qualified service providers are as follows:			
	Name	Tel	Fax	e-mail
4.2.1 (a)	Apart from the initial programme, the HIV / AIDS awareness programme is to be repeated at 4-month intervals throughout the duration of the contract.			
Variations:				
Additional clauses:				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C3.5.2 PARTICULAR OR GENERIC SPECIFICATIONS**

Refer to Clause C3.4.3

### **C3.5.3 PLANNING AND PROGRAMMING**

A programme must be issued before the commencement of the works which must display the activities, noting the critical path activities with phases of activities, milestone dates for completion etc

The contractor shall submit his programme to the Employer's Agent for approval by all relevant parties prior to construction.

### **C3.5.4 SEQUENCE OF THE WORKS**

These must be indicated in the programme.

### **C3.5.5 SOFTWARE APPLICATION FOR PROGRAMMING**

An excel spreadsheet or Microsoft project will be applicable.

### **C3.5.6 METHODS AND PROCEDURES**

The following activities may/will require attention during the course of construction:

- the way in which work is to be executed when buildings are occupied;
- the cleanliness of the site;
- protection of trees and shrubs;
- blasting operations;
- the location of borrow pits, disposal of excess materials, deposition of materials, etc in earthworks activities;
- work on or adjacent to structures, railway lines, pipelines, roads, cables etc;
- the management and disposal of water on the site arising from whatever cause;
- access, roads, maintenance of accesses and walkways;
- co-operation with others on the site;
- existing premises and adjoining properties;
- dealing with underground and other existing services, cable and pipe trenches and covers;
- dealing with objects of historical or environmental interest;
- title to materials from excavation and demolition;
- site records;
- hours of work; rules and conduct in respect of the personnel of the contractor and his subcontractors;
- noise, dust, water, waste and other impediments;
- checking work of others;
- access for other contractors;
- giving notice of work to be covered up;
- scaffolding and temporary works;
- care of the works; plant and materials;
- establishing and removing equipment from the site;
- samples and mock ups;
- progress photographs;

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- maintenance until completion;
- plant codification (configuration management);
- materials storage facilities and samples for tests and inspections to be provided.

### **C3.5.7 QUALITY PLANS AND CONTROL**

#### **a) Control Testing of Earthworks and Road Layers**

The contractor is required to carry out his own control testing. However, should the contractor wish to use the Employer's Agent's testing facilities, he will be charged for the various tests at the rates ruling at the time.

Any additional tests requested by the contractor or any retests required, due to failure of the initial tests, will be charged to the contractor at the rates ruling at the time.

### **C3.5.8 ENVIRONMENT**

#### **a) Sand and dust control**

The contractor shall, for the duration of the contract, take appropriate measures to control the dust and soil movement which may arise due to his operations.

### **C3.5.9 ACCOMMODATION OF TRAFFIC ON PUBLIC ROADS OCCUPIED BY THE CONTRACTOR**

The contractor shall submit proposed Traffic Accommodation Plan in connection with directional signs to the Employer's Agent for approval by all relevant parties prior to construction.

An item is included in the bill of quantities for accommodation of traffic.

### **C3.5.10 OTHER CONTRACTORS ON SITE**

Only subcontractors in the employ of the contractor will be allowed on site.

### **C3.5.11 TESTING, COMPLETION, COMMISSIONING, AND CORRECTION OF DEFECTS**

The following activities or milestone will require assessment certification i.e.

- Use of the works before completion has been certified;
- Handover / beneficial occupation;
- Pre-commissioning and commissioning of the works or part thereof, before and after completion;
- Certifying completion;
- Start-up; operation of the works; special arrangements associated with operating plant and machinery etc.,
- Training and technology transfer,
- Take over;
- Operational maintenance (if any), after completion;
- Work which contractors may carry out after completion has been certified (in addition to correcting defects), and
- Arranging access for correction of defects.

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C3.5.12 RECORDING OF WEATHER**

The contractor shall erect two effective rainfall gauge on the site of the works and record the daily rainfall figures in the site diary. The site diary shall be handed to the Employer's Agent's Representative for his signature no later than 24 hours after rain that is considered to justify an extension of time occurs.

Extension of time due to abnormal rainfall shall be determined by as defined and described in the Contract Data.

### **C3.5.13 FORMAT OF COMMUNICATIONS**

A site instruction book will be maintained on site with requests etc. Each requested must be numbered, dated and signed for completeness. Copies may be emailed to the relevant parties.

### **C3.5.14 KEY PERSONNEL**

The contractor is to provide a list of key personnel with relevant contact information at the start of the contract.

### **C3.5.15 MANAGEMENT MEETING**

Site Meetings will be held on a monthly basis followed by a technical meeting. The technical meeting may coincide with the monthly meeting but could be scheduled as required.

### **C3.5.16 FORMS FOR CONTRACT ADMINISTRATION**

Standard forms for contract administration purposes will be issued to the Contractor at the start of the contract. These will be made available in soft and hard copy format.

### **C3.5.17 ELECTRONIC PAYMENTS**

The contractor will be responsible for supplying correct bank details to the employer for electronic payments and the employer will not be held responsible for any incorrect bank details supplied by the Contractor. Mechanisms of payments dates will be advised at the start of the contract.

### **C3.5.18 BONDS AND GUARANTEES**

The contractor shall deliver to the Employer the guarantee within 14 days of receipt by the contractor of the Letter of Acceptance. The guarantee shall be held by the Employer for safekeeping until completion of the work.

### **C3.5.19 PERMITS**

Requirements will be determined by the nature of work comprising each assignment.

### **C3.5.20 PROOF OF COMPLIANCE WITH THE LAW**

Mechanisms of legal compliances will be advised at the start of the contract.

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C3.5.21 INSURANCE PROVIDED BY THE EMPLOYER**

Copies of the above insurance may be obtained from the Employer, if required.

### **C3.5.22 DAILY RECORDS**

Daily records of site activities must be kept accurately. This would include records of plant, personnel, site and weather conditions and any other pendant information effecting the Contract. These records must be agreed to by the Employer's Agent on a regular basis.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2


## C3.6: HEALTH AND SAFETY REQUIREMENTS AND PROCEDURES


### C3.6.1 HEALTH AND SAFETY REQUIREMENTS AND PROCEDURES


In terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993) hereinafter referred to as the Act, the following arrangements and procedures shall apply between the Contractor and the Employer to ensure compliance by the contractor with the provisions of the Act:


- (i) The contractor undertakes to acquaint the appropriate officials and employees of the contractor with all relevant provisions of the Act and the Regulations promulgated in terms of the Act.
- (ii) The contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the contractor will be fully complied with.
- (iii) The contractor accepts liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations.
- (iv) The contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to monitor that the contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the contractor, or any appropriate records or safety plans held by the contractor.
- (v) The contractor shall be obliged to report forthwith to the Employer and Employer's Agent any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing, to the Employer and Employer's Agent, of such investigation, complaint or criminal charge.
- (vi) The contractor shall furthermore, in compliance with Constructional Regulations 2014 (dated 07 February 2014) to the Act acquaint himself with the requirements of the Employer's health and safety specification as laid down in regulation 4(1)(a) of the Construction Regulation 2014, and prepare a suitably and sufficiently documented health and safety plan as contemplated in regulation 5(1) of the Construction Regulation 2014 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment shall be submitted for approval, to the Employer or his agent, within 14 days of the Commencement Date and shall be implemented and maintained from the commencement of the Works. The contractor shall at all times be responsible for full compliance with the approved plan as well as with the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan
- (vii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to monitor that the contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations shall entitle the Employer's Agent, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the contractor has been in default have been rectified.


The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in Section C3.4 : Construction, the Bill of Quantities, the Drawings, and in the Employers' Health and Safety Specification (Regulation 4(1) of the Construction Regulations 2014), which is attached under C3.8.


  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

Payment items are included in the Bill of Quantities to cover the contractor's cost for compliance with the OHS Act and the abovementioned regulations.

### **C3.6.2 PROTECTION OF THE PUBLIC**

The contractor shall at all times ensure that his operations do not endanger any member of the public. As the area is adjacent to a residential area the contractor shall take special precautions to prevent public access to any danger areas on the Works, e.g. by temporary barricades and/or fencing.

### **C3.6.3 BARRICADES AND LIGHTING**

The contractor must take all special precautions to prevent public access to any danger areas on the Works, e.g. by temporary barricades and/or fencing. The Contractor shall maintain barricades and/or fencing for the duration of the Contract.

The construction site must be secure and it is the responsibility of the contractor to ensure the safety of his staff and all visitors to the site.

### **C3.6.4 TRAFFIC CONTROL ON ROADS**

The contractor may use the existing roads for the hauling of materials to or from site, but he will be held responsible to clear any spillage caused by his activities on or near the roads by whatever means necessary and immediately. No additional payment will be made for the clearance of spillage and all other relevant costs.

Where work operations are to be executed close to site activities, the contractor shall ensure that at all times pedestrian, and vehicle access are provided.

### **C3.6.5 MEASURES AGAINST DISEASE AND EPIDEMICS**

The contractor has to take cognizance of his construction activities in the works area and therefore must ensure the safety of his workers at all times.

### **C3.6.6 AIDS AWARENESS**

Toolbox talks will be initiated on site and an item is included for awareness programmes.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**C3.7: HIV / AIDS AWARENESS**

Compliance with the HIV/AIDS Awareness Programme is compulsory. The contractor is responsible for ensuring that the programme is implemented on individual assignments under this contract in accordance with the HIV/AIDS Specification for Civil Contracts issued by the Department of Public Works, a copy of which is included in Part 5, Annexure C5.4.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### C3.8: COVID-19 OHS Specifications and Regulations

Compliance with the COVID-19 OHS Specifications and Regulation is compulsory. The contractor is responsible for ensuring that the specifications and regulations is implemented as required during the full duration of the project in accordance with the COVID-19 Specification and Regulations for Civil Contracts of which is included in Part 5, Annexure C5.5.. Directive by the minister of employment and labour in terms of regulation 10 (8) of the regulations issued by the minister of cooperative governance and traditional affairs in terms of section 27 (2) of the disaster management act, 2002 (act no. 57 of 2002)

Payment items are included in the Bill of Quantities to cover the contractor's cost for compliance with the COVID-19 OHS Specifications and Regulations and the abovementioned regulations.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

# MOHOKARE LOCAL MUNICIPALITY

**BID NUMBER: SCM/MOH/10/2023**

**ZASTRON/MATLAKENG: THE CONSTRUCTION OF A  
SEWER NETWORK IN REFENGKHOTSO FOR 900 ERVEN  
(MIS: 422896)**

## CONTRACT

**PART 4 (OF 5): SITE INFORMATION**

### CONTENTS

<b>C4.1</b>	<b>BOOK OF DRAWINGS</b>
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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

## C4.1: BOOK OF DRAWINGS

Please find the Book of drawings attached.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2



A

NOTES:  
DRAWINGS NOT TO BE SCALED  
DIMENSIONS TO BE CHECKED AND CONFIRMED  
ON SITE PRIOR TO COMMENCEMENT OF WORKS  
CONTRACTOR TO BE RESPONSIBLE FOR  
SECURING THE SITE PRIOR TO COMMENCEMENT OF THE WORKS  
ALL CIVIL WORKS TO BE ACCORDING  
TO SANS 1200

- LEGEND:
- MAINLINE MANHOLE DETAIL
- MANHOLE NAME
  - SEWER MAINLINE  
(VARYING SLOPE AND DIAMETER)
  - 110mm dia ERF CONNECTION  
SLOPE 1:60
  - EXISTING WATER NETWORK

REDUCED DRAWING  
SCALE OF THIS DRAWING  
100 MILLIMETRES ON ORIGINAL DRAWING

FOR TENDER

No.	AMENDMENTS		DATE
	SURVEYED	APPR.	
	SURVEY PLOTTED		
	DRAWN	W. GRIESEL	2023/01/27
	CHECKED		2023/01/27

PROJECT ENGINEER

NAME: XXX  
(P. 1681-XXX)

DATE: 2020/03/26



MOHOKARE LOCAL  
MUNICIPALITY  
CONSTRUCTION OF SEWER  
NETWORK IN REFENKGOTSO  
FOR 900 ERVEN

SEWER LAYOUT NO 1

SCALE  
N.T.S.

SHEET 1 OF 1 SHEETS

6209 PCE 301 (T1)













# MOHOKARE LOCAL MUNICIPALITY

**BID NUMBER: SCM/MOH/10/2023**

## **ZASTRON/MATLAKENG: THE CONSTRUCTION OF A SEWER NETWORK IN REFENGKHOTSO FOR 900 ERVEN (MIS: 422896)**

# **ANNEXURES**

## **PART 5 (OF 5): ANNEXURES**

### **CONTENTS**

<b>C5.1</b>	<b>Health &amp; Safety Specification</b>
<b>C5.2</b>	<b>Environmental Management Plan (EMP)</b>
<b>C5.3</b>	<b>EPWP Reporting</b>
<b>C5.4</b>	<b>HIV/AIDS Specification for Civil Contracts</b>
<b>C5.5</b>	<b>COVID-19 OHS Specifications and Regulations</b>

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C5.1: HEALTH AND SAFETY SPECIFICATION

# MOHOKARE LOCAL MUNICIPALITY

**BID NUMBER: SCM/MOH/10/2023**

## **ZASTRON/MATLAKENG: THE CONSTRUCTION OF A SEWER NETWORK IN REFENGKHOTSO FOR 900 ERVEN (MIS: 422896)**

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### **C5.1: OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS**

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#### **Project Health and Safety Specification**

In terms of Construction Regulations 2014

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C5.1.2: FURTHER REQUIREMENTS

ANNEXURE A: TASK COMPLETION FORM


ANNEXURE B: CONTRACTOR'S RESPONSIBLE PERSONS


BASELINE RISK ASSESSMENTS


HEALTH AND SAFETY SPECIFICATION ACKNOWLEDGEMENT RECEIPT


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Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

## C5.1.1 SPECIFIC PROJECT INFORMATION

### C5.1.1.1 INTRODUCTION AND DEFINITIONS

PLEASE NOTE THAT THE REQUIREMENTS OF THE NEW CONSTRUCTION REGULATIONS 2014 HAVE BEEN IN EFFECT SINCE 7TH AUGUST 2014. THE NEW REGULATIONS PLACE ADDITIONAL LEGAL DUTIES UPON PRINCIPAL CONTRACTORS AND CONTRACTORS. ALTHOUGH THIS HEALTH AND SAFETY SPECIFICATION INCLUDES MUCH OF THE CONTENT OF THESE NEW REQUIREMENTS, THE CONTRACTOR WILL BE DEEMED TO BE FAMILIAR WITH THE REQUIREMENTS OF THESE REGULATIONS, AND TO HAVE FACTORED IN ALL THE DUTIES PLACED UPON CONTRACTORS AND PRINCIPAL CONTRACTORS IN THE TENDER. A COPY OF THE REGULATIONS CAN BE VIEWED ON THE DEPARTMENT OF LABOUR'S WEBSITE.

This Health and Safety Specification contains clauses that are generally applicable to construction activities, as well as imposing pro-active controls associated with activities that impact on Health and Safety as it relates to plant and machinery. Compliance to the requirements of the Occupational Health and Safety Act 1993 is in addition to the requirements of this Health and Safety Specification and is part of the Contractor's responsibility. The Client will monitor that the Contractors comply with the requirements of such legislation.

ALL REFERENCES TO CLIENT IN THIS HEALTH AND SAFETY SPECIFICATION ALSO REFER TO CLIENT AGENT, WHERE SO APPOINTED.

***Definitions (as per the Construction Regulations 2014) applicable to this Health and Safety Specification:***

"agent" means a competent person who acts as a representative for a client;

"angle of repose" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

"bulk mixing plant" means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

"client" means any person for whom construction work is being performed;

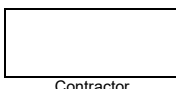
"competent person" means a person who has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of 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; and is familiar with the Act and with the applicable regulations made under the Act;

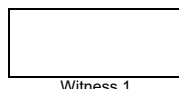
"construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

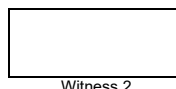
"construction site" means a work place where construction work is being performed;

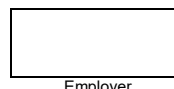
"construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

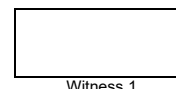
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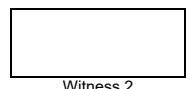
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

"construction vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work;

"construction work" means any work in connection with-

- the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, 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 regulation 3;

"contractor" means an employer who performs construction work;

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications ;

"designer" means a competent person who-

- prepares a design;
- checks and approves a design;
- arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- designs temporary work, including its components;
- an architect or engineer contributing to, or having overall responsibility for a design;
- a building services engineer designing details for fixed plant;
- a surveyor specifying articles or drawing up specifications;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter or landscape architect;

"excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines or similar equipment;


"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guard-rails, screens, barricades, anchorages or similar equipment;

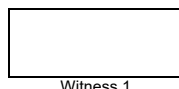
"fall protection plan" means a documented plan, which includes and provides for -

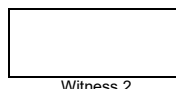
- all risks relating to working from a fall risk position, considering the nature of work undertaken;
- the procedures and methods to be applied in order to eliminate the risk of falling; and
- a rescue plan and procedures;

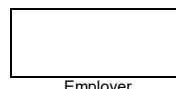
"fall risk" means any potential exposure to falling either from, off or into;

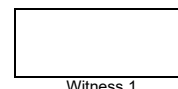
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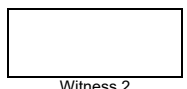
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

"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;

"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

"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;

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003;

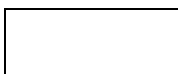
"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

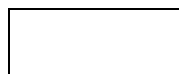
"shoring" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation;

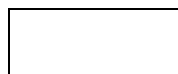
"structure" means-

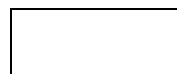
- any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or
- any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling;

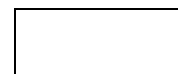
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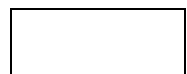
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

"suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support ;

"temporary works" means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

"the Act" means the Occupational Health and Safety Act , 1993 (Act No. 85 of 1993);

"tunneling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

Reference should be made to the following documentation in conjunction with this Safety Specification (including existing surveys, drawings and reports):

All existing survey drawings  
Engineering drawing  
Geo Technical report

**IMPORTANT NOTE:**

This Health and Safety Specification has been prepared to comply with the requirements of the Construction Regulations 2014.

### **C5.1.1.2 BACKGROUND TO THE HEALTH AND SAFETY SPECIFICATION**

Historically, the Construction Industry has had a poor health and safety record. Due to the complex and potentially dangerous operations being undertaken, there is a high risk of incidents, accidents and injuries. In many instances poor adherence to the Act and Regulations has resulted in severe consequences for Health and Safety performance. The Client is determined that the highest Health and Safety standards will prevail throughout the Contract and that there will be full commitment from all parties involved.

To achieve this goal the Client has prepared this Health and Safety Specification. The Health and Safety Specification sets out guidelines and minimum levels of awareness and guidance for Health and Safety requirements for the project. Contractual responsibility for adhering to these requirements rests with the Contractors. All employees are encouraged to be pro-active in compliance.

The Client is committed to ensuring the highest Health and Safety standards for all work undertaken within the Contract.

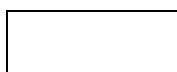
**Contractors as employers are fully responsible and accountable for compliance with all Health and Safety requirements.**

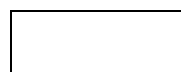
**IMPORTANT NOTE:**

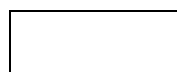
**Compliance with the Occupational Health and Safety Act and Regulations shall not be limited to this Health and Safety Specification and definitions contained in this document.**

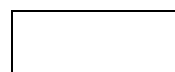
**Contractors shall be conversant with the requirements and effects of Health and Safety legislation upon their activities, in particular the Construction Regulations, 2014, and the Occupational Health and Safety Act, 1993, and to have made adequate resource in their tender submission to comply with all legislative requirements.**

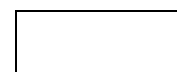
The Contractor's personnel will be responsible for the auditing of the implementation of the

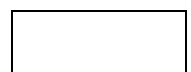
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

Health and Safety Specification and maintaining the document control and record systems associated with the Health and Safety Specification. The Client will conduct Health and Safety audits of the works too.

#### **C5.1.1.3 PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION**

The purpose of this site specific Health and Safety Specification is to comply with legal requirements and to provide health and safety information about specific project risks known by the Client, Designer and Client Agent to be applicable to this project. This document also provides minimum health and safety requirements, standards and expectations that the principal contractor and contractors must adhere to.

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resource and competence to deal with the matters detailed herein so that all relevant contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons affected by the construction activities.

The Health and Safety Specification will be implemented during construction of the works and any construction activity that the Client has control over.

This will also assist in ensuring that all the costs related to the compliance with Occupational Health Act 85 of 1993 and the Construction Regulations 2014, as well as this Health and Safety Specification, are taken into consideration at Tender stage.

No advice, approval of any document required by the Health and Safety Specification such as hazard identification and risk assessment action plans or any other form shall be construed as an acceptance by the 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 which may result from the Contractor failing to comply with the Health and Safety Specification unless the Client has issued an instruction to any requirement, i.e. the Contractor remains responsible for achieving the required performance levels.

#### **C5.1.1.4 IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION**

This Health and Safety Specification forms an integral part of the Contract, and Contractors shall make it an integral part of their Contracts with Sub Contractors and Suppliers. Contractors employed by the Client are to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off site activities relating to the project, in particular in transport activities and project dedicated off site fabrication works.

The Contractor shall enforce the provisions of the Health and Safety Specification amongst all sub contractors and suppliers for the project.

The Contractor shall sign the acknowledgment on the last page of this safety specification that he/she has familiarized him/herself with the content of the Health and Safety Specification and shall comply with all obligations in respect thereof.

The successful Contractor will be required to compile a Health and Safety Plan based on the requirements of the Occupational Health Act 85 of 1993 and these Specifications, which will need to be approved by Client prior to commencement with construction work.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### C5.1.1.4.1 Client Duties

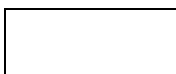
In terms of the Construction Regulations 2014 the Client (or their Agent, where appointed) has legal duties. Where an Agent (refer to “definitions” section of this document) is appointed in terms of this project, these Health and Safety duties assigned will also apply.

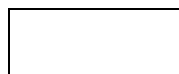
**All references to “Client” will apply to their appointed “Client Agent”, where so appointed, in this Health and Safety Specification.**

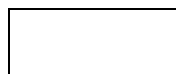
The Client must:

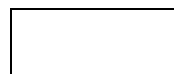
- Prepare a baseline risk assessment for the construction work
- Prepare a suitable, sufficiently documented and coherent site specific Health and Safety specification for the intended construction work, based on the baseline risk assessment
- Include the health and safety specification in the tender documents
- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely
- Take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with the regulations
- Ensure, before work commences, that every principal 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 (Act no 130 of 1993)
- Appoint each principal contractor in writing for the project, or part thereof
- Discuss and negotiate with the principal contractor the contents of the principal contractor’s safety plan and thereafter finally approve that plan for implementation
- Ensure that a copy of the principal contractor’s health and safety plan is implemented and maintained
- Ensure that periodic health and safety 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
- Ensure that a copy of the health and safety audit report is provided to the principal contractor within 7 days after the audit
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the principal contractor’s health and safety plan for site
- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely
- Ensure that the health and safety file is kept and maintained by the principal contractor.
- Where the client requires additional work to be performed as a result of a design change or error in construction due to the actions of the client, the client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.
- Where more than one principal contractor is appointed, the client must take reasonable steps to ensure co-operation between all principal contractors and contractors to ensure compliance with the Regulations

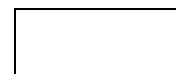
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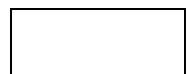
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

- Where the Client has appointed a Client Agent for the project, their details for this project are contained in the Project Directory section of this health and safety specification.

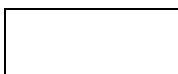
#### C5.1.1.4.2 Designer Duties

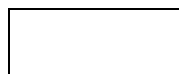
It must be noted that the Designer also has Health and Safety duties assigned in terms of the Construction Regulations. Where the contractor fulfils a design function in terms of this project (refer to “definitions” section of this document), these duties will also apply. Please refer to Regulation 6 of the Construction Regulations 2014.

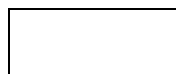
**Please note that the designer of temporary works must ensure that:**

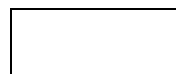
- all temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- the designs of temporary works are done with close reference to the structural design drawings issued by the contractor, and in the event of any uncertainty consult the contractor;
- all drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- the loads caused by the temporary works and any imposed loads are clearly indicated in the design.

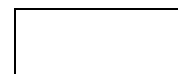
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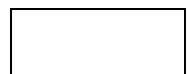
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

<b>C5.1.1.5 PROJECT DIRECTORY</b>		
<b>Project Client</b>	MOHOKARE LOCAL MUNICIPALITY	<b>Tel:</b> 074 085 3384 <b>e-mail:</b> mohokarepmu@gmail.com
<b>Contact Person</b>	Ms. S. Shamase	
<b>Construction Safety Agent</b>		<b>Cell:</b>  <b>e-mail:</b>
<b>Contact Person</b>		
<b>Project Manager</b>	Proper Consulting Engineers	<b>Tel:</b> 051 451 1721  <b>Cell:</b>
<b>Contact Person</b>	Mr F Coetzer / Mr. P. Meir	<b>e-mail:</b> fanie@propercon.co.za
<b>Consulting Engineer</b>	Proper Consulting Engineers	<b>Tel:</b> 051 451 1721  <b>Cell:</b>
<b>Contact Person</b>	Mr F Coetzer / Mr. P. Mei	<b>e-mail:</b> fanie@propercon.co.za

<b>OTHER PARTIES DIRECTORY</b>	
<b>Department of Labour for submission of Annexure 2: Notification of Construction Work</b>  Free State	<b>Tel:</b>  <b>Email:</b>  <b>Mobile:</b>
<b>Department of Labour</b>  Free State	<b>Tel:</b>  <b>Fax:</b>  <b>Email :</b>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

<b>Telecommunications</b>  <b>Company:</b> Telkom	<b>Tel:</b>
<b>Water</b>  <b>Company:</b> MOHOKARE LOCAL MUNICIPALITY	<b>Tel:</b>  <b>Fax:</b>
<b>Electricity</b>  <b>Company:</b> MOHOKARE LOCAL MUNICIPALITY	<b>Tel:</b>  <b>Fax:</b>
<b>Gas</b>  <b>Company:</b>	<b>Tel:</b>  <b>Fax:</b>

<b>C5.1.1.6 PROJECT DETAILS</b>
<b>Description of Works</b>  The construction of a sewer network in Refengkhotsso for 900 erven (Mis: 422896)
<b>Anticipated Construction Duration</b>  As stipulated by the Contractor
<b>Provisional Start Date</b>  Six weeks after tender closing.
<b>Completion Date</b>  To be confirmed on Site Handover Meeting.

<b>C5.1.1.7 EXISTING ENVIRONMENT</b>
<b>Hazards particular to this project by virtue of location:</b> Eskom Powerlines Water Sewage
<b>Overhead, Above Ground and Underground Services crossing the site:</b>  <b>Overhead:</b> Yes  <b>Underground:</b> YES  <b>Ground level:</b> N/A  <b>Service Drawings available:</b> Yes

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**Wayleaves required:** Yes

**Permits required:** Yes

**Isolations required:** N/A

**Existing structures and surrounding land use (with a significant impact on Health & Safety):**

N/A

**Existing ground conditions and ground survey report:**

Geotechnical Investigation needs to be conducted

**Existing Traffic Systems**

**Condition:** Gravel roads

**Restrictions to access:** None Known

**Speed restrictions:** Usual urban speed restrictions applicable

#### **C5.1.1.8 AVAILABLE DRAWINGS**

Refer to tender documentation.

#### **C5.1.1.9 PROJECT HEALTH AND SAFETY REQUIREMENTS**

**Significant health and safety hazards identified by Designer and Client Agent:**

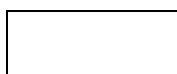
Working at Heights will be done during different phases of the project. Over deep excavations and building of structures by example. This must be assessed by the contractor and method statement for these activities to be submitted for approval prior to work commencement.

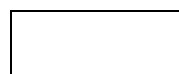
It is envisioned that plant will be moving on the road and must be made visible at all times. Parking of this plant must be strictly monitored by the contractor at all times. Use trained flag persons as applicable.

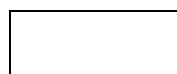
Protection of residence-  
1.8m ready fencing required to demarcate site area. All necessary steps must be taken to prevent unauthorized entry to site and to protect members of the public from any dangers associated with the construction works being undertaken.

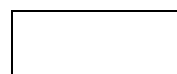
**Use of scaffold and working at height** – a Fall Protection Plan and Rescue Plan will be required for approval prior to commencement of any activities at height. All workers to have a medical certificate of fitness. All workers must have fall protection plan training in the form of a toolbox talk with a signed register of attendance. Safety harnesses to be worn as required. Edge protection in the form of guard rails and toe boards to prevent materials and people from falling.

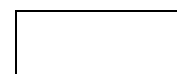
**Other construction hazards expected are as follows:**

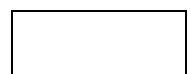
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2


Bricklaying  
Compacting and Filling  
Compactor Operations  
Confined Spaces  
Contaminated Land  
Cutting Kerbs  
Cutting Off Disc  
Demolition  
Electric Tools and Electrical Installations  
Excavations  
Fire  
Flammable Liquids / Gas  
Fragile Materials  
Goods / Passenger Hoist Operation  
Hand tools  
Hazardous Substances  
Hot Works  
Kerb Laying  
Lifting Operations  
Manhole Rings and Pipes Storage  
Manual Handling of General Items  
Material / Passenger Hoist Operation  
Members of Public  
Noise and Dust  
Overhead Services (Working near)  
Painting  
Paving (Laying)  
Plant/Vehicle and Equipment Operation  
Plastering  
Plumbing  
Scaffold Erection / Dismantling  
Shuttering Walls, Beams, Columns  
Site Strip  
Skipping of Concrete  
Snakes  
Steel Erection  
Steel Fixing  
Temporary Work (include False Work, Scaffold and Shoring)  
Tower Crane Erection and Dismantling  
Tower Scaffold  
Troxler Use  
Work over or next to Water  
Working at Height (excl scaffold)


**NOTE: Please refer to end of this Health and Safety Specification for the baseline risk assessment for these risks.**


**ACTIVITIES REQUIRING APPROVED METHOD STATEMENTS (FOR HEALTH AND SAFETY)**


Working in close proximity of high voltage power lines.  
Traffic Management Plan including overnight parking of plants.  
Working in close proximity of fast flowing and deep water..  
Shoring of trenches and excavations.  
Confined space entries.  
Working at Heights.


  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

**ACTIVITIES REQUIRING PERMITS (FOR HEALTH AND SAFETY PURPOSES)**

**Permit to Dig / Permit to Enter Excavations:** Permit will be required, PC to issue

**Permit to Work with Electricity:** Permit will be required, Municipality to issue

**Confined Space Permit:** Permit will be required, PC to issue

**Hot Works Permit:** Permit will be required, PC to issue

**Permit to Work under Power Lines:** Permit will be required Municipality/Eskom to issue

**Blasting:** N/A

**Temporary Works:** N/A

**CONTRACTOR SAFETY OFFICER PROVISION**

Records of safety audits undertaken by the Contractor's Safety Officer must be kept on site in the safety file and non-conformances reported by the Safety Officer to the Contractor's management team. All non-conformances identified by the Safety Officer must be investigated and corrective action taken by the Contractor to prevent re-occurrence. A full-time safety officer must be appointed for this project the appointed safety officer must be registered at SACPCMP, proof of registration or confirmation letter of request for registration must be provided.

**MEDICAL CERTIFICATE OF FITNESS**

The Principal contractor must ensure that his employees and contractor appointed by him are in possession of a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template.

**MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK**

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor.

**TRAFFIC MANAGEMENT AND TRAFFIC SAFETY OFFICER PROVISION**

N/A

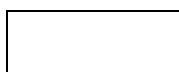
**ENVIRONMENTAL CONDITIONS**

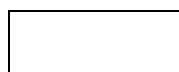
Contractor must take into account adverse weather conditions on site activities and implement control measures to mitigate risk. This includes risk of exposure to excessive heat, cold, rain and wind. The open nature of the site works will not preclude any of the above. Weather considerations must be allowed for on site, especially in terms of heavy rains stopping work, lightning, high winds and heat stress exposures. For lightning the following guide exists:

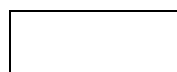
Where high level construction or maintenance work is being performed, thunder storms present a wind and rain risk to the workers in elevated positions but lightning is also a significant risk.

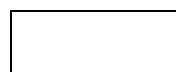
To establish how far the lightning is from a work area, this distance can be determined by multiplying the time difference in seconds between the actual lightning flash seen and the hearing of the thunder rumble by 344m per second (ie. the speed of sound travel) to calculate the distance to the lightning flash in metres.

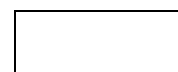
Distance to lightning in metres = seconds time difference between the flash and its rumble x 344 m/sec

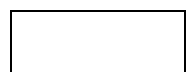
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

This means that a 3 second delay represents a lightning flash just over 1 km distant. Explosives factories use a 10 second delay (a 3.4km distance) for production building evacuation because of lightning risk.

#### **ARRANGEMENTS FOR ACCESS, PARKING, DELIVERIES, ETC**

**Access to site by Construction Vehicles:** Appointed Principal contractor to ensure that no vehicles use road reserve as parking area along site. All visitors are to report to site office.

**Access to site by Construction Workers and Visitors:** Appointed Principal contractor to ensure that all visitors are to report to site office.

#### **ARRANGEMENTS FOR SITE CAMP, ABLUTIONS AND YARD**

##### **Site camp location and set up**

- **Restrictions / requirements:** }
  - **Storage areas:** }
  - **Security:** }
- Contractor to advise in consultation  
with Engineer / Professional Team

##### **Ablutions and Welfare Arrangements**

Contractor to supply ablutions and facilities in line with the Construction Regulations 2014, refer to section 2.31 of this health and safety specification regarding the below. Please note that toilets should be provided with built in facilities for hand washing:

- **Toilets:** }
  - **Washing facilities:** }
  - **Drinking Water:** }
  - **Shelter:** }
  - **Showers:** }
- Contractor to provide as per Regulations

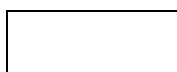
#### **PROTECTION OF SITE AGAINST UNAUTHORISED ACCESS BY PUBLIC**

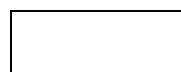
**Excavation Fencing:** Note that excavations accessible to public, or adjacent to public roads / thoroughfares, must have (1) barrier / fence of at least 1m in height, and (2) warning illuminants at night or when visibility is poor, or have other suitable precautionary measures if of both these are not practicable.

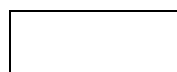
**General Fencing of Site:** Note that construction sites in built up areas adjacent to public way must be fenced off and have controlled access points.

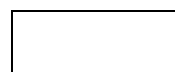
**Warning Notices:** "No Unauthorised Entry" safety signs and PPE requirements signs to be displayed as well as usual construction warning signage at the entrance of site camp. Road / traffic management signage as per the SA Road traffic regulations and stipulated in the Traffic Management Plan approved prior to work starting.

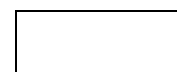
**Look Outs:** PC to ensure that requirements are met as required.

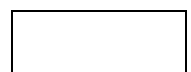
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**The Client requires the Contractor to ensure that employees (and others under his/her control) wear the following minimum PPE:**

**Overalls:** Yes, all workers to be identifiable when on site.

**Safety Harnesses:** Yes, all workers on scaffolding to use during all phases as required

**Hard Hats:** Yes, all workers to adhere to PPE requirements when on site.

**Reflective Vests:** Yes, all workers to be identifiable when on site.

**Goggles / gloves / ear defenders / respiratory protection:** Yes, all workers to use applicable PPE.

**Safety Footwear:** Yes, all workers to wear when on site

**Specialist Equipment (eg: for confined Spaces):** Yes, all workers to use applicable PPE and ensure precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with.

### **HAZARDOUS SUBSTANCES**

**The following materials and substances have, or may have, to be used in the works and are identified as potentially posing special health and / or safety hazards during the project. Appropriate measures will need to be specified for their control:**

Cement                  Petrol                  Diesel

### **C5.1.1.10 INTERFACE AND RESTRICTIONS BY CLIENT**

**Contractor must note that the following Client activities will continue during construction:**

Daily maintenance and work by Municipality Workers in the Harrismith area.

**The following Client safety rules and/or requirements are to be observed:**

Workers are to stay in designated works areas.

All workers are to receive induction prior to commencement of work on site.

Other safety rules and requirements to be advised at induction.

Please also refer to tender document.

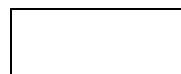
**Restrictions on times, access or other restrictions by Client**

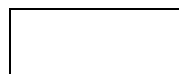
Permission will be required from Engineers for any work done on public holidays and night shifts.

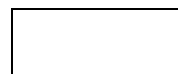
### **C5.1.1.11 SAFETY FILE RETURN TO CLIENT**

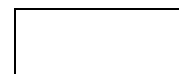
The Safety File for the Project is to be handed over by the Principal Contractor to the Client upon Project Completion in a hard copy format and on CD.

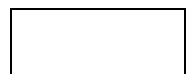
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

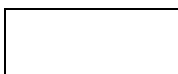
## C5.1.2 FURTHER REQUIREMENTS

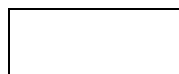
### C5.1.2.1 DUTIES OF PRINCIPAL CONTRACTOR / CONTRACTOR IN TERMS OF CONSTRUCTION REGULATIONS 2014

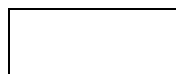
A Principal Contractor must:

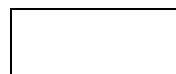
- provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the client, the client's agent or a contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
- provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
- ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
- ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
- ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
- appoint each contractor in writing for the part of the project on the construction site
- take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
- ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
- stop any contractor from executing construction work which is not in accordance with the client's health and safety 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;
- 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;
- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;
- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the client or the client's agent;
- hand over a consolidated health and safety file to the client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;

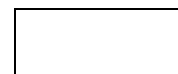
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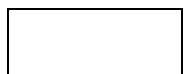
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- 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.

A contractor must prior to performing any construction work-

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the client, the client's agent or the principal contractor;
- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act;
- 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.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor will apply to the contractor as if he or she were the principal contractor.

A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

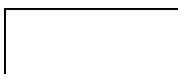
No contractor may allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

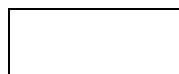
A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

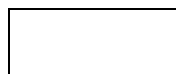
A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor.

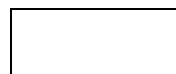
A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3 (a template of which can be found in the Construction Regulations, 2014).

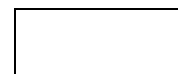
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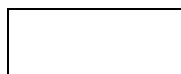
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### C5.1.2.2 MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor.

A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers, or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed.

No construction manager appointed in terms of the Regulations may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

A contractor must, after consultation with the client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor

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

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor, and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties.

Where the contractor has not appointed such an employee, or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector.

No construction supervisor appointed may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C5.1.2.3 NOTIFICATION OF INTENTION TO COMMENCE CONSTRUCTION WORK**

The Contractor shall notify the Provincial Director of the Department of Labour of the intention to commence construction work at least 7 days prior to the works commencing if the intended construction work will:

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

If the construction work involves construction of a single storey dwelling for a client, and such client will be residing in such dwelling upon completion, the contractor must also notify the Provincial Director of the Department of Labour at least 7 days before the works commence.

This must be done on a form similar to an Annexure 2 (template of which can be found in the Construction Regulations, 2014). A copy of the notification letter to the Provincial Director shall be forwarded to the Client for record purposes.

### **C5.1.2.4 ASSIGNMENT OF CONTRACTOR'S RESPONSIBLE PERSONS TO MANAGE HEALTH AND SAFETY ON SITE**

The Contractor shall submit management and supervisory appointments as well as any relevant appointments in writing (as stipulated by the Construction Regulations 2014 and the Occupational Safety and Health Act 1993), prior to commencement of work (refer to Annexure B at the end of this Health and Safety Specification).

### **C5.1.2.5 COMPETENCY FOR CONTRACTOR'S RESPONSIBLE PERSONS**

The Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent health and safety courses attended by such persons will be required to be presented to the Client.

### **C5.1.2.6 COMPENSATION OF OCCUPATIONAL INJURIES AND DISEASES ACT 130 OF 1993 (COIDA)**

The successful Contractor shall submit to the Client a valid letter of good standing with the Compensation Insurer prior to appointment.

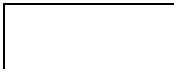
### **C5.1.2.7 OCCUPATIONAL HEALTH AND SAFETY POLICY**

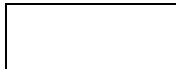
The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the company operations.

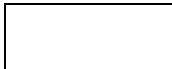
### **C5.1.2.8 HEALTH AND SAFETY ORGANOGRAM**

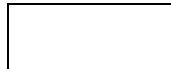
The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Site Team that will be assigned to the project, if successful with the tender. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated, when there is a change in the site team.

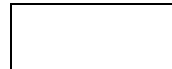
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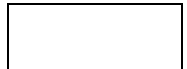
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### C5.1.2.9 RISK ASSESSMENTS

#### Baseline Risk Assessment

The Client shall cause a baseline risk assessment to be conducted by a competent person before the design process and tender process commence, and the assessed risks shall form part of the health and safety specifications.

The Contractor must, before commencement of any construction work, and during construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site and must include:

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

The Contractor must ensure that, as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in a risk assessment.

The Contractor must ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and/or control measures before any work commences and thereafter at the times determined in the risk assessment monitoring and review plan of the relevant site.

The Principal Contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment before any work commences and thereafter at the times determined in the risk assessment monitoring and review plan of the relevant site.

The Contractor must consult with the health and safety committee or with a representative trade union or representative group of employees if no health and safety committee exists, on the monitoring and review of the risk assessments for the site.

The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the client, client's agent, any contractor, any employee, a representative trade union, a health and safety representative or safety committee member.

A Contractor must review the relevant risk assessment where changes are affected to the design and/or construction that result in a change to the risk profile, or when an incident has occurred.

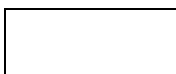
**Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk, the equipment or clothing to be used must be SANS approved.**

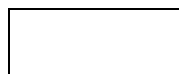
In general, the Contractor must ensure that the Risk Assessment involves identifying the hazards present in a work activity on site. This is followed by an evaluation of the extent of the risk involved taking into account those precautions already being taken.

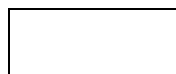
The following general principle should be followed when conducting a risk assessment:

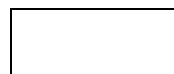
- All relevant risks and/or hazards should be systematically addressed;

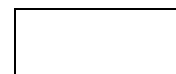
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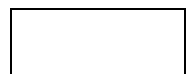
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

- The risk assessment should address what actually happens in the workplace during the work activity;
- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors and subcontractors;
- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;
- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

#### **C5.1.2.10 HEALTH AND SAFETY REPRESENTATIVE(S)**

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

#### **C5.1.2.11 HEALTH AND SAFETY COMMITTEE**

Where two or more health and safety representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept on record. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson. Minutes of these meetings must be available for the employees of the contractor to refer to.

#### **C5.1.2.12 MEDICAL CERTIFICATE OF FITNESS**

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template (refer to the Construction Regulations 2014 on the Department of Labour website for a sample of this form).

#### **C5.1.2.13 HEALTH AND SAFETY TRAINING**

The Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

##### **C5.1.2.13.1 Induction**

No Contractor may allow or permit any employee or person to enter site unless they have undergone health and safety induction training pertaining to the hazards prevalent on site at the time of entry. This includes visitors to site. The Contractor must ensure that visitors to site have the necessary protective equipment (PPE). A copy of attendance registers of all employees who attend inductions shall be kept.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **C5.1.2.13.2 Awareness**

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

#### **C5.1.2.14 COMPETENCY**

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on Risk Assessment, he shall send the relevant persons on appropriate courses and keep certificates of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence.

#### **C5.1.2.15 GENERAL RECORD KEEPING**

The Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specification and the Occupational Health and Safety Act. 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 the Client, or the Department of Labour's Inspectors.

#### **C5.1.2.16 GENERAL INSPECTION, MONITORING AND REPORTING**

The Contractor shall carry out inspections as required by this Health and Safety Specification, as well as by health and safety legislation.

#### **C5.1.2.17 EMERGENCY PROCEDURES**

The Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials / situations, 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.

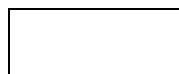
Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, dangers as a result of riot / service deliver protests / intimidation, etc. The Contractor shall advise the Client in writing of any on-site emergencies, together with a record of action taken, before the end of the working day. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc) must be maintained and available to site personnel.

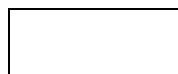
#### **C5.1.2.18 FIRST AID BOX AND FIRST AID EQUIPMENT**

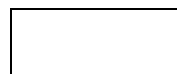
The Contractor shall provide first aid box/es and appoint, in writing, First Aider(s) for this project in line with the results of the Contractor's risk assessment for the project, this health and safety specification as well as the provisions of the General Safety Regulations. The appointed First Aider(s) are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on site.

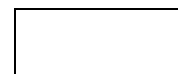
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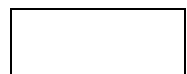
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

First Aid box/es must be adequately stocked at all time, accessible and be controlled by a qualified First Aider. If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.

#### **C5.1.2.19 ACCIDENT / INCIDENT REPORTING AND INVESTIGATION**

The Contractor shall, in addition to the prescribed requirements of the Occupational Health and Safety Act and General Safety Regulations, investigate, record and report all Section 24 reportable incidents to the Client within 24 hours of the incident occurring. Incident investigations shall be conducted by the Contractor's appointed Accident Investigator – this Investigator must be a competent person or persons who have sufficient knowledge to carry out an investigation.

In the event of a fatality or a permanent disabling injury the Contractor must submit proof of reporting of incident to Department of Labour as well as proof of preventative measures to the Client. The Client reserves the right to conduct investigations into any incidents that they deem fit and the Contractor is required to provide full co-operation in this regard.

#### **C5.1.2.20 HAZARDS AND POTENTIAL SITUATIONS**

The Contractor shall immediately notify other Contractors of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

#### **C5.1.2.21 OCCUPATIONAL HEALTH AND SAFETY SIGNAGE**

The Contractor shall ascertain and provide adequate on site health and safety signage. This signage shall include, but shall not be limited to, Hard Hat / Helmet Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear Plugs / Muffs to be worn where there might be noise exposure over 85 db; Gloves; Safety Goggles; Safety Harness, Workers in Excavation, traffic management, etc. The Contractor shall be responsible to maintain the quality and replacement of signage.

#### **C5.1.2.22 MANAGEMENT OF CONTRACTORS BY PRINCIPAL CONTRACTOR**

The Principal Contractor shall ensure that all contractors under his control are complying with the respective Health and Safety Plans, as well as Health and Safety Legislation.

#### **C5.1.2.23 STACKING OF MATERIALS**

The Principal Contractor must implement and comply with OH&S Act – General Safety Regulation and Construction Regulations.

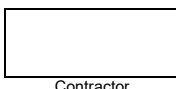
Stacking is to be neat and safe.

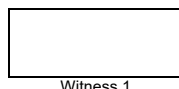
Before stacking any material, the Principal Contractor, Sub-contractors or their employees must consult MOHOKARE Local Municipality representative for allocation of a stacking area.

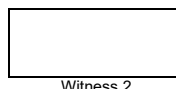
In addition to the provisions for the stacking of articles in the General Safety Regulations, 2003, the contractor must ensure that –

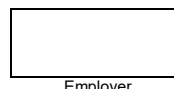
- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and

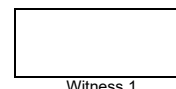
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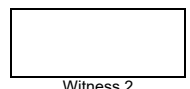
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

- storage areas are kept neat and under control.

#### **C5.1.2.24 HOUSEKEEPING AND GENERAL SAFEGUARDING ON CONSTRUCTION SITES**

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-

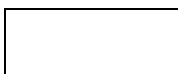
- the proper storage of materials and equipment;
- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;
- ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in the regulations;
- ensuring that 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; and
- ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under, or fencing 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.

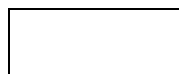
#### **C5.1.2.25 CONSTRUCTION VEHICLES AND MOBILE PLANT**

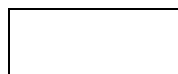
A contractor must ensure that all construction vehicles and mobile plant-

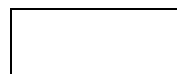
- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
- has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
- has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized 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 guard-rails and crash barriers;
- 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 acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm; and

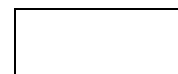
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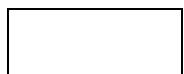
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized 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, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;
- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms or similar appendages, fully lowered or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set and ignition secured;
- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material and equipment are secured and separated by means of a physical barrier 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
- all construction vehicles or mobile plant travelling, working or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.


#### **C5.1.2.26 ELECTRICAL INSTALLATIONS AND MACHINERY ON CONSTRUCTION SITES**


A contractor must, in addition to compliance with the Electrical Installation Regulations and the Electrical Machinery Regulations, 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;
- the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
- all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.


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Contractor

  
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Witness 2

  
Employer

  
Witness 1

  
Witness 2

### **C5.1.2.27 Use and Temporary Storage of Flammable Liquids on Construction Sites**

A contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that –

- where flammable liquids are being used, applied or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;
- no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- 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 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, are removed from the construction site and safely disposed of;
- where flammable liquids are decanted, the metal containers are bonded and earthed; and
- no flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids

### **C5.1.2.28 WATER ENVIRONMENTS**

A contractor must ensure that where construction work is done over or in close proximity to water, provision is made for –

- preventing persons from falling into water; and
- the rescuing of persons in danger of drowning.

A contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

### **C5.1.2.29 FIRE PRECAUTIONS ON CONSTRUCTION SITES**

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, 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;

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- welding, flame cutting and other hot work are done only after appropriate precautions 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 contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, 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.

#### **C5.1.2.30 CONSTRUCTION EMPLOYEES' FACILITIES**

A contractor must, in terms of the Construction Regulations 2014, provide:

- Shower facilities after consultation with the employees or employees representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers;
- changing facilities for each sex;
- and sheltered eating area.

A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

#### **C5.1.2.31 FALL PROTECTION**

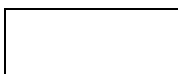
The Contractor must:

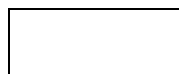
- designate a competent person to be responsible for the preparation of a fall protection plan
- ensure that the fall protection plan contemplated above is implemented, amended where and when necessary and maintained as required; and
- take steps to ensure continued adherence to the fall protection plan.

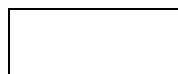
A fall protection plan contemplated above must include-

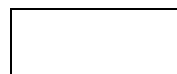
- a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
- the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;
- a programme for the training of employees working from a fall risk position and the records thereof;
- the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and

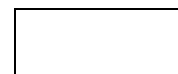
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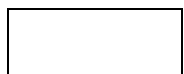
  
Contractor

  
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Witness 2

  
Employer

  
Witness 1

  
Witness 2

- a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

A contractor must ensure that a construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

A contractor must ensure that all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;

Also that no person is required to work in a fall risk position, unless such work is performed safely as contemplated in above and fall prevention and fall arrest equipment are approved as suitable and of sufficient strength for the purpose for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and securely attached to a structure or plant, and the structure of plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and person who could fall, and fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

### **C5.1.2.32 TEMPORARY WORKS**

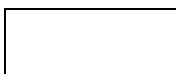
A contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.

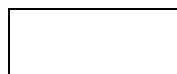
A contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.

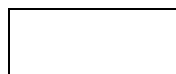
A contractor must ensure that-

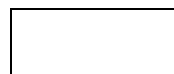
- all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;
- all temporary works structures are done with close reference to the structural design drawings, and where 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 above;
- if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;

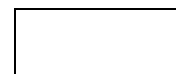
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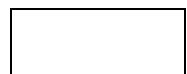
  
Contractor

  
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Witness 2

  
Employer

  
Witness 1

  
Witness 2

- adequate precautionary measures are taken in order to-
- secure any deck panels against displacement; and
- prevent any person from slipping on temporary works due to the application of release agents;
- as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;
- upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person
- the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.
- provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;
- a temporary works drawing or any other relevant document includes construction sequences and methods statements;
- the temporary works designer has been issued with the latest revision of any relevant structural design drawing;
- a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and
- the temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

No contractor may use a temporary works design and drawing for any work other than its intended purpose.

### **C5.1.2.33 EXCAVATION / TRENCHES AND BARRICADING**

A contractor must-

- ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and
- evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

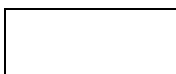
The Principal Contractor must implement and comply with OH&S Act – Construction Regulation and General Safety Regulation. The Principal Contractor must ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing.

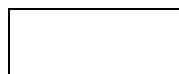
Barricading is provided around all holes or openings to prevent any person being injured as a result of a fall. Where it is impracticable to provide fixed guard railing, effective removable barriers are provided at all unguarded openings in guard railing or floors, and is maintained in position at all times until the hazard no longer applies.

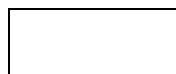
When excavations are necessary across roadways, approval is sought from MOHOKARE LOCAL MUNICIPALITY representative. When necessary “detour” notices and detour routes will be provided.

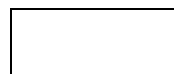
Warning signs and flashing warning lights at night are to be provided in suitable positions to warn any persons approaching the area of the location and extent of any excavation.

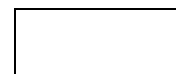
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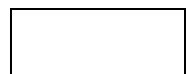
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

Personnel must immediately report any unusual conditions that may be found, such as underground power lines, pipelines, sewers or inconsistent materials to MOHOKARE LOCAL MUNICIPALITY representative and, if risk to personnel safety is involved all work is to be stopped until approval to continue is granted by MOHOKARE LOCAL MUNICIPALITY representative.

Safe access and egress is to be provided and sides battered or shored to the satisfaction of MOHOKARE LOCAL MUNICIPALITY representative.

All excavations must be on register and inspected daily before work commences and after inclement weather by the Principal Contractor appointed competent person and declared safe and his findings noted in the said register.

Note: No loose material is allowed within 3m of the excavation edges.

### **BARRICADING**

The Principal Contractor must implement and comply with OH&S Act – General Safety Regulation & Construction Regulations.

The Principal Contractor must ensure that:

- All openings and edges are barricaded with solid barricading to withstand an impact of at least 100kg.
- Only solid barricading covered with orange “snow netting” and or MOHOKARE LOCAL MUNICIPALITY approved equivalent barricading is allowed to be used as barricade.
- Solid barriers to prevent persons falling into them must protect openings in floors, stairwells, staircases, open- sided buildings and any structure in the course of erection, where dangerous openings exist.
- Principal 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.
- Barricading must be tagged, placed on register, maintained and inspected daily – the owner of the barricades name and mobile number must appear on the tag.

All handrails and fencing must comply with MOHOKARE LOCAL MUNICIPALITY standards, to be provided around all holes or openings to prevent any person being injured as a result of a fall. A solid framework with plastic barricading netting attached to it is required.

Where it is impracticable to provide fixed guard railing, effective removable barriers are to be provided at all unguarded openings in guard railing or floors and is maintained in position at all times until the hazard no longer applies.

Note: Danger tape will not be accepted as barricading!

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Contractor

Witness 1

Witness 2

Employer

Witness 1

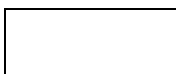
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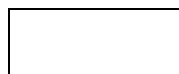
### C5.1.2.34 TUNNELLING

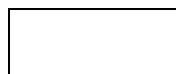
A contractor who performs excavation work-

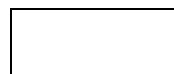
- must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;
- may not require or permit any person to work in an excavation which has not been adequately shored or 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 in stable material: Provided that-
- permission has been given in writing by the appointed competent person contemplated above upon evaluation by him or her of the site conditions; and
- 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 is decisive and such a decision must be noted in writing and signed by both the competent person and the professional engineer or technologist, as the case may be;
- must take steps to ensure that the shoring or bracing contemplated above is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;
- must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
- must ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons;
- must cause convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six meters from the point where any worker within the excavation is working;
- must 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 must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved;
- must ensure that every excavation, including all bracing and shoring, is inspected-
- daily, prior to the commencement of each shift;
- after every blasting operation;
- after an unexpected fall of ground;
- after damage to supports; and
- after rain,
- by the competent person, in order to ensure the safety of the excavation and of persons, and those results must be recorded in a register kept on site and made available on request to an inspector, the client, the client's agent, any other contractor or any employee;
- must 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 –

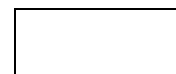
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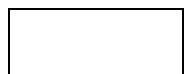
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

- 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 illuminates or any other clearly visible boundary indicators at night or when visibility is poor, or have resort to any other suitable and sufficient precautionary measure where this is not practicable;
- must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation;
- must, where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosives legislation; and
- must cause warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.

### C5.1.2.35 SCAFFOLDING

A contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.

A contractor using access scaffolding must ensure that such scaffolding, when in use, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act.

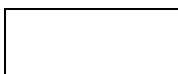
### C5.1.2.36 HAZARDOUS CHEMICAL SUBSTANCES (HCS)

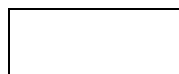
In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the Health and Safety Plan that:

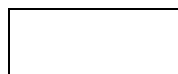
- Material Safety Data Sheets (MSDS's) of the relevant materials / hazardous chemical substances are available prior to use by the contractor. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are done at least once every 6 months.
- Exposure monitoring is done according to OESSM and by an Approved Inspection Authority (AIA) and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How the relevant HCS's are being/going to be controlled by referring to:
  - Limiting the amount of HCS
  - Limiting the number of employees
  - Limiting the period of exposure
  - Substituting the HCS
  - Using engineering controls
  - Using appropriate written work procedures
  - The correct PPE is being used.
- HCS are stored and transported according to SANS 072 and 0228.
- Training with regards to these regulations was given.

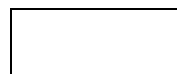
The Health and Safety plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

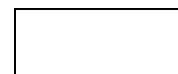
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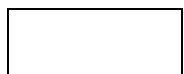
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

The First Aider must be made aware of the MSDS and trained in how to treat HCS incidents appropriately.

#### **C5.1.2.37 NOISE INDUCED HEARING LOSS**

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SANS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
  - Engineering methods considered
  - Admin control (number of employees exposed) considered
  - Personal protective equipment considered/decided on
  - Describe how records are going to be kept for 40 years.

#### **C5.1.2.38 PERSONAL PROTECTIVE EQUIPMENT (PPE)**

The Contractor shall carry out PPE or clothing needs analysis in accordance with his risk assessment, to determine the necessary PPE or clothing to be used during construction. The Contractor shall make provision and keep adequate quantities of SANS approved PPE or clothing on site at all times.

The Contractor must ensure that personnel are trained in the correct use of PPE to be used.

The Contractor must ensure that lost, stolen, worn out or damaged PPE is replaced as required and receipt signed for by employees on site.

#### **C5.1.2.39 PRESSURE VESSELS (INCLUDING GAS BOTTLES)**

The Contractor shall comply with Pressure Vessel Regulations, including:

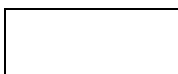
- Providing competency and awareness training to the operators;
- Providing PPE or clothing;
- Providing and maintain appropriate signage in areas where pressure vessels are used, as applicable;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate fire fighting equipment (Fire Extinguishers).

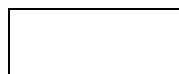
#### **C5.1.2.40 FIRE EXTINGUISHERS AND FIRE FIGHTING EQUIPMENT**

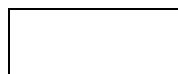
The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers. The Contractor shall have adequate persons trained or competent to use the Fire Fighting Equipment.

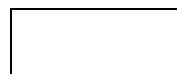
Safety signage shall be posted up in all areas where fire extinguishers are located.

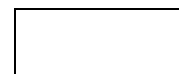
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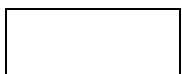
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

#### **C5.1.2.41 LIFTING MACHINERY AND TACKLE**

The Contractor shall ensure that lifting machinery and tackle is inspected before use and on a monthly basis. The Contractor shall have lifting machinery and tackle inspector who will inspect the equipment at intervals required by the Driven Machinery Regulations, 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;
- Thorough examinations are carried out by competent personnel at the frequencies required by legislation
- There is proper supervision in terms of guiding the loads which includes a trained banks man to direct and check lifting tackle if it is safe for use.

#### **C5.1.2.42 LADDERS AND LADDER WORK**

The Contractor shall ensure that all ladders are numbered and inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

#### **C5.1.2.43 GENERAL MACHINERY**

The Contractor shall comply with the Driven Machinery Regulations, which include 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.

#### **C5.1.2.44 PORTABLE ELECTRICAL TOOLS**

The Contractor shall ensure that use and storage of all explosive actuating fastening devices and portable electrical tools are in compliance with relevant legislation.

The Contractor shall consider that:

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

#### **C5.1.2.45 HIGH VOLTAGE ELECTRICAL EQUIPMENT**

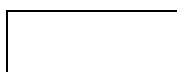
The Contractor shall ensure that, where the work is under, on or near high-voltage electrical equipment the Electrical Installation Regulations, together with safety instructions (Regulations of the Owner of the Equipment) are complied with. Such equipment includes:

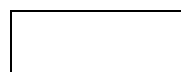
- Eskom and the Local Authority equipment
- The Contractor's own power supply; and
- Electrical equipment being installed but not yet taken over from a Contractor by The Client.

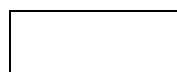
#### **C5.1.2.46 PUBLIC HEALTH AND SAFETY**

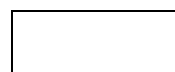
The Contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from on-site activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety

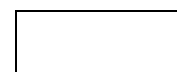
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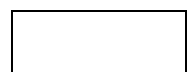
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

signage shall be posted at all times.

#### **C5.1.2.47 NIGHT WORK**

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

#### **C5.1.2.48 ENVIRONMENTAL CONDITIONS AND FLORA AND FAUNA**

The Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions. The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc). The Contractor's risk assessment process must take these risks into account.

#### **C5.1.2.49 OCCUPATIONAL HEALTH**

Exposure of workers to occupational health hazards and risks are very common in any work environment, especially in construction. Occupational health hazards and risks exposure 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 (pores) e.g. painting or use of thinners.

The contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.

All Contractors should ensure that Occupational Hygiene surveys are conducted as per the Occupational Health and Safety Act to ensure employees are not exposed to hazards. Risk Assessments should identify areas where surveys are to be conducted.

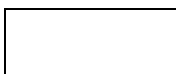
#### **C5.1.2.50 SUSPENDED PLATFORMS**

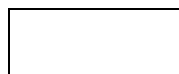
A contractor must appoint a competent person in writing who must ensure that all suspended platforms work operations are carried out under his or her supervision and that all suspended platform erectors, operators and inspectors are competent to carry out their work.

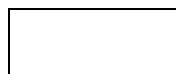
No contractor may use or permit the use of a suspended platform, unless-

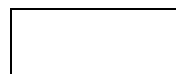
- the design, stability and construction thereof comply with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act;
- he or she is in possession of a certificate of system design issued by a professional engineer, certificated engineer or a professional technologist for the use of the suspended platform system; and
- he or she is, before 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 above and applicable to the environment in which the system is being used, which operational compliance plan must include proof of the-

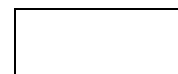
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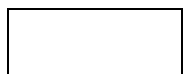
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

- appointment of the competent person;
- competency of erectors, operators and inspectors;
- operational design calculations, which must 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.

A contractor making use of a suspended platform system must submit a copy of the certificate of system design, including a copy of the operational 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 that the system will be used for.

A contractor must submit a copy of the certificate of system design as per regulations for every new project.

A contractor must ensure that the outriggers of each suspended platform-

- are constructed of material of adequate 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.


A contractor must ensure that-

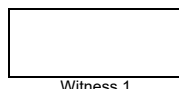
- the parts of the building or structure on which the outriggers of a suspended platform are supported, are checked by means of calculations to ensure that the required safety factor is adhered to without risk of damage to the building or structure;
- the suspension wire rope and the safety wire rope are separately connected to the outrigger;
- each person on a suspended platform is provided with and wears a body harness as a fall prevention device, which must at all times be attached to 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 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
- when the working platform is suspended by two ropes only, the connections of the ropes to the working platform are of a height above the level of the working platform to ensure the stability of the working platform.

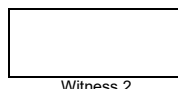
A contractor must ensure that a suspended platform-

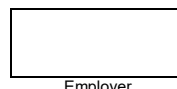
- is suspended as near as possible to the structure to which work is being done to prevent as far as is reasonably practicable horizontal movement away from the face of the structure;
- is fitted with anchorage points to which workers must attach the lanyard of the safety harness worn and used by the worker, and such anchorage connections must have sufficient strength to withstand any potential load applied to it; and

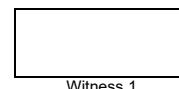
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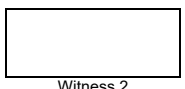
  
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- is fitted with a conspicuous notice easily understandable by all workers working with the suspended platform, showing-
  - the maximum mass load;
- the maximum number of persons; and
- the maximum total mass load, including load and persons, which the suspended platform can carry.

A contractor must cause-

- the whole installation and all working parts of a suspended platform to be thoroughly examined by a competent person in accordance with 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 above 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 must determine the serviceability of the structures, ropes, machinery and safety devices before they are used, every time suspended platforms are erected; and
- the performance test contemplated above 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% 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.

A contractor must 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 before they are used every time they are assembled, and, in cases of continuous use, at intervals not exceeding three months.

A contractor must ensure that the suspended platform supervisor or the suspended platform inspector carries out a daily inspection of all the equipment prior to use, including establishing whether –

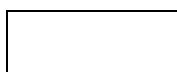
- all connection bolts are secure;
- all safety devices are functioning;
- all safety devices are not tampered with or vandalized;
- the total maximum mass load of the platform is not exceeded;
- the occupants in the suspended platform are using body harnesses which have been properly attached;
- there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

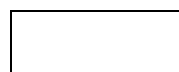
A contractor must ensure that all inspection and performance test records are kept on the construction site at all times and made available to an inspector, the client, the client's agent or any employee upon request.

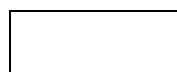
A contractor must ensure that all employees required to work or to be supported on a suspended platform are –

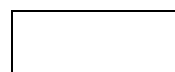
- medically fit to work safely in a fall risk position or such similar environment by being in possession of a medical certificate of fitness;
- competent in conducting work related to suspended platforms safely;
- trained or received training, which includes at least-
- how to access and egress the suspended platform safely;
- how to correctly operate the controls and safety devices of the equipment;

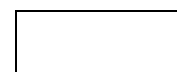
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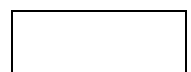
  
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- information on the dangers related to the misuse of safety devices; and
- information on the procedures to be followed in the case of-
- an emergency;
- the malfunctioning of equipment; and
- the discovery of a suspected defect in the equipment; and
- instructions on the proper use of body harnesses.

A contractor must ensure that where the outriggers of a suspended platform are to be moved, only persons trained and under the supervision of the competent person effect such move, within the limitation stipulated in the operational compliance plan, and that the supervisor must carry out an inspection and record the result thereof prior to re-use of the suspended platform. A contractor must ensure that the suspended platform is properly isolated after use at the end of each working day in such a manner that no part of the suspended platform presents a danger to any person thereafter.

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## OTHER HEALTH AND SAFETY SPECIFICATION REQUIREMENTS

The contractor must be aware of the following additional requirements:

What	When	Output
Awareness training (Toolbox Talks)	At least fortnightly and before hazardous work is carried out	Attendance Register
Health and Safety Committee Meetings	Monthly	Minutes signed by the employer (Contractor) covering: a) Health and Safety Representative Checklist
Health and Safety Reports	Monthly	Report covering: a) Incidents/Accidents and Investigations b) Non- conformance c) Health and Safety Training d) HIRA Updates e) Internal and External Audits
General Inspections	As per Health and Safety Specification and OHSA	Report on Health and Safety Specification and OHSA compliance: a) Scaffolding b) Lifting Machinery c) Excavation
General Inspections	Monthly	Covering: a) Fire fighting Equipment b) Portable Electrical Equipment c) Ladders
Record keeping	Ongoing	Covering: a) General complaints b) Fines c) General incidents d) MSDS e) Surveillance Medicals f) Inspection Register g) Dept of Labour Notices
Permits	Before commencement with certain activities	As stipulated by the Health and Safety Specification and the OHSA / Construction Regulations

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Key:

## OHSA – Occupational Health and Safety Act, 1993

### ANNEXURE A

The Contractor shall submit the info below in an Annexure 2 prior to construction commencement.

Item No.	Health and Safety Specification Requirement	OHSA Requirement	Submission date
1.	Notification of Intention to Commence Construction	Construction Regulations 2014	At least 7 days before commencement on site
2.	Construction Work Permit	Construction Regulations 2014 (but only comes into effect from February 2017, for the size of R40 Mil contract value or above)	At least 30 days prior to project commencement
3.	Assignment of Responsible Person to Manage Building Work via Health and Safety Organogram	Construction Regulations 2014	Before commencement on site
4.	Competency for Health and Safety Positions	Client / Client Agent requirement	Before commencement on site
5.	Compensation of Occupational Injuries and Diseases Act (COIDA) 130 of 1993	COIDA Requirement	Before commencement on site
6.	Occupational Health and Safety Policy	Client / Client Agent requirement	Before commencement on site
7.	Risk Assessment, Safety Plan and Fall Protection Plan, Demolition Method Statement	Client / Client Agent requirement	Before construction work commences

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**ANNEXURE B** - The contractor shall make the following appointments, as required:

Chief Executive Officer (OSHACT 16(1))
Contract Director/Manager (OSHACT 16(2))
Construction Manager (CR 8(1))
Construction Supervisor (CR 8(7))
Assistant Construction Supervisor (CR 8(8))
Construction Safety Officer (CR 8(5))
Safety Representative (where > 20 employees on site)
Temporary work Designer (CR 12(1))
Temporary work Supervisor (CR12(2))
Construction risk assessor (CR 9(1))
Excavation Supervisor (CR13(1)(a))
Scaffold Supervisor (CR16(1))
Suspended Platform Supervisor (CR17(1))
Material Hoist Inspector (CR19(8)(a))
Material Hoist Operator (CR19(6))
Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))
Controller of Temporary Electrical Installations (CR24(c))
Stacking Supervisor (CR28(a))
Fire Extinguishing Equipment Inspector (CR29(h))
Fall Protection Plan Developer (CR 10(1)(a))
Incident Investigator (OSHACT 9(2))
Competent Person – Confined Spaces (GAR 5(1))

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## BASELINE RISK ASSESSMENT FOR PROJECT

Irrespective of the risk presented on site, it will be ensured that sufficient supervision is in place on site, that personnel are trained in accordance with legislation, including the requirement for site specific inductions on site to inform personnel on site of the risks and hazards applicable to the site. Site supervision is responsible for ensuring that the control measures required below are implemented on site.

	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
1.	Bricklaying	Caustic contamination with mortar Contact with sharp bladed tools	• M	<ul style="list-style-type: none"> <li>• Use only trained personnel</li> <li>• Safe means of access to be provided</li> <li>• Safe/Suitable working platform required where working at height</li> <li>• PPE for mortar to include gloves where practicable and goggles/masks where there is a risk of contamination</li> </ul>
2.	Compacting and Filling	Contact with tipping materials Contact with moving plant Vehicles/personnel falling into excavations Contact with underground services	• M	<ul style="list-style-type: none"> <li>• Trained banksman to control vehicles movement</li> <li>• Only trained personnel use plant</li> <li>• Personal Protective Equipment to be worn</li> <li>• Personnel to stand clear as materials are being tipped</li> <li>• Use stop blocks and signs to warn vehicles of excavations, where applicable</li> <li>• Stand clear of plant whilst materials are being compacted</li> <li>• Establish position of underground services and protect services from damage</li> </ul>
3.	Compactor Operations	Crushing of feet	• M	<ul style="list-style-type: none"> <li>• Only trained and competent personnel to use the machine</li> <li>• Ensure operative wears steel toe cap shoes or boots at all times</li> </ul>
4.	Compactor Operations	Crushing of feet	• M	<ul style="list-style-type: none"> <li>• Only trained and competent personnel to use the machine</li> <li>• Ensure operative wears steel toe cap shoes or boots at all times</li> </ul>
5.	Confined Spaces	Suffocation Fumes	• H	<ul style="list-style-type: none"> <li>• Ensure that confined space is sufficiently ventilated</li> <li>• Wear personal protective equipment such as proper masks if air supply insufficient or not of sufficient quality</li> </ul>

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				<ul style="list-style-type: none"> <li>• Test oxygen levels in confined space to ensure that is safe for entry</li> <li>• Ensure that emergency procedures in place</li> </ul>
6.	Cutting Kerbs	Saw slipping, Blade disintegrating, Noise and dust	<ul style="list-style-type: none"> <li>• M</li> </ul>	<ul style="list-style-type: none"> <li>• Only trained operators to use saw and change blades.</li> <li>• Personal Protective Equipment must be worn. Gloves, goggles, dust mask and hearing protection.</li> <li>• People to be kept away from the work area.</li> <li>• Work to cease if people have to pass.</li> <li>• Sparks etc. to be directed away from people and any flammable material</li> </ul>

	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
7.	Cutting Off Disc	Noise Cuts from machine Fire (particularly at refuelling) Flying debris Blade shattering Contamination by fume created or exhaust fume	<ul style="list-style-type: none"> <li>• M</li> </ul>	<ul style="list-style-type: none"> <li>• Use competent personnel.</li> <li>• Hot works control- fire extinguisher, fire watchman. (Permit may be required)</li> <li>• PPE to include gloves, eye protection, hearing protection</li> <li>• Solid working position.</li> <li>• Clear working area</li> <li>• Correct grade of blade must be used.</li> <li>• Good ventilation to be provided (forced if necessary).</li> <li>• Changing of wheels to be by competent persons only</li> <li>• Cut off discs must not be used for grinding (grinding disc thicker)</li> <li>• Bystanders to wear hearing protection, as applicable</li> </ul>
8.	Demolition	Falling materials Premature collapse of structure	<ul style="list-style-type: none"> <li>• H</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure there is a current method statement in place</li> <li>• Ensure all emergency procedures are in place and all details are displayed</li> <li>• Ensure that structural demolition has been approved by the designer and site management</li> <li>• Personnel must be competent</li> </ul>

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				<ul style="list-style-type: none"> <li>• Ensure at all times there is a safe means of access and egress</li> <li>• All personnel must wear suitable and sufficient Personal Protective Equipment, including head, eye and skin protection</li> </ul>
9.	Electrical Commissioning	Electric shock	<ul style="list-style-type: none"> <li>• H</li> </ul>	<p>Personnel to comply with permits to work issued by client</p> <p>Personal protective equipment to be worn by employees to prevent electric shock</p> <p>First aid treatment to be readily available</p> <p>Only competent and trained persons may decommission or commission electrical equipment</p>
10.	Electric Tools and Electrical Installations	Electric shock Fire	<ul style="list-style-type: none"> <li>• H</li> </ul>	<ul style="list-style-type: none"> <li>• Electric tools and installations to be in good condition</li> <li>• Inspect electric tools before use</li> <li>• Do not use electric tools in wet/damp conditions</li> <li>• Use personal protective equipment such as insulated gloves</li> <li>• Electrical installations register to be maintained, inspected by competent person</li> </ul>
11.	Excavations (Working in and around)	Toxic fumes Collapse of trench walls/trapping Falling into excavation Collapse of adjacent structures	<ul style="list-style-type: none"> <li>• H</li> </ul>	<ul style="list-style-type: none"> <li>• Deep excavations / monitor air for toxic fumes</li> <li>• Prevent collapse by battering back sides to a safe angle or install temporary support</li> <li>• Protect vehicles from falling into excavations – provide barriers, signage, etc as necessary</li> <li>• Beware of undermining of other structures (eg: buildings, scaffolds)</li> <li>• Record excavation inspections by competent person on daily basis</li> <li>• Provide suitable means of access/egress in case of emergency.</li> <li>• Excavations formed by explosives must be accompanied by method statement approved by Client</li> </ul>
12.	Fire	Injuries to workers, pedestrians, residents, road users, damage to property through fire	<ul style="list-style-type: none"> <li>• H</li> </ul>	<ul style="list-style-type: none"> <li>• No littering on site which could become fire hazard, maintain site in clean condition.</li> <li>• No fires to be lit on site. Have a working fire extinguisher at hand at all times.</li> </ul>

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				<ul style="list-style-type: none"> <li>No smoking or naked flame near flammable substances or in unauthorised areas</li> <li>Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices</li> </ul>
13.	Flammable Liquids and Gases (Use of)	Fire Explosion	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>No littering on site which could become fire hazard, maintain site in clean condition.</li> <li>Have a working fire extinguisher at hand at all times.</li> <li>No smoking or naked flame near flammable substances or in unauthorised areas</li> <li>Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices</li> <li>Equipment must be in good condition, maintained</li> <li>Personnel using substances must be trained in safe use and risks</li> </ul>
14.	Fragile Materials	Persons or items falling through fragile materials	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>All fragile materials to be identified and protected prior to work commencing.</li> <li>Protection to include either covering the fragile materials or excluding activity.</li> <li>Any coverings to be secured in place</li> <li>The location of the fragile materials to be indicated by signage</li> </ul>
15.	Hand tools	Injuries caused by use of hand tool Impact with the tool Falls due to access problems Contamination with substance being worked	<ul style="list-style-type: none"> <li>L</li> </ul>	<ul style="list-style-type: none"> <li>Ensure:</li> <li>Tool is correct for job</li> <li>Tool is in good order and suitably sharp</li> <li>Personnel must be competent/instructed in tool usage and tool safely</li> <li>Lighting is sufficient</li> <li>Access is safe, working platform is secure, leading edge is guarded</li> <li>Operative is wearing all necessary PPE</li> </ul>
16.	Hazardous Substances	Injuries to workers through use of hazardous substances, eg: injuries to eyes, skin, etc	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>Use substances in accordance with data sheet, particularly reference protective clothing required (example: gloves, goggles, etc)</li> <li>Know what First Aid measures are</li> <li>Have welfare facilities available for washing of hands, etc</li> </ul>

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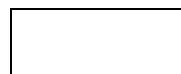
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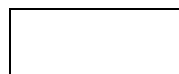
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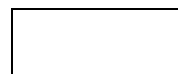
17.	Hot Works	Burns to eyes or other parts of the body	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>Personal Protective Equipment to include eye, skin and hearing protection</li> <li>Respirator maybe be required where cutting galvanized steel or anywhere else toxic fumes and gases arise. Dust can also be a problem and forced ventilation may be required.</li> </ul>
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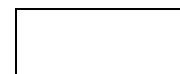
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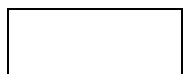
  
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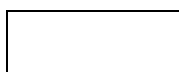
  
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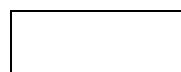
  
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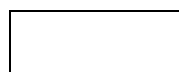
  
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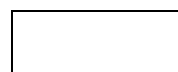
  
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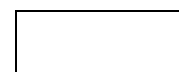
	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
18.	Kerb Laying	Nips at joints Crushing by kerbs Caustic burns	<ul style="list-style-type: none"> <li>M</li> </ul>	<ul style="list-style-type: none"> <li>Impervious gloves and barrier cream to be used to protect hands.</li> <li>Personnel should be aware of safe manual handling techniques when handling kerbs.</li> </ul>
19.	Members of Public – Protection of	Injury to member of public and road users from site works	<ul style="list-style-type: none"> <li>L</li> </ul>	<ul style="list-style-type: none"> <li>Barriers and signage to be in place</li> <li>Workers must warn away any members of public from the works</li> <li>Footpaths and bridges which are open to public must be closed off if in area of works or otherwise made safe so that no injury occurs to members of public</li> <li>Traffic turning into site – traffic management and signage as required.</li> <li>Signage to be on road at site entrance warning motorists that construction traffic turning into/out of site access. Keep roads free of mud where possible</li> <li>Refer to plant risk assessment for details on plant safety precautions</li> <li>NOTE: SIGNAGE TO BE POSTED ON SITE TO WARN OF CONSTRUCTION TRAFFIC MOVEMENTS. SAFE MEANS OF ACCESS FOR BOTH CONSTRUCTION TRAFFIC TO SITE AND PRIVATE HOMEOWNERS MUST BE AGREED.</li> </ul>
20.	Mobile Crane Erection and Dismantling and Use	Collapse of structure Overturning of structure Falling materials	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>Ensure emergency procedures are in place and all operative are aware of the details</li> <li>Only use trained and competent operators for the erection and dismantling and use of cranes</li> <li>Ensure crane driver is trained and holds certification as proof. Must have valid medical certificate of fitness.</li> <li>Ensure there is safe means of access available at all times</li> <li>Ensure the mobile crane driver has 360° vision if not ensure a fully trained banksman is used</li> <li>Banksman to wear reflector vest to identify himself to the crane driver</li> </ul>

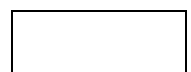
  
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				<ul style="list-style-type: none"> <li>• Ensure all personnel wear suitable and sufficient personal protective equipment</li> <li>• Consider creating exclusion areas</li> </ul>
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	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
2 1	Night Work	Security Lighting	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor shall not undertake any night work without prior arrangement and a written permit from the Client.</li> <li>The Contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped.</li> </ul>
2 2	Noise and Dust	Breathing in dust can cause long term health problems, noise can damage hearing	<ul style="list-style-type: none"> <li>M</li> </ul>	<ul style="list-style-type: none"> <li>Wear respiratory and hearing protection</li> <li>Dampen down and minimise dust where possible.</li> </ul>
2 3	Overhead Services (Working near)	Contact with live services causing injury to personnel  Damage caused to services	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>Maintain safe clearance levels</li> <li>Establish presence of any services via proper walk through survey of site and/or means of service drawings</li> <li>Wear personal protective clothing</li> <li>Ensure height of plant/vehicles does not compromise or exceed clearance levels for overhead services</li> <li>Obtain information on clearance levels from service provider</li> </ul>
2 4	Painting	Contact with paint	<ul style="list-style-type: none"> <li>M</li> </ul>	<ul style="list-style-type: none"> <li>Refer to safety data sheet for usage instructions, hazards and precautions required.</li> <li>When working at height, refer to risk assessment addressing this hazard below.</li> </ul>
2 5	Paving (Laying)	Impact injuries from tile / mallet Caustic burns Sore knees Cuts from cutter	<ul style="list-style-type: none"> <li>M</li> </ul>	<ul style="list-style-type: none"> <li>Impervious gloves to be worn/ barrier cream to be used</li> <li>Kneelers or similar to be available</li> <li>Personal protective equipment to be worn – for example if saw used to cut pavers</li> </ul>
2 6	Plant or Vehicles and Equipment Operation	Workers injured by passing traffic Road users and pedestrians at risk from plant operation Noise	<ul style="list-style-type: none"> <li>M</li> </ul>	<ul style="list-style-type: none"> <li>Implement traffic protection measures</li> <li>Trained and competent operators must be used</li> <li>Check plant and vehicles on daily basis before use and record inspections. Maintain vehicles in safe condition.</li> <li>Medical certificates of fitness required for construction plant.</li> </ul>

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Witness 1

Witness 2

Employer

Witness 1

Witness 2

				<ul style="list-style-type: none"> <li>• Crossing of road by construction vehicles or machines must be limited to the practical minimum</li> <li>• Plant and vehicles must be fitted with amber rotating beacons and reverse alarms.</li> <li>• Wear appropriate protective clothing/equipment, eg: goggles, gloves, ear defenders, etc as appropriate.</li> </ul>
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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
2 7	Plastering	Falling materials Fall from height Contact with materials	<ul style="list-style-type: none"> <li>M</li> </ul>	<ul style="list-style-type: none"> <li>Ensure standard safety procedures are followed</li> <li>Ensure there is a safe working area</li> <li>Ensure safe access and egress</li> <li>Ensure competent personnel are used</li> </ul>
2 8	Plumbing	Falling material Falling from height Fire Burns Exposure to lead fumes	<ul style="list-style-type: none"> <li>M</li> </ul>	<ul style="list-style-type: none"> <li>Ensure standard safety procedures are followed at all times</li> <li>Only used trained and competent personnel</li> <li>Ensure there is a safe working area at all times</li> <li>Ensure materials are stored neatly</li> <li>Ensure there is safe access and egress at all times</li> <li>Ensure all personnel wear suitable and sufficient personal protective equipment</li> <li>Consider a hot works permit system prior to commencing any hot works</li> <li>Make sure emergency procedures are in place and ensure all personnel are aware of where to go in case of a fire</li> </ul>
2 9	Rope access	Personnel falling form height Falling debris Those beneath being injured	<ul style="list-style-type: none"> <li>H</li> </ul>	<p>Ensure:</p> <ul style="list-style-type: none"> <li>competent person appointed in writing to supervise all rope access work on the site,</li> <li>compliance to Construction Regulations 2014, particularly regulation 18 and 10;</li> <li>ensure all rope access work is carried out under supervision of a competent person;</li> <li>all rope access operators are competent and licensed to carry out their work.</li> <li>the design, selection and use of the equipment and anchors comply with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act</li> <li>Site specific fall protection plan has been developed by a competent person applicable to</li> </ul>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				<p>the specific work and environment prior to the commencement of the work, including records of maintenance and inspections of all the equipment used for the work operations.</p> <ul style="list-style-type: none"> <li>adequate measures are in place to allow rescue procedures to commence immediately in the event of a fall incident taking place.</li> </ul>
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Contractor

Witness 1

Witness 2

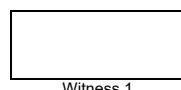
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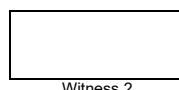
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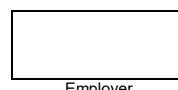
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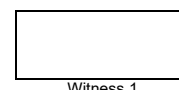
	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
3 0	Scaffold Erection/ Dismantling	Personnel falling from a height Items of scaffold falling onto personnel Scaffold collapsing onto those below	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>Ensure</li> <li>scaffold is designed to take the imposed loads</li> <li>scaffolding is constructed properly</li> <li>scaffold is not overloaded</li> <li>scaffolders are fully trained</li> <li>scaffolding is regularly checked by competent person and record of inspection retained. Written inspections to be recorded on weekly basis</li> <li>scaffolders must adhere to the safe systems of work.</li> <li>all fall arrest equipment to be checked and certified in good working order</li> <li>that ALL understand the safe system of work</li> </ul>
3 1	Site Strip	Overtuning Vehicles	<ul style="list-style-type: none"> <li>M</li> </ul>	<ul style="list-style-type: none"> <li>Follow standard safety procedures</li> <li>Only use trained and competent personnel</li> <li>Ensure there is a suitable and safe means of access and egress</li> <li>Ensure banksman used when required</li> <li>Ensure all personnel wear suitable reflector vests as required</li> </ul>
3 2	Snakes	Snake bite	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>Qualified first aider required for site who can treat snakebite</li> <li>Snake bite kit to be on hand</li> <li>Check area before working</li> <li>Find out nearest hospital and get emergency telephone numbers.</li> </ul>
3 3	Steel Erection	Falls from height Falling components Contact injuries from falling lifting equipment	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>Adhere to all general precautions for working at height (See risk assessment below)</li> <li>Barrier off / exclude area below work</li> <li>All lifting appliances to be examined and inspected</li> <li>Inspection register in place and up to date</li> <li>All personnel to be trained and competent and wear clipped on safety harnessed when working at height</li> </ul>

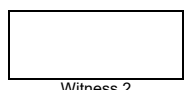
  
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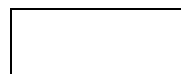
  
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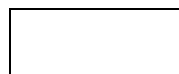
  
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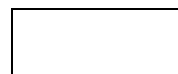
  
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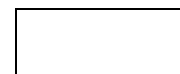
				<ul style="list-style-type: none"> <li>• Ensure that lifting equipment (slings, chains, shackles) test certificates are current and on site.</li> <li>• Competent persons only to connect loads and direct plant</li> </ul>
3 4	Steel Fixing	Back injuries caused by manual handling Eye injuries from tie wire Trips / falls Falling form height	<ul style="list-style-type: none"> <li>• M</li> </ul>	<ul style="list-style-type: none"> <li>• PPE must include safety boots and goggles</li> <li>• Manual handling training may be required</li> <li>• Care to be taken when working near over head lines</li> <li>• Use only trained personnel</li> <li>• Provide safe means of access</li> <li>• Maintain and regularly inspect all lifting appliances and equipment</li> <li>• Cap starter bars to prevent injuries where feasible</li> <li>• Construct scaffold walk ways to cross reinforcing mesh, as required</li> </ul>

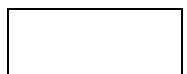
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
3 5	Temporary Works – shoring, scaffold, falsework, formwork	Collapse of form work	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>Wear personal protective equipment such as gloves and goggles</li> <li>Formwork must be built by trained person and also be inspected by competent person and results entered into register on site</li> </ul>
3 6	Tower (Mobile Aluminium Tower) Scaffold	Over Turning Falls	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>Tower to be on firm level ground with wheels or feet properly supported.</li> <li>Height not to exceed 3 times the base dimension. i.e. 2x3m Base Tower not exceed 6m.</li> <li>Erection by competent person</li> <li>Inspection before first use</li> <li>Weekly record of inspection required</li> <li>Guard rails and Toe boards as per normal scaffolds</li> <li>Beware when moving of overhead obstructions, such as power lines</li> <li>Never move in strong winds</li> </ul>
3 7	Troxler – use of	Radiation exposure Transportation and storage of nuclear equipment Working in road	<ul style="list-style-type: none"> <li>H</li> </ul>	<p>Ensure</p> <ul style="list-style-type: none"> <li>Training of Troxler gauge operators in basic radiation safety and correct operating procedure to satisfactory level of competence</li> <li>An enclosed vehicle must be used for transport of the gauge</li> <li>After use and before storing the gauge, a visual check to be carried out to confirm shutter is properly closed</li> <li>Warning signage to be displayed at entrance to store indicating presence of radioactive material</li> <li>Wear reflective vests when working in or near the road or road shoulder as well as any other required personal protective clothing.</li> </ul>
3 8	Working at Height	Personnel falling from height Falling debris Those beneath being injured	<ul style="list-style-type: none"> <li>H</li> </ul>	<ul style="list-style-type: none"> <li>All access equipment is properly constructed (inspections record must be maintained)</li> <li>Only trained personnel construct, dismantle or control the access equipment</li> </ul>

Contractor

Witness 1

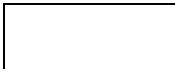
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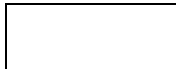
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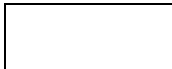
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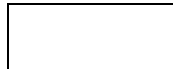
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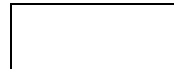
				<ul style="list-style-type: none"> <li>• All access equipment must have full toe boards and guardrails - comply with SANS 10085 on erection, use and dismantling of scaffolding</li> <li>• No access equipment may be loaded above the level of the guardrail</li> <li>• No access equipment to be loaded above its safe working load</li> <li>• Where work involves leaning out on an open leading edge, then all personnel are to be fitted with full body harness. The harness must be connected at all times</li> <li>• All fall arrest equipment to be correctly maintained</li> <li>• Ensure if ladders are being used for access, they are either footed or tied. Also the ladder must be set at the correct level of 1 in 4 or approximately 75°</li> </ul>
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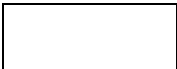
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

	HAZARD	RISK	RISK RATING (High / Medium / Low)	MINIMUM CONTROL MEASURES
3 9	Work over or next to Water	Drowning	H	<ul style="list-style-type: none"> <li>Evaluate depth of water, height above water that work takes place, whether workers can swim or not and then determine safety precautions required: these may include such measures such as barriers, signage, life belts, safety harnesses, etc</li> <li>When working on river/harbour/dam edge - erect life saving devices and barriers to protect workers and vehicles (stop blocks may also be required). Only trained and competent persons to be used.</li> </ul>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### ISSUE REGISTER

Date of Original Safety Specification Compilation	Compiled By	Issue Date	Revision Date

#### Acknowledgement:

I, \_\_\_\_\_ representing  
\_\_\_\_\_(Contractor), have satisfied myself with the content of this Health and Safety Specification and shall ensure that our employees and contractors on site comply with the requirements of this document, our safety documentation and health and safety legislation.

\_\_\_\_\_

Signature of Contractor

\_\_\_\_\_

Date

#### Comments:

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

C5.2: ENVIRONMENTAL MANAGEMENT PLAN (EMP)

# MOHOKARE LOCAL MUNICIPALITY

**BID NUMBER: SCM/MOH/10/2023**

## **ZASTRON/MATLAKENG: THE CONSTRUCTION OF A SEWER NETWORK IN REFENGKHOTSO FOR 900 ERVEN (MIS: 422896)**

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### **Part C5.2: Environmental Management Requirements**

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#### **TABLE OF CONTENTS**

C5.2.1: SCOPE

C5.2.2: NORMATIVE REFERENCES

C5.2.3: DEFINITIONS


C5.2.4: REQUIREMENTS


C5.2.5: COMPLIANCE WITH REQUIREMENTS AND PENALTIES


C5.2.6: MEASUREMENT AND PAYMENT


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Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

## C5.2: ENVIRONMENTAL MANAGEMENT PLAN (EMP)

### C5.2.1 SCOPE

This Specification covers the requirements for controlling the impact of construction activities on the environment. It contains clauses that are generally applicable to the undertaking of civil engineering works in areas where it is necessary to impose pro-active controls on the extent to which the construction activities impact on the environment.

Interpretations and variations of this Specification are set out in the Specification Data.

### C5.2.2 NORMATIVE REFERENCES

#### C5.2.2.1 Supporting specifications

Where this Specification is required for a project the following specifications shall, inter alia, form part of the Contract Document.

- a) Specification Data;
- b) SANS 1200 Series of Standardized Specifications;
- c) SANS 1200 A or SANS 1200 AA, as applicable;
- d) Specification OHS;
- e) Occupational health and safety Construction Regulations, 2014.

### C5.2.3 DEFINITIONS

For the purposes of this Specification the definitions and abbreviations given in the applicable specifications listed in C3.3.2.1 and the following definitions shall apply:

- OHS: Occupational Health and Safety.
- Construction Regulations: Construction Regulations, 2014 of the OHS Act (Act No. 85 of 1993).

#### C5.2.3.1 Environment

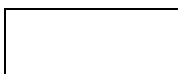
The surroundings within which humans exist and that are made up of:

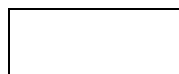
- (i) the land, water and atmosphere of the earth;
- (ii) micro-organisms, plant and animal life;
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
- (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

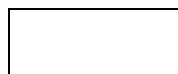
#### C5.2.3.2 Potentially hazardous substances

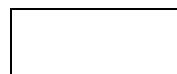
A substance that, in the reasonable opinion of the Engineer, can have a deleterious effect on the environment

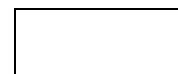
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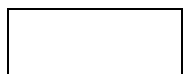
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

## **C5.2.4 REQUIREMENTS**

### **C5.2.4.1 Materials**

#### **C5.2.4.1.1 Bitumen**

Not Applicable

### **C5.2.4.2 Plant**

#### **C5.2.4.2.1 Ablution facilities**

Adequate temporary ablution facilities shall be provided for the workforce. The Contractor shall ensure that no spillage occurs when the toilets are cleaned or emptied and that the contents are properly stored and removed from Site. Discharge of waste from toilets into the environment and burial of waste is strictly prohibited.

Washing whether of the person or of personal effects and acts of excretion and urination are strictly prohibited other than at the facilities provided.

#### **C5.2.4.2.2 Solid waste management**

The Contractor shall provide sufficient bins with lids on Site to store the solid waste produced on a daily basis. Solid, non-hazardous waste shall be disposed of in the bins provided and no on-site burying, dumping or burning of any waste materials, vegetation, litter or refuse shall occur. Bins shall not be allowed to become overfull and shall be emptied a minimum of once daily. The waste may be temporarily stored on Site in a central waste area that is weatherproof and scavenger-proof, and which the Engineer has approved.

All solid waste shall be disposed of off-site at an approved landfill site. The Contractor shall supply the Engineer with a certificate of disposal.

#### **C5.2.4.2.3 Contaminated water**

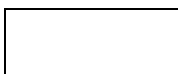
The Contractor shall set up a contaminated water management system, which shall include collection facilities to be used to prevent pollution, as well as suitable methods of disposal of contaminated water. The Contractor shall prevent the discharge of water contaminated with any pollutants, such as soaps, detergent, cements, concrete, lime, chemicals, glues, solvents, paints and fuels, into the environment.

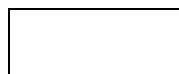
The Contractor shall notify the Engineer immediately of any pollution incidents on Site. The Engineer's approval is required prior to the discharge of contaminated water to the Municipal sewer system.

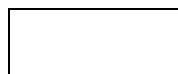
#### **C5.2.4.2.4 Site structures**

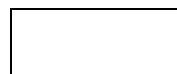
All site establishment components (as well as equipment) shall be positioned to limit visual intrusion on neighbor's and the size of area disturbed. The type and colour of roofing and cladding materials to the Contractor's temporary structures shall be selected to reduce reflection.

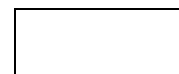
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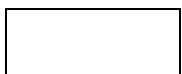
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

#### **C5.2.4.2.5 Noise control**

The applicable regulations framed under the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), and the provisions of SANS 1200 A Sub-clause 4.1 regarding "built-up areas" shall apply to all areas within audible distance of residents whether in urban, pen-urban or rural areas.

Appropriate directional and intensity settings are to be maintained on all hooters and sirens, and the Contractor shall provide and use suitable and effective silencing devices for pneumatic tools and other plant such that the noise level in inhabited areas and dwellings adjacent to the work areas will not increase by more than 7 dB(A)Leq 60 above residual background sound levels. Similarly in habituated areas adjacent to access roads maximum noise levels shall not exceed 60 dB(A)Leq 60 and maximum sound pressure level of 70 dB(A).

Where excess noise generation is unavoidable, the Contractor shall, by means of barriers, effectively isolate the source of any such noise in order to comply with the said regulations. The Contractor shall restrict any of his operations that may result in undue noise disturbance to those communities and dwellings abutting the Site to the hours of 08:00 to 17:00 on weekdays and Saturdays. No work will be permitted on Sundays unless otherwise agreed to with the Engineer.

No amplified music shall be allowed on Site. The use of radios, tape recorders, compact disc players, television sets etc. shall not be permitted unless the volume is kept sufficiently low as to avoid any intrusion on members of the public within range. The Contractor shall not use sound amplification equipment on Site unless in emergency situations.

#### **C5.2.4.2.6 Lights**

The Contractor shall ensure that any lighting installed on the site for his activities does not interfere with road traffic or cause a reasonably avoidable disturbance to the surrounding community or other users of the area.

#### **C5.2.4.2.7 Fuel (petrol and diesel) and oil**

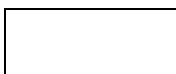
Unless otherwise specified in the Specification Data, fuel may be stored on site in an area approved by the Engineer. The Contractor shall ensure that all liquid fuels (petrol and diesel) are stored in tanks with lids, which are kept firmly shut or in bowzers. The tanks or bowzers shall be situated on a smooth impermeable surface (concrete or 250 µm plastic) with an earth bund (plastic must have a 5 cm layer of sand on top to prevent damage and perishing). The impermeable lining shall extend to the crest of the bund and the volume inside the bund shall be 130% of the total capacity of all the storage tanks! bowzers. The bunded area shall be covered to protect it from rain. Provision shall be made for refueling at the fuel storage area, by protecting the soil with 250 µm plastic covered with a minimum of a 5 cm layer of sand.

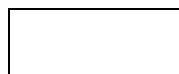
If fuel is dispensed from 200 litre drums, only empty externally clean drums may be stored on the bare ground. All empty externally dirty drums shall be stored on an area where the ground has been protected. The proper dispensing equipment shall be used, and the drum shall not be tipped in order to dispense fuel. The dispensing mechanism of the fuel storage drum shall be stored in a waterproof container when not in use.

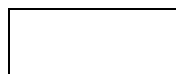
The Contractor shall prevent unauthorized access into the fuel storage area. No smoking shall be allowed within the vicinity of the fuel storage area. The Contractor shall ensure that there is adequate fire-fighting equipment at the fuel stores.

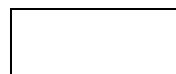
Where reasonably practical, plant shall be refueled at the fuel storage area or at the workshop as applicable. If it is not reasonably practical then the surface under the refueling area shall

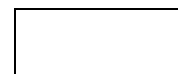
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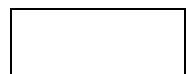
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

be protected against pollution to the reasonable satisfaction of the Engineer prior to any refueling activities. The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb/ breakdown and where possible be designed to encapsulate minor hydrocarbon spillage. The quantity of such materials shall be able to handle a minimum of 200l of hydrocarbon liquid spill. The Contractor shall obtain the Engineer's prior approval for any refueling or maintenance activities.

#### **C5.2.4.2.8 Workshop, equipment maintenance and storage**

Leaking equipment shall be repaired immediately or removed from the Site. Where practical, all maintenance of equipment and vehicles on Site shall be performed off Site or in the workshop. If it is necessary to do maintenance outside of the workshop area, the Contractor shall obtain the approval of the Engineer prior to commencing activities. The Contractor shall ensure that in his workshop and other plant maintenance facilities, including those areas where, after obtaining the Engineer's approval, the Contractor carries out emergency plant maintenance, there is no contamination of the soil or vegetation. The workshop shall have a smooth impermeable (concrete or 250 pm plastic covered with sand) floor. The floor shall be bunded and sloped towards an oil trap or sump to contain any spillages of substances (e.g. oil).

When servicing equipment on site, drip trays shall be used to collect the waste oil and other lubricants. Drip trays shall also be provided in construction areas for stationary plant (such as compressors) and for "parked" plant (such as scrapers, loaders, vehicles). Drip trays shall be inspected and emptied daily. Dip trays shall be closely monitored during rain events to ensure that they do not overflow. Where practical, the Contractor shall ensure that equipment is covered so that rainwater is excluded from the drip trays.

The washing of equipment shall be restricted to urgent or preventative maintenance requirements only. All washing shall be undertaken off Site or in the workshop. The use of detergents for washing shall be restricted to low phosphate and nitrate containing, low sudsing-type detergents.

#### **C5.2.4.2.9 Dust**

Dust nuisance around the plant must be controlled by regular watering. Speed restrictions must be in place in and around the site, this will also help to keep the spreading of dust to a minimum. Wind strength must be kept in mind when materials are being transported to and from site and where and when excavations take place.

#### **C5.2.4.3 Methods and procedures**

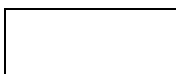
##### **C5.2.4.3.1 Method Statements**

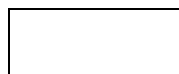
Any Method Statement required by this Specification, the Specification Data or the Engineer shall be produced within such reasonable time as is required by this Specification, the Specification Data or the Engineer. The Contractor shall not commence the activity until the Method Statement has been approved. Except in the case of emergency activities, the Contractor shall allow a period of two weeks for approval of the Method Statement by the Engineer. Such approval shall not unreasonably be withheld.

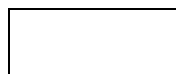
Method Statements in respect of environment management that shall be provided by the Contractor within 14 days of receipt of the letter of acceptance and prior to the activity covered by the Method Statement being undertaken, include:

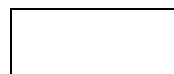
- 1) Location and structure of the fuel storage site, including the type and volume of storage

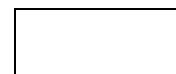
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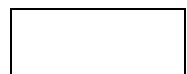
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

- 2) Solid waste (refuse) control and removal of waste from the Site, including the number, type and location of rubbish bins, the manner and frequency with which the waste will be removed from site and the disposal site.
- 3) Contaminated water management system, including an indication of the source and volume of contaminated water and how this would be disposed of.
- 4) Dust control, including methods to prevent dust generation and methods to reduce dust where its generation is unavoidable.
- 5) Location and layout of the construction camp in the form of a plan showing offices, stores for fuels and explosives, vehicle parking, access point, equipment cleaning areas and staff toilet placement.
- 6) Location of proposed site access routes and proposed traffic safety measures.
- 7) Emergency procedures for fire, and accidental leaks and spillages of hazardous materials.
- 8) Location, layout and preparation of cement/ concrete batching facilities including the methods employed for the mixing of concrete and the management of runoff water from such areas. An indication shall be given of how concrete spoil will be minimised and cleared.
- 9) Method of undertaking earthworks, including spoil management, erosion, dust and noise controls.
- 10) Motivation and method for undertaking any construction related activities within a "no-go" area, including requisite emergency procedures. Unless need clearly motivated and proposed methodology exhibits clear focus on environmentally sensitive construction practice, no activity will be permitted within the defined "no-go" areas.

#### **C5.2.4.3.2 Environmental awareness training**

Within seven days of the Commencement Date, the Contractor's site staff including foremen and site management staff shall attend an environmental awareness training course, of approximately one-hour duration. The Contractor shall liaise with the Engineer prior to the Commencement Date to fix a date and venue for the course. The Contractor shall provide a suitable venue with facilities as required by the Specification Data, and ensure that the specified employees attend the course.

No more than 20 people shall attend each course and the Contractor shall allow for sufficient sessions to train all personnel. Subsequent sessions shall be run for any new personnel coming onto site.

The environmental awareness training course shall be held in the morning during normal working hours. Any new employees coming on to site after the initial training course and the Contractor's suppliers and subcontractors shall also attend the course. Provision should also be made for quarterly refreshers courses to be undertaken during the course of the Contract. The Contractor shall ensure that all attendees sign an attendance register, and shall provide the Engineer with a copy of the attendance register the day after each course.

#### **C5.2.4.3.3 Construction personnel information posters**

The Contractor shall erect and maintain information posters for the information of his employees depicting actions to be taken to ensure compliance with aspects of the Specifications. Such posters will be supplied by the Engineer and shall be erected at a location specified by the Engineer.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

#### **C5.2.4.3.4 Site clearance**

No plants, trees, or any vegetation may be removed other than absolutely necessary.

#### **C5.2.4.3.5 Site division**

The Engineer shall be advised of the area that the Contractor intends using for his site establishment. The Contractor's camp shall occupy as small an area as possible, and no site establishment shall be allowed within 50 m of any watercourse unless otherwise approved by the Engineer.

The Contractor shall inform the Engineer of the intended actions and programme for site establishment. The site layout shall be planned to facilitate ready access for deliveries, facilitate future works and to curtail any disturbance or security implications for neighbors.

#### **C5.2.4.3.6 Site demarcation**

If required by the Specification Data, the Contractor shall erect and maintain permanent and/or temporary fences of the type and in the locations directed by the Engineer. Such fences shall, if so specified, be erected before undertaking designated activities.

#### **C5.2.4.3.7 "No go" areas**

If so required by the Specification Data, certain areas shall be considered to be "no go" areas. The Contractor shall ensure that insofar as he has the authority, no unauthorized entry, stockpiling, dumping or storage of equipment or materials shall be allowed within the demarcated "no go" areas.

"No go" areas shall be demarcated with fencing consisting of wooden or metal posts at 3 m centers with 1 plain wire strand tensioned horizontally at 900 mm from ground level. Commercially available danger tape shall be wrapped around the wire strand. The Contractor shall maintain the fence for the duration of construction and ensure that the danger tape does not become dislodged.

#### **C5.2.4.3.8 Protection of natural features**

The Contractor shall not deface, paint, damage or mark any natural features (e.g. rock formations) situated in or around the Site for survey or other purposes unless agreed beforehand with the Engineer. Any features affected by the Contractor in contravention of this clause shall be restored/ rehabilitated to the satisfaction of the Engineer. The Contractor shall not permit his employees to make use of any natural water sources (e.g. springs, streams, open water bodies) for the purposes of swimming, personal washing and the washing of machinery or clothes.

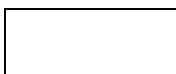
#### **C5.2.4.3.9 Protection of flora and fauna**

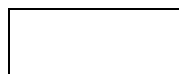
Except to the extent necessary for the carrying out of the Works, flora shall not be removed, damaged or disturbed nor shall any vegetation be planted without authorization.

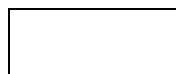
Trapping, poisoning and/ or shooting of animals is strictly forbidden. No domestic pets or livestock are permitted on Site.

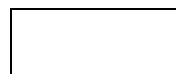
Where the use of herbicides, pesticides and other poisonous substances has been specified, they shall be stored, handled and applied with due regard to their potential harmful effects.

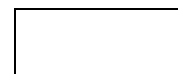
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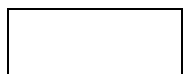
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

#### **C5.2.4.3.10 Protection of archaeological and palaeontological remains**

The Contractor shall take reasonable precautions to prevent any person from removing or damaging any fossils, coins, articles of value or antiquity and structures and other remains of archaeological interest discovered on the Site, immediately upon discovery thereof and before removal. The Contractor shall inform the Engineer immediately of such a discovery and carry out the Engineers instructions for dealing therewith. All construction within the vicinity of the discovery shall cease immediately and the area shall be cordoned off until such time as the Engineer authorises resumption of construction in writing.

The Engineer will contact the relevant heritage authority.

#### **C5.2.4.3.11 Access routes/ haul roads**

Access to the Construction camp and working areas shall utilize existing roads or tracks. Entry/exit points onto public roads shall take cognisance of traffic safety. Traffic safety measures shall include appropriate signage and signalmen where relevant

On the Site, and, if so required by the Specification Data, within such distance of the Site as may be stated, the Contractor shall control the movement of all vehicles and plant including that of his suppliers so that they remain on designated routes, are distributed so as not to cause an undue concentration of traffic and that all relevant laws are complied with. In addition, such vehicles and plant shall be so routed and operated as to minimise disruption to regular users of the routes not on the Site. On gravel or earth roads on Site and within 500 m of the Site, the vehicles of the Contractor and his suppliers shall not exceed a speed of 20 km/h.

Mud and sand deposited onto public roads by construction activities shall be cleared on a daily basis.

#### **C5.2.4.3.12 Cement and concrete batching**

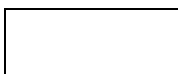
Where applicable, the location of the batching plant (including the location of cement stores, sand and aggregate stockpiles) shall be as approved by the Engineer. The concrete/cement batching plant shall be kept neat and clean at all times.

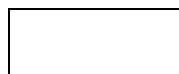
No batching activities shall occur directly on unprotected ground. The batching plant shall be located on a smooth impermeable surface (concrete or 250 µm plastic covered with 5 cm of sand). The area shall be bunded and sloped towards a sump to contain spillages of substances. All wastewater resulting from batching of concrete shall be disposed of via the contaminated water management system and shall not be discharged into the environment. Contaminated water storage areas shall not be allowed to overflow and appropriate protection from rain and flooding shall be implemented

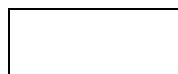
Empty cement bags shall be stored in weatherproof containers to prevent wind-blown cement dust and water contamination. Empty cement bags shall be disposed of on a regular basis via the solid waste management system, and shall not be used for any other purpose. Unused cement bags shall be stored so as not to be affected by rain or runoff events. In this regard, closed steel containers shall be used for the storage of cement powder and any additives. The Contractor shall ensure that sand, aggregate, cement or additives used during the mixing process are contained and covered to prevent contamination of the surrounding environment.

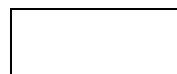
The Contractor shall take all reasonable measures to prevent the spillage of cement concrete during batching and construction operations. During pouring, the soil surface shall be protected using plastic and all visible remains of concrete shall be physically removed on completion of the cement/ concrete pour and appropriately disposed of. All spoiled and excess

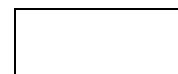
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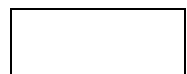
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

aggregate/ cement/ concrete shall be removed and disposed of via the solid waste management system.

Where "readymix" concrete is used, the Contractor shall ensure that the delivery vehicles do not wash their chutes directly onto the ground. Any spillage resulting from the "readymix" delivery shall be immediately cleared and disposed of via the solid waste management system.

#### **C5.2.4.3.13 Earthworks**

Where material for construction will be required, the Contractor will ensure that an Environmental Authorisation has been obtained prior to entry into any quarry or borrow pit. The Contractor will ensure that Environmental Best Practices are implemented throughout the operation of any quarry or borrow pit relevant to this project. Where required, the quarries and borrow pits used during this project shall be rehabilitated by the Contractor to the satisfaction of the Engineer.

#### **C5.2.4.3.14 Pumping**

Not Applicable

#### **C5.2.4.3.15 Bitumen**

Not Applicable

#### **C5.2.4.3.16 Fire control**

No fires may be lit on site. Any fires that occur shall be reported to the Engineer immediately. Smoking shall not be permitted in those areas where it is a fire hazard. Such areas shall include the workshop and fuel storage areas and any areas where the vegetation or other material is such as to make liable the rapid spread of an initial flame. In terms of the Atmospheric Pollution Prevention Act (No. 45 of 1965), burning is not permitted as a disposal method.

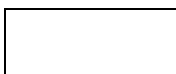
The Contractor shall ensure that there is basic fire-fighting equipment available on Site at all times. This shall include at least rubber beaters when working in urban open spaces, and at least one fire extinguisher of the appropriate type when welding or other "hot" activities are undertaken.

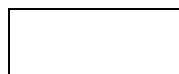
#### **C5.2.4.3.17 Emergency procedures**

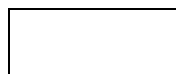
The Contractor's procedures for the following emergencies shall include:

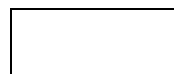
- (i) Fire  
The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it. The Contractor shall ensure that his employees are aware of the procedure to be followed in the event of a fire.
- (ii) Accidental leaks and spillages  
The Contractor shall ensure that his employees are aware of the emergency procedure(s) to be followed for dealing with spills and leaks, which shall include notifying the Engineer and the relevant authorities. The Contractor shall ensure that the necessary materials and equipment for dealing with spills and leaks is available on Site at all times. Treatment and remediation of the spill areas shall be undertaken to the reasonable satisfaction of the Engineer.

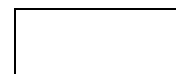
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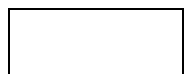
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

In the event of a hydrocarbon spill, the source of the spillage shall be isolated, and the spillage contained. The area shall be cordoned off and secured. The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb/ breakdown and where possible be designed to encapsulate minor hydrocarbon spillage. The quantity of such materials shall be able to handle a minimum of 200 t of hydrocarbon liquid spill.

#### **C5.2.4.3.18 Community relations**

The Contractor shall erect and maintain information boards in the position, quantity, design and dimensions specified. Such boards shall include contact details for complaints by members of the public in accordance with details provided by the Engineer.

The Contractor shall keep a "Complaints Register" on Site. The Register shall contain all contact details of the person who made the complaint, and information regarding the complaint itself.

#### **C5.2.4.3.19 Erosion and sedimentation control**

The Contractor must ensure that the site camp and site are sloped accordingly and implement correct drainage measures for efficient runoff and drainage of rain water.

Where construction activities are finished the area must be rehabilitated and revegetated to prevent erosion. Construction areas tend to get compacted because of the concentration of workers and vehicles, such areas should be ripped to decrease compaction and prevent erosion.

#### **C5.2.4.3.20 Aesthetics**

The Contractor shall take reasonable measures to ensure that construction activities do not have an unreasonable impact on the aesthetics of the area.

#### **C5.2.4.3.21 Recreation**

If so required by the Specification Data, the Contractor shall take measures to reduce disruption to recreational users of the area abutting the Site.

#### **C5.2.4.3.22 Access to site**

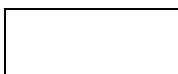
Only the necessary vegetation must be removed for the purpose of the access road. The contractor must ensure that the access road is maintained and upgraded regularly to prevent erosion and surface damage. Storm water measures should also be kept in mind on the access road.

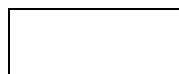
All construction vehicles must keep to the dedicated roads and tracks, no vehicles may be allowed in the fields and grazing areas, turnaround points must be made on strategic areas to prevent this.

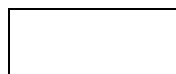
#### **C5.2.4.3.23 Crane operations**

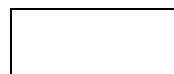
Not applicable

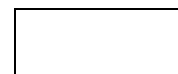
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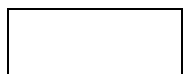
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

#### **C5.2.4.3.24 Trenching**

Excavation must be kept to normal working hours and dust prevention measures must also be kept in mind. Where trenches are made the excavations must be kept in a narrow line and limited to the layout footprint only.

When Excavations take place there will always be a possibility of heritage features occurring, in this event construction activities in the area must be stopped immediately and the appropriate person or organisation must be contacted. This area must also be barricaded.

#### **C5.2.4.3.25 Demolition**

Not Applicable

#### **C5.2.4.3.26 Drilling and jack hammering**

Not Applicable

#### **C5.2.4.3.27 Stockpiling**

Stockpiling must not be positioned in such manner that it will obstruct pathways, cause erosion, or cause damming of storm water.

Stockpiling of topsoil, excavated soil, or any material may not exceed a height of 2m, if a stockpile of soil is left unattended for longer than 6 months it must be analysed and upgraded if necessary before it is reused.

#### **C5.2.4.3.28 Site closure and rehabilitation**

Before the construction site can be closed, the area must be rehabilitated, revegetated, and left in the same or a better state than before the construction started. Photo's should be taken before and after construction.

#### **C5.2.4.3.29 Temporary re-vegetation of the areas disturbed by construction.**

Not Applicable

#### **C5.2.4.3.30 Temporary site closure**

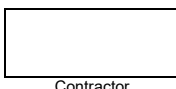
In the event of holidays, long weekends, and even just at the end of each day the site must be left in such a manner that it will not pose a threat to the immediate or surrounding environment. Ensure drip trays are in place, excavations are closed or barricaded and all waste and waste bins are removed and emptied, ect.

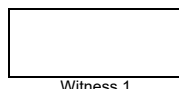
### **C5.2.5 COMPLIANCE WITH REQUIREMENTS AND PENALTIES**

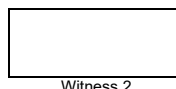
#### **C5.2.5.1 Compliance**

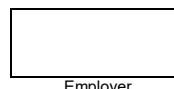
Environmental management is concerned not only with the final results of the Contractor's operations to carry out the Works but also with the control of how those operations are carried out. Tolerance with respect to environmental matters applies not only to the finished product

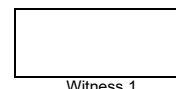
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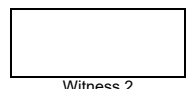
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

but also to the standard of the day-to-day operations required to complete the Works.

It is thus required that the Contractor shall comply with the environmental requirements on an ongoing basis and any failure on his part to do so will entitle the Engineer to certify the imposition of a penalty as detailed below.

### **C5.2.5.3 Removal from site and suspension of Works**

The Engineer may instruct the Contractor to remove from Site any person(s) who in their opinion is guilty of misconduct, or is incompetent, negligent or constitutes an undesirable presence on Site. This contract requires that all Plant be in good working Order, and accordingly the Engineer may order that any Plant not complying with the Specifications be removed from Site. Where the Engineer deems the Contractor to be in breach of any of the requirements of this Specification, he may order the Contractor to suspend the progress of the Works or any part thereof.

## **C5.2.6 MEASUREMENT AND PAYMENT**

### **C5.2.6.1 Basic principles**

#### **C5.2.6.1.1 General**

Except as specified below, or in the Specification Data or as billed, no separate measurement and payment will be made to cover the costs of complying with the provisions of this Specification and such costs shall be deemed to be covered by the rates tendered for the items in the Bill of Quantities completed by the Contractor when submitting his tender.

#### **C5.2.6.1.2 All requirements of the environmental management specification**

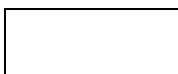
All work not measured elsewhere, associated with complying with any requirement of this Environmental Management specification will be measured and paid as a sum.

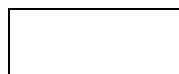
The tendered sum shall cover the cost of with complying with the environmental management specification and shall include for all materials, labour and plant required to execute and complete the Works as specified, described in the Bill of Quantities or shown on the Drawing(s).

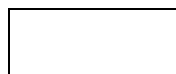
#### **C5.2.6.1.3 Work "required by the Specification Data"**

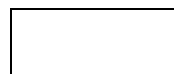
Where a clause in this Specification includes a requirement as "required by the Specification Data", measurement and payment for compliance with that requirement shall be in accordance with the relevant measurement and payment clause of the Specification Data.

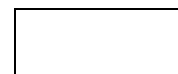
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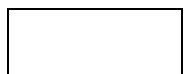
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

### C5.3: EPWP REPORTING

The Extended Public Works Programme (EPWP) is a country-wide government initiative aimed at creating jobs and imparting skills through public spending.

It involves re-orientating line function budgets so that government expenditure results in more work opportunities, particularly for unskilled labour.

MAP is committed in ensuring that job creation opportunities are maximised on each and every project, and that every job opportunity created is recorded in line with the Department's requirements and those of the Auditor General.

The records required are set out in the table below..

No	Document	Frequency	Responsible Person
1	Project Registration Form	Once	Project Manager/ Employer's Agent
2	Copies of Employee Contracts and certified copies of Identity Documents	Once	Project/Site Manager
3	Site Attendance Register	Daily	Project/Site Manager
4	Labour Payment Schedule to be signed by all beneficiaries and project manager	Monthly	Project/Site Manager
5	Proof of Payment of Beneficiaries (e.g. Electronic Transfer)	Monthly	Project/Site Manager
6	Expenditure Report	Monthly	Project Manager/ Employer's Agent

The required documentation for the previous month must be submitted to the Client attached to the contractor's monthly payment certificate.

Payment of the contractor's certificate will be withheld if the above-mentioned documentation is not attached thereto.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## C5.4: HIV/AIDS SPECIFICATION FOR CIVIL CONTRACTS

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**PW 1544**



## **DEPARTMENT OF PUBLIC WORKS**

### **HIV/AIDS**

### **SPECIFICATION**

**OCTOBER 2004**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## SECTION: HIV/AIDS SPECIFICATION / HIV/AIDS REQUIREMENTS

### C5.4.1 SCOPE

This specification contains all requirements applicable to the Contractor for creating HIV/AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV/AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers;
- Informing Workers of their rights with regard to HIV/AIDS in the workplace;
- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices.

### C5.4.2 DEFINITIONS AND ABBREVIATIONS

#### C5.4.2.1 Definitions

Service Provider: The natural or juristic person recognised and approved by the Department of Public Works as a specialist in conducting HIV/AIDS awareness programmes.

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, presented by a Service Provider which has been approved by the Representative/Agent.

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractors, who is on site for a minimum period of 30 days in all.

#### C5.4.2.2 Abbreviations

HIV : Human Immunodeficiency Virus.  
AIDS : Acquired Immune Deficiency Syndrome.  
STI : Sexually Transmitted Infection.

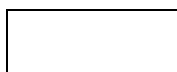
### C5.4.3 BASIC METHOD REQUIREMENT

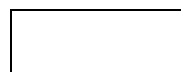
#### C5.4.3.1 The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers.

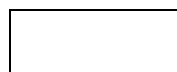
The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regard to HIV/AIDS awareness.

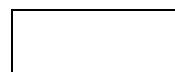
The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

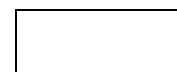
- Number of Workers and Sub-contractors on site;
- When new Workers or Sub-contractors will join the construction project;

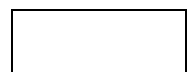
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

- Duration of Workers and Sub-contractors on site;
- How the maximum number of Workers can be targeted with workshops;
- How the Contractor prefers workshops to be scheduled, e.g. three hourly sessions per Worker, or one 2.5 hour workshop per Worker;
- Profile of Workers, including educational level, age and gender (if available);
- Preferred time of day or month to conduct workshops;
- A Gantt chart reflecting the construction programme, for scheduling of workshops;
- Suitable venues for workshops.

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training.

**C5.4.3.2 The Service Provider Workshop Plan shall address, but will not be limited to the following:**

- 3.2.1 The nature of the disease;
- 3.2.2 How it is transmitted;
- 3.2.3 Safe sexual behaviour;
- 3.2.4 Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV/AIDS;
- 3.2.5 Attitudes towards other people with HIV/AIDS;
- 3.2.6 Rights of the Worker in the workplace;
- 3.2.7 How the Awareness Champion will be equipped prior to commencement of the HIV/AIDS
- 3.2.8 Awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively and confidentially;
- 3.2.9 How the Service Provider will support the Awareness Champion;
- 3.2.10 Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;
- 3.2.11 How the workshops will be presented, including frequency and duration;
- 3.2.12 How the workshops will fit in with the construction programme;
- 3.2.13 How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;
- 3.2.14 How the video will be used;
- 3.2.15 How the Service Provider will elicit maximum participation from the Workers; 3.2.15 A questions and answers slot (interactive session).

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated.

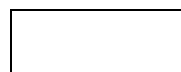
**C5.4.4 HIV/ AIDS AWARENESS EDUCATION AND TRAINING**

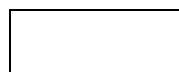
**C5.4.4.1 Workshops**

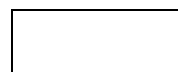
The Contractor shall ensure that all Workers attend the workshops.

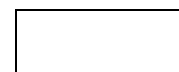
The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. A video of HIV/AIDS in the construction industry, which can be obtained from all Regional Offices of the Department of Public Works, is to be screened to Workers at workshops. In order to enhance the learning experience, groups of not exceeding 25 people

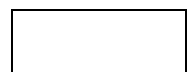
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

shall attend the interactive sessions of the workshops.

#### **C5.4.4.2 Recommended practice**

##### **C5.4.4.2.1 Workshop Schedule**

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan.

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session.

##### **C5.4.4.2.2 Service Providers**

A database of recommended Service Providers is available from all Regional Offices of the Department of Public Works.

##### **C5.4.4.2.3 HIV/AIDS Specific Learning Outcomes and Assessment Criteria**

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met.

###### **C5.4.4.2.3.1 UNIT 1: The nature of HIV/AIDS**

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS.

Assessment Criteria:

- 1) Define and describe HIV and AIDS;
- 2) List and describe the progression of HIV/AIDS.

###### **C5.4.4.2.3.2 UNIT 2: Transmission of the HI virus**

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV/AIDS is transmitted and how it is not transmitted.

Assessment Criteria:

- 1) Record in what bodily fluids the HI virus can be found;
- 2) Describe how HIV/AIDS can be transmitted;
- 3) Demonstrate the ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C5.4.4.2.3.3 UNIT 3: HIV/AIDS preventative measures**

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimise the risk of HIV/AIDS infection and to use measures to prevent the HI virus from entering the bloodstream.

Assessment Criteria:

- 1) Report on how to minimise the risk of HIV/AIDS infection;
- 2) Report on precautions that can be taken to prevent HIV/AIDS infection;
- 3) Explain or demonstrate how to use a male and female condom;
- 4) List the factors that could jeopardize the safety of condoms provided against HIV/AIDS Transmission.

### **C5.4.4.2.3.4 UNIT 4: Voluntary HIV/AIDS counselling and testing**

After studying and understanding this unit, the Worker will be able to recognise methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counseling.

Assessment Criteria:

- 1) Describe methods of testing for HIV/AIDS infection;
- 2) Report on why voluntary testing is important;
- 3) Report on why pre- and post-test counselling is important.

### **C5.4.4.2.3.5 UNIT 5: Living with HIV/AIDS**

After studying and understanding this unit, the Worker will be able to recognise the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS.

Assessment Criteria:

- 1) List and describe ways to manage HIV/AIDS;
- 2) Describe nutritional needs of people living with HIV/AIDS;
- 3) Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS;
- 4) Explain the need for counselling and support to people living with HIV/AIDS.

### **C5.4.4.2.3.6 UNIT 6: Treatment options for people with HIV/AIDS**

After studying and understanding this unit, the Worker will be familiar with the various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people.

Assessment Criteria:

- 1) Discuss anti-retroviral therapy;
- 2) List methods of treatment to prevent HIV/AIDS transmission from mother-to-child;
- 3) Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS;
- 4) Describe post exposure prophylactics.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **C5.4.4.2.3.7 UNIT 7: The rights and responsibilities of Workers in the workplace with regard to HIV/AIDS**

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way.

Assessment Criteria:

- 1) Discuss the rights of a person living with HIV/AIDS in the workplace;
- 2) Discuss the responsibilities of a person living with HIV/AIDS in the workplace;
- 3) Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important.

#### **C5.4.4.3 Displaying of plastic laminated posters and distribution of information booklets**

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets. The contractor should include the costs of posters and information booklets in his/her tender price.

The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV/AIDS and STI's.

Posters or display stands shall be displayed on site as soon as possible, but not later than 14 days after the date of site handover.

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds.

The posters on display must always be intact, clear and readable.

Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site.

#### **C5.4.5 PROVIDING WORKERS WITH ACCESS TO CONDOMS**

The Contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SANS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health.

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover.

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **C5.4.6 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)**

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counselling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers.

#### **C5.4.7 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION**

C5.4.7.1 Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner.

C5.4.7.2 The Awareness Champion shall be responsible for:

C5.4.7.2.1 Liasing with the Service Provider on organising awareness workshops;

C5.4.7.2.2 Filling condom dispensers and monitoring condom distribution;

C5.4.7.2.3 Handing out information booklets;

C5.4.7.2.4 Placing and maintaining posters.

#### **C5.4.8 MONITORING**

The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract.

The Contractor must report problems experienced in implementing the HIV/AIDS requirements to the Representative/Agent.

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent.

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager, through the Representative/Agent.

The attached CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PW 1544

## SCHEDULE A

### HIV/AIDS PROGRAMME: SITE CHECKLIST

When did construction commence: \_\_\_\_\_

Name of Departmental Project Manager: \_\_\_\_\_

*Please refer to HIV/AIDS Programme activities during the reporting period*

Tick the block if Contractor satisfactorily complied with specifications																												
DATE	PI				PI				PI				PI				PI				PI							
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Programme implemented within 14 days of site handover																												
Awareness champion on site																												
HIV/AIDS awareness service provider report																												
Male condom dispenser																												
Sufficient male condoms available																												
Male condom dispenser in a highly trafficked area																												
Female condom dispenser																												
Sufficient female condoms available																												
Female condom dispenser in a highly trafficked area																												
All four types of posters displayed																												
Posters in a good condition																												
Posters in a highly trafficked area																												
Posters displayed on local support services: clinic & VCT centre																												
Support service poster/s in highly trafficked area																												

Contractor

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Witness 2

Employer

Witness 1

Witness 2

Support service poster/s in a good condition							
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<i>Please indicate the applicable number for the reporting period</i>							
Workers on payroll (at PI)							
Sub-Contractors who will be on site for longer than 30 days (at PI)							
Workshop attendees							
Number of workshops held							
Scheduled workshops according to approved workshop plan							
Booklets distributed							
Male condoms distributed							
Female condoms distributed							

\_\_\_\_\_  
Representative/Agent

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Witness 1

\_\_\_\_\_  
Witness 2

\_\_\_\_\_  
Employer

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Witness 1

\_\_\_\_\_  
Witness 2

**PW 1544**

Date of progress inspection: (ccyy/mm/dd)

Reporting period: (ccyy/mm/dd) \_\_\_\_\_ to (ccyy/mm/dd) \_\_\_\_\_

Deviations from HIV/AIDS awareness programme plan:

--

Corrective actions:

--

\_\_\_\_\_  
Representative/Agent

\_\_\_\_\_  
Departmental Project Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

**PW 1544**

## **SCHEDULE B**

### **HIV/AIDS AWARENESS PROGRAMME: SERVICE PROVIDER REPORT**

Reporting period: (ccyy/mm/dd) \_\_\_\_\_ to (ccyy/mm/dd) \_\_\_\_\_

Number of workshops conducted in reporting period: \_\_\_\_\_

Number of scheduled workshops according to approved workshop plan: \_\_\_\_\_

Deviations from workshop plan:

State reasons for deviating from workshop plan:

Corrective actions:

\_\_\_\_\_  
Service Provider

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PW 1544

**HIV/AIDS AWARENESS PROGRAMME : WORKSHOP CONTENT ADDRESSED**

Fill in the applicable information with regard to each workshop conducted																											
DATE	W/S				W/S				W/S				W/S				W/S				W/S						
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M			
<b>Content of workshop:</b> (Mark the content included)																											
SLO1																											
SLO2																											
SLO3																											
SLO4																											
SLO5																											
SLO6																											
SLO7																											
HIV/AIDS in construction video																											
Indicate the duration of the workshop in hours																											
Total number of Workers																											
Indicate workshop venue																											

Contractor

Contract

Part C5: Annexures

Witness 1

Witness 2

Page 175

Employer

Witness 1

HIV/AIDS Specification for Civil Contracts

Witness 2

## HIV/AIDS AWARENESS PROGRAMME: ATTENDANCE REGISTER

Contractor
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Employer
Witness 1
Witness 2

Contract  
 Part C5: Annexures

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HIV/AIDS Specification for Civil Contracts


Contractor

Contract  
Part C5: Annexures

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Witness 2

Employer

Witness 1

Witness 2

**PW 1544**

## **SCHEDULE C**

### **CONTRACTOR HIV/AIDS PROGRAMME REPORT**

Project name: \_\_\_\_\_

Project Location: \_\_\_\_\_

Contract value of project: R\_\_\_\_\_

Department of Public Works Project Manager: \_\_\_\_\_

HIV/AIDS Programme duration: (ccyy/mm/dd) \_\_\_\_\_ to (ccyy/mm/dd) \_\_\_\_\_

#### **AWARENESS MATERIAL**

Describe location of posters displayed during the programme: \_\_\_\_\_

\_\_\_\_\_

Comments on posters: \_\_\_\_\_

Indicate total number of booklets distributed: \_\_\_\_\_

Comments on booklets: \_\_\_\_\_

\_\_\_\_\_

#### **CONDOMS**

Indicate total number of male condoms distributed: \_\_\_\_\_

Indicate total number of female condoms distributed: \_\_\_\_\_

Describe where male condom dispenser was placed: \_\_\_\_\_

Describe where female condom dispenser was placed: \_\_\_\_\_

#### **HIV/AIDS WORKSHOPS**

Indicate the total number of HIV/AIDS workshops conducted: \_\_\_\_\_

Indicate the duration of workshops: \_\_\_\_\_

Indicate the total number of Workers that participated in the HIV/AIDS workshops: \_\_\_\_\_

Indicate the total number of Workers that were exposed to the video on HIV/AIDS in the Construction Industry:

\_\_\_\_\_

Comments on HIV/AIDS workshops on site: \_\_\_\_\_

\_\_\_\_\_

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## GENERAL

Briefly describe programme activities and satisfaction with outcome: \_\_\_\_\_

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Additional comments, suggestions or needs with regard to the HIV/AIDS awareness programmes on site:

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Please indicate if your company has a formal HIV/AIDS policy focussing on HIV/AIDS awareness raising and care and support of HIV/AIDS Workers:

Yes	No	Currently developing one
-----	----	--------------------------

Please indicate if, to your knowledge, you have lost any workers during the duration of the project to HIV/AIDS related sicknesses. One or more of the following might indicate an HIV/AIDS related death:

Excessive weight loss

Reactive TB

Hair loss

Severe tiredness

Coughing or chest pain

Pain when swallowing

Persistent fever

Diarrhoea

Vomiting

Meningitis

Memory loss

Pneumonia

Number of HIV/AIDS-related deaths: \_\_\_\_\_

\_\_\_\_\_  
**Contractor**

\_\_\_\_\_  
**Date**

\_\_\_\_\_

\_\_\_\_\_  
**Date**

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

# MOHOKARE LOCAL MUNICIPALITY

**BID NUMBER: SCM/MOH/10/2023**

## **ZASTRON/MATLAKENG: THE CONSTRUCTION OF A SEWER NETWORK IN REFENGKHOTSO FOR 900 ERVEN (MIS: 422896)**

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### **Part C5.5: COVID-19 OHS Specifications and Regulations**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## C5.5: COVID-19 OHS SPECIFICATIONS AND REGULATIONS

### C5.5.1. INTRODUCTION:

This Plan is subject to Government Regulations and the prohibitions and notices issued by the relevant authorities regarding Lockdown in terms of the Disaster Management Act 2002 and Amendments.

These are exceptional circumstances and the industry must comply with the latest Government guidelines on Coronavirus at all times.

The health and safety requirements of any construction activity must also not be compromised at this time. If an activity cannot be undertaken safely due to a lack of suitably qualified personnel being available or social distancing being implemented, it should not take place.

We are aware that emergency services are also under great pressure and may not be in a position to respond as quickly as usual.

Site management should remind the workforce at every opportunity of the Site Operating Procedures which are aimed at protecting them, their colleagues, their families and the general population.

If a site is not consistently implementing the measures set out below, it may be required to shut down.

#### C5.5.1.1 Purpose:

This document provides an overview of how the Contractor shall Address the COVID-19 Pandemic in relation to project continuity on the Construction project. Project teams shall apply these guidelines, as applicable, on the project sites to the best of their abilities.

This is a fast-moving situation and this document will be revised as the need arises.

### C5.5.2. COMMUNICATION:

#### C5.5.2.1 Safety Talks and Induction

When work resume on site Induction shall be done with all employees on site regarding the COVID 19 Pandemic and all measures to be implemented as per this Management plan. Safety Talks that is available shall be communicated at toolbox Talks with all employees and visitors and distribute to subcontractors so they can also review at their toolbox talks. Safety Notice is to be posted on the project Notice Board.

The current concerns for COVID -19 makes induction especially important as a means of communicating with new workers the safety precautions that they must comply with for them to work on this site.

It is also a point for screening workers and asking them questions about their travels and health to verify that they are healthy and not in contravention of any Public Health recommendations.

It is also a moment when we can reassure workers that our project is being managed for their safety, that we are taking COVID – 19 seriously and that the most important thing to us is their health and safety.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### C5.5.2.2 Risk Assessments

COVID 19 Risk Assessments have been developed and are attached for reference see Appendix 1 The Risk Assessments are based on current knowledge and available information. General best practices in line with Government and WHO (World Health Organisation) guidelines propagated as control and mitigation.

These risk assessments shall be communicated with all employees and copies of the attendance register shall be kept for record purposes.

### C5.5.2.3 Contractor COVID – 19 Prevention Procedures

The Contractor shall identify which tasks may be impacted by social distancing restrictions and implement mitigation measures, for example:

- Site induction
- Training
- Tasks that involve two or more workers to work in close proximity. i.e. Carrying pipe or equipment
- Restricted work locations where there is insufficient space to maintain social distancing i.e. cab of a vehicle or small room.

The Contractor must identify tasks where there is a potential for transmission through shared use of PPE, tools and equipment and implement mitigation measures. For example:

- PPE – face shields at cutting stations, fall protection ropes and lanyards, etc.
- Tools – hand saws, chop saws, grinders, vacuums, etc.
- Equipment – aerial work platforms, forklifts, power trowels, etc.

Where cleaning and disinfecting are required the Contractor shall review the procedures and implementing practices that prevent the transmission of COVID -19 on an ongoing basis.

### C5.5.2.4 Health Verification of Workers and Visitors

The health and well-being of workers and visitors is paramount. To protect workers and visitors and provide a safe and healthy workplace the following shall be implemented:

Supervisors to be vigilant and that includes monitoring for symptoms of COVID-19.

Workers and visitors who are exhibiting symptoms of COVID 19 or are otherwise recommended to be in self- isolation or self-quarantine in accordance with recommendations of the Government Guidelines are not permitted on the project.

1. Any workers or visitors intending to access the site must complete a Health Questionnaire (Appendix 1). The purpose of the questionnaire is to verify that workers are free, to the best of their knowledge, of COVID-19 symptoms and related restrictions in accordance with Government Guidelines and recommendations.
2. Supervisors must provide each day an attendance list of workers by name and phone contact. In the event that there is a COVID issue later this information will be especially helpful in identifying potential exposures. Attendance lists to be stored in accordance with privacy considerations.
3. Contractor supervisors are required to verify, at start of shift, that their workers are healthy, fit for work and to the best of their knowledge, free of any symptoms or restrictions associated with COVID-19 in accordance with the Health Questionnaire and recommendations of the Government Guidelines.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4. Supervisors must provide an update on their workers' health to the COVID Safety Coordinator and Safety Officer at start of shift. If there are any significant changes in attendance or health concerns notify the Construction Manager in writing.
5. Supervisors are required to verify, at end of shift, that their workers are healthy, fit for work and to the best of their knowledge, free of any symptoms or restrictions associated with COVID-19 in accordance with the Health Questionnaire and recommendations of the Government Guidelines.
6. Supervisors must provide an update on their workers' health to COVID Safety Coordinator end of shift. If there are any significant changes in attendance or health concerns notify the Construction Manager in writing.

#### **C5.5.2.5 Safety Notice and Poster**

Safety Notices and Posters to be posted around the project site (at washing stations, at hand sanitizing stations, at washrooms, at entry & exit of sites, etc.) and distribute to subcontractors so they can post in their respective areas (lunchrooms, lockups, etc.).

#### **C5.5.2.6 Communication with Client, Consultants, Engineers/Designers, Subcontractors, Suppliers and Local Community**

It is important to communicate directly with our construction partners to inform them of current policies around protecting persons on our worksites from COVID-19 and the removal of any person who exhibits symptoms consistent with this virus.

#### **C5.5.2.7 Internal Updates**

The Managers and Supervisors to participate in a daily update with the Project Manager and then discuss what needs to be communicated to the project teams. The frequency and time of these calls may be subject to change as the situation evolves.

### **C5.5.3. SITE PROTOCOL**

#### **C5.5.3.1 Site Meetings**

To limit person to person contact, update all site communication to email and electronic means (Skype or Zoom). If meetings are required to be in person (morning foreman meetings, etc.), hold them in an open area, preferably outside, and practice good Social Distancing practices by maintaining a 2.0m distance from each other.

#### **C5.5.3.2 COVID 19, Safety Coordinator**

Principal Contractor to appoint a dedicated person to coordinate cleaning and maintenance of all measurements and procedures implemented in order to manage this contingency plan. This appointed person shall report directly to site management and shall work in collaboration with the site Safety Officer and Safety Reps.

This COVID Safety Coordinator shall be responsible for the following:

- Review and assess Contractor COVID Prevention Procedures.
- Conduct regular inspections of the worksite to monitor adherence to COVID Prevention Procedures and record inspection findings
- Review and store Health Questionnaires in accordance with privacy considerations.
- Document attendance issues and nonconformances.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- Monitor cleaning to verify that approved products and procedures are being followed.
- Inspect wash stations and hand sanitization stations to verify that they are adequately stocked and posters explaining hand washing and hand sanitization are posted.
- Post and inspect other signage to verify that it is located in correct location and in good order.
- Verify that First Aid Attendants have the necessary safety equipment and are using it correctly.
- Investigating any reports of workers that are not complying with procedures or concerns for workers health.
- Refer any issues or concerns to the Appointed Construction Manager and inform the Safety Officer.
- Immediate report and investigate presumed and confirmed cases of COVID – 19 in accordance with Presumptive / Confirmed Case COVID-19 Response and with the assistance of Construction Manager and Safety Officer.
- Review and instruct project staff in this procedure and other COVID-19 documentation.
- Monitor this procedure and other documents for updates and assist Project Supervision in disseminating that information to Contractors and workers.

#### **C5.5.3.3 Site Visitors**

All site visitors (client, Construction Health and Safety agent, consultants, inspectors, etc.) should limit site visits unless necessary for Business Continuity reasons. If visits are required:

- a. Give site management advance notice that you are visiting the site.
- b. Practice good Social Distancing measures.
- c. Avoid entry into site offices and or other structures unless required.

#### **C5.5.3.4 Handwashing Stations**

Install handwashing stations complete with dispenser soap in strategic locations on the project site.  
Install a Safety Notice Poster at each location

#### **C5.5.3.5 Hand Sanitizing Stations**

Install hand sanitizer stations in strategic locations around the project site. Inspect daily to ensure they are full. Install a Safety Notice Poster at each location

#### **C5.5.3.6 Cleaning**

Identify and clean surfaces that workers come into regular contact with. Dedicated labourers are to sanitize door handles, toilet doors, meeting room tables, offices, etc. at the end of each shift. Stock and supply cleaning wipes and spray sanitizer on site.

#### **C5.5.3.7 Social Distancing**

Promote hand shaking alternatives. Ensure individuals are always 2.0m apart from each other. This includes in lunchrooms, lock ups, while working on site, entry and exits of sites, etc. Employees are encouraged to work remotely if their role permits.

Some roles on site may allow for a rotation schedule to allow some to work remotely while maintaining presence at the project.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Cancel and/or postpone all site evacuation drills or similar drills. These are not in line with Social Distancing guidelines. Evacuation Plans to incorporate Social Distancing. This can include more assembly points, proper spacing of 2.0m at assembly points and instructions to workers about Social Distancing.

Signage will be posted on sites to promote proper social distancing protocols.

#### **C5.5.3.8 Subcontractor Coronavirus (COVID-19) Plans**

Communicate with subcontractors who will be performing work on site.  
Subcontractors shall be subjected to the COVID H&S management plan of the Principal contractor.

#### **C5.5.3.9 Monitoring Worker Health**

The Contractor shall monitor worker health on site. If a worker is exhibiting symptoms, ask them to leave site in conjunction with their superior and arrange for them getting tested.

Principal Contractor shall keep a list of all workers on site and update it daily

Each worker on site is required to fill this out and return a Worker Health Questionnaire (Appendix 2). Going forward, all new workers and visitors are required to complete this questionnaire. It reinforces how important it is for them to be healthy if they want to come to the site and reinforces the public health authority's self- assessment monitoring tool. All records are the same as first aid records and are to be kept under lock for privacy reasons.

#### **C5.5.3.10 Eating Areas**

The Contractor shall ensure that there is a handwash station close to the project eating areas/lockup areas. Post social distancing signage to remind workers to keep their distance.

Post signage to remind workers to wash or disinfect their hands before and after eating.

Stagger coffee/lunch breaks to reduce the number of workers in the lunchroom at the same time.

Organize chairs and stagger seating arrangement to maintain social distancing or take lunch and coffee outside

Remove garbage often.

Clean and disinfect tables, microwaves and other commonly handled items between workers/ lunch shifts. Encourage workers to wash their hands properly before and after all meals. Abide by Social Distancing guidelines in eating areas and stay 2.0m away from each other always.

Due to size constraints, this may require workers to take coffee breaks and/or lunch breaks in shifts.

Avoid

going to areas on congregation during breaks and lunch time. Consider separating PPE & clothing that is hung up in the eating area to avoid contamination. All work spare clothing to be transported home in a plastic bag and washed.

All lunch tables should be wiped down and disinfected daily per the Routine Cleaning Protocol. (see Appendix

3 – Surface Cleaning for Potential Virus)

#### **C5.5.3.11 Toolbox Talks sessions**

The Safety Representatives should ask workers if they have had any recent travel and if they are feeling sick during the Toolbox Talks sessions.

Limit the number of persons in Toolbox Talk sessions to maintain social distancing protocol (2.0m) this may result in the requirement to hold more Toolbox Talk sessions. Disinfect used pens, tables and chairs after each session. A Toolbox Talk session should include hygiene expectations, social distancing and general health of the worker (flu like symptoms).

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **C5.5.3.12 Wearing Gloves**

Provide gloves to workers who do not have gloves and enforce that they wear them on the project. It is important to note that gloves can still carry and transfer the virus. Avoid touching others, you face and your eyes even with gloves on. If gloves are washable, they should be washed after each shift.

All workers must wear gloves in accordance with their SW. Wearing gloves, besides being a safety requirement reduces the likelihood of workers touching their eyes, nose or ears reducing the potential of transmission from contaminated surfaces.

Workers should replace their used gloves frequently with new gloves and launder used gloves, if practicable, with their work clothes to prevent them from becoming potential sources of transmission.

#### **C5.5.3.13 Garbage Bins**

Eating areas, storage facilities and site offices cleaned daily and site garbage should be collected and disposed of.

#### **C5.5.3.14 Antibacterial Soap & Disinfecting Spray**

Procurement of basic hygiene supplies continues to be a challenge and items being received needs to be diligently inspected and stored.

As we are all aware, hand sanitizer has become very scarce and hard to find. We should try use it as a last measure when hand washing is unavailable.

Please read the instructions carefully and be sure to use these products efficiently as supply is limited during these times.

#### **C5.5.3.15 N95 and N99 Masks**

All N95/99 masks should be preserved on site and not used for construction related activities. There is a general shortage of these masks in the market.

#### **C5.5.3.16 Site Office**

Limit the number of employees and workers in site offices. Maintain social distancing protocol (2.0m). If the role permits, rotate employees working remotely and working on site to ensure social distancing protocol is met. Host meetings outside if meeting is too small to support proper social distancing protocol. Do not share keyboard, mice, pens, clipboards, documents, etc. Routinely disinfect door handles, chairs, and commonly touched items.

The following shall apply:

- Post "Restricted Access" signage on door with contact information (phone #).
- Keep the door locked to prevent access.
- Restrict the number of people who are allowed to enter these offices to social distancing allowances.
- Disinfect anything touched by a visitor prior to use.
- Do not share keyboard or mouse, pens, clipboards or documents.
- Disinfect commonly touched items like door handles, chairs, tables, stair handrails, etc.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C5.5.3.17 Hygiene Practices**

Clean hands with soap and water for 20 seconds. Do this before and after meals, at the end of the workday and when home. Avoid hand shaking. Do not share food, drinks, cigarettes and personal hand tools. Do not touch face, eyes, or mouth with unwashed hands. Follow good respiratory etiquette by covering your mouth and nose by creasing your elbow when coughing or sneezing.

Workers are required to wash or sanitize their hands:

- At the start of their shift and before they start work
- Before eating, drinking or smoking
- After using the toilet facilities
- After handling any tools or materials that may be contaminated
- At the end of the shift before they leave work

The Contractor will provide or make available hand washing and hand sanitization facilities to meet the needs of the volume of workers at the project.

### **C5.5.3.18 Personal Protective Equipment for Project Safety Coordinators when with Patients**

The following PPE is required when with a patient that may have a presumptive case of Coronavirus (COVID- 19):

- N95 mask
- Face shield/mask with visor
- Safety glasses
- Gloves
- Disinfectant products

## **C5.5.4. MEDICAL RESPONSE**

### **C5.5.4.1 Employee Self Quarantine**

Notify supervisor and Safety Manager. Check the Assessment Tool and follow instructions and recommendations.

### **C5.5.4.2 Persons Reporting to Project First Aid**

Report workplace injuries to the First Aid Attendant (FAA). As a precaution the FAA will wear N95/99 mask or ½ mask respirator, face shield and medical gloves when treating workers.

If a worker reports to first aid feeling ill or exhibiting COVID-19 symptoms, send the worker home and instruct them to visit the nearest screening facility of the National Dept of Health. Ensure communication on outcome of tests.

### **C5.5.4.3 Persons Observed on Site with Flu-Like Symptoms**

If a worker is observed exhibiting COVID-19 symptoms or they feel ill, direct them to go home and to visit the nearest screening facility of the National Dept of Health. Clean and disinfect any areas where the worker was working per the Surface Cleaning for Potential Virus Contamination Safe Work Procedures (see Appendix 4). Ensure communication on outcome of tests.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **C5.5.4.4 Persons Confirmed to Having COVID-19**

Prevent the spread of COVID-19 by assessing who else may have been in contact with the individual and notifying those people in accordance with Health Authority Protocols for identification and quarantine.

#### **C5.5.4.5 Presumptive and Confirmed COVID-19 Case Responses**

Contractor to inform Client of all cases on a daily basis.

### **C5.5.5. EXTERNAL COMMUNICATION**

#### **C5.5.5.1 Client**

Confirm with client how and how often they would like project specific communication relating to the coronavirus (COVID-19). Confirm who should be on this communication.

#### **C5.5.5.2 Media**

All communication related to the media needs to be directed to the Client on these communications.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## APPENDIX 1: RISK ASSESSMENT

### Risk assessment COVID 19 on Construction Site

#### A. Risk Assessment for Coronavirus (COVID-19)

<b>Site:</b>		<b>Contractor Sec 16(2)</b>	
<b>Project:</b>		<b>Done by:</b>	
<b>Contractor:</b>		<b>Date:</b>	
<b>Client:</b>			

SITUATIONS:	
1.	Someone entering the workplace already infected with CV19
2.	Someone becomes ill within the workplace
3.	Contaminated workplace
4.	Proximity, workplace gatherings
5.	General Ignorance
6.	Self-isolation
7.	Travel (Travelling across provincial borders)
8.	Symptomatic or exposed employee(s)
9.	Presenteeism
10.	First Aid Training / CPR Manikin
11.	Lack of accurate information / a failure to disseminate

Risk Rating		SEVERITY / CONSEQUENCE				
		1. Negligible	2. Minor	3. Moderate	4. Serious	5. Major
LIKELIHOOD	1. Very Unlikely	1	2	3	4	5
	2. Unlikely	2	4	6	8	10
	3. Possible	3	6	9	12	15
	4. Likely	4	8	12	16	20
	5. Probable	5	10	15	20	25

1-6 LOW	May be acceptable. Due care to be employed and situation reviewed to see if risk can be reduced further.
7-14 Medium	Possible Precarious situation only allowed to proceed with proper supervision. All available measures employed to reduce Raw Risk.
15-25 High	Situation Critical and cannot be allowed to proceed. Reassess situation continuously to determine best implementable measures for Risk mitigation.

Contractor

Witness 1

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Employer

Witness 1

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### B. Risk Assessment

Nr	HAZARD			INITIAL RISK			CONTROLS	RESIDUAL RISK		
	Hazard Description	Risk	Health/Safety Influenced	Hazard Severity	Likeli - hood	Risk Rating	List Controls Required	Hazard Severity	Likeli - hood	Risk Rating
1.	Someone entering the workplace with CV19	Passing the virus on to other employees, causing illness and possible death	Health Safety		3	15	<ul style="list-style-type: none"> <li>Symptomatic individuals will not be allowed entry.</li> <li>Hygiene requirements (handwashing etc.) and symptoms of CV19 included with Induction.</li> <li>CV19 Information posters placed in accessible locations in the workplace</li> </ul>	3	1	3
2.	Someone becomes ill within the workplace	Workers contracting CV19 by any means, causing illness and possible death	Health Safety		3	15	<ul style="list-style-type: none"> <li>Worker removed to a designated area at least 2 metres away from other people.</li> <li>The individual will be sent home and advised to follow Governmental guidance.</li> <li>Workplace decontaminated following accepted standards.</li> <li>Relevant PPE to be issued</li> </ul>	5	1	5

Contractor

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Nr	HAZARD			INITIAL RISK			CONTROLS	RESIDUAL RISK		
	Hazard Description	Risk	Health/Safety Influenced	Hazard Severity	Likeli - hood	Risk Rating	List Controls Required	Hazard Severity	Likeli - hood	Risk Rating
3.	Contaminated workplace	Workers catching CV19 due to contaminated surfaces, causing illness and possible death	Health Safety	5	2	10	<ul style="list-style-type: none"> <li>Formal cleaning regime introduced (Employees cleaning equipment and facilities more often).</li> <li>Hand sanitisers to be placed in readily accessible locations.</li> <li>Extra hygiene requirements enforced.</li> <li>Multi-use handtowels not allowed for drying hands.</li> <li>Relevant PPE to be issued</li> </ul>	5	1	5
4.	Physical Proximity during workplace gatherings	Workers catching CV19 due to working closely with infected colleagues, causing illness and possible death	Health Safety	5	3	15	<ul style="list-style-type: none"> <li>Social Distancing policy implemented. All work areas and activities been evaluated for the possibility of implementing social distancing (no handshaking, deferring large meetings etc.)</li> <li>Relevant PPE to be issued</li> </ul>	5	1	5

Contractor

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Nr	HAZARD			INITIAL RISK			CONTROLS	RESIDUAL RISK		
	Hazard Description	Risk	Health/Safety Influenced	Hazard Severity	Likeli - hood	Risk Rating	List Controls Required	Hazard Severity	Likeli - hood	Risk Rating
5.	General Ignorance	Workers unaware of risks from CV19 and become infected, causing illness and possible death	Health Safety	5	3	15	<ul style="list-style-type: none"> <li>A formal training program implemented to cover risks, symptoms and control measures. Attendance to all sessions mandatory with attendance registers kept on file as proof.</li> </ul>	5	1	5
6.	Self-isolation of workers	Workers unaware of the need to (or how to) self-isolate, causing further spread of disease and possible death	Health Safety	5	3	15	<ul style="list-style-type: none"> <li>A formal training program implemented educate workers on control measures, including self- isolation. Attendance to all sessions mandatory with attendance registers kept on file as proof.</li> </ul>	4	1	4

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7.	Travel (Travelling across provincial borders)	Travelling across provincial borders and afterwards returning	Health Safety	5	2	10	<ul style="list-style-type: none"> <li>Adhere to general travel ban by SA Government.</li> <li>Implement alternatives to travel - postpone trips or hold meetings via video conferencing.</li> </ul>	5	1	5
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Nr	HAZARD			INITIAL RISK			CONTROLS	RESIDUAL RISK		
	Hazard Description	Risk	Health/Safety Influenced	Hazard Severity	Likeli - hood	Risk Rating	List Controls Required	Hazard Severity	Likeli - hood	Risk Rating
8.	Symptomatic or exposed employee(s)	Workers are symptomatic of CV19 or has been in close contact with someone with CV19, causing further spread of disease and possible death	Health Safety	5	3	15	<ul style="list-style-type: none"> <li>If worker is unfit for work, they will be booked off sick as per normal policy.</li> <li>Symptomatic employees will be sent home.</li> <li>Colleagues who came in contact with symptomatic workers will be informed of symptoms and advised to contact a doctor for guidance.</li> <li>Working from home will be considered.</li> <li>Relevant PPE to be issued</li> </ul>	5	1	5

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9.	Presenteeism	A worker catches CV19 because a colleague continues working despite being unwell, causing further spread of disease and possible death	Health Safety	5	3	15	<ul style="list-style-type: none"> <li>Workers coming in contact with symptomatic ones will be informed of symptoms and advised to contact a doctor for guidance.</li> <li>Workplace will be decontaminated following Governmental guidance:</li> <li>Relevant PPE to be issued</li> </ul>	5	1	5
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Nr	HAZARD			INITIAL RISK			CONTROLS	RESIDUAL RISK		
	Hazard Description	Risk	Health/Safety Influenced	Hazard Severity	Likeli - hood	Risk Rating	List Controls Required	Hazard Severity	Likeli - hood	Risk Rating
10.	First Aid Training / CPR Manikin	Workers exposed to CV19 due to providing First Aid in the workplace or during CPR Training on Mannequin, causing further spread of disease and possible death	Health Safety	5	2	10	<ul style="list-style-type: none"> <li>Proper training of First Aid staff</li> <li>Use of correct equipment while giving First Aid</li> <li>Maintaining proper mannequin hygiene</li> <li>Relevant PPE to be issued</li> </ul>	5	1	5

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11.	Lack of accurate information / a failure to disseminate information	Employees unaware of risks from CV19 get infected due to lack of awareness of control measures, causing further spread of disease and possible death	Health Safety	5	3	15	<ul style="list-style-type: none"> <li>A designated person will be appointed to monitor CV19 by signing up for immediate news updates and monitoring relevant Websites and News outlets.</li> <li>A risk communication plan will be implemented, ensuring timely updating/ sharing of information with all internal &amp; external stakeholders</li> </ul>	5	1	5
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### C. Acknowledgement and Approval

Date	Designation	Name	Signature
	CEO		
	Supervisor		
	Risk Assessor		
	Client (Or representative)		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## APPENDIX 2: HEALTH QUESTIONNAIRE

### Health Questionnaire - COVID 19

Revision:	#1: 14 April 2020
Date:	
Name	
ID:	
Your Cell phone No	
Site:	
Employer	

The purpose of this questionnaire is to ensure appropriate COVID-19 screening of all individuals requesting access to ..... construction projects. These questions will help confirm that you are healthy and fit for work.

Because your health has the potential to affect the health of other people on this site, as well as their families and others, it is essential you answer these questions honestly.

In the event that someone on the site has been in close contact with someone probable or confirmed with COVID-19, your contact information is necessary so we can inform you that your health and safety may be at risk.

This questionnaire is based on the Dept of National Health COVID-19 Self-Assessment Tool.

#### 1. Are you experiencing any of the following?

- ☐ Severe difficulty breathing (i.e., struggling to breathe or speaking in single words)
- ☐ Severe chest pain
- ☐ Having a very hard time waking up
- ☐ Feeling confused
- ☐ Losing consciousness
- ☐ No ☐ Yes

#### 2. Are you experiencing any of the following:

- ☐ Shortness of breath at rest
- ☐ Inability to lie down because of difficulty breathing
- ☐ Chronic health conditions that you are having difficulty managing because of difficulty breathing
- ☐ No ☐ Yes

#### 3. Are you experiencing a fever:

- ☐ No ☐ Yes

#### 4. Are you experiencing any abnormal or unusual conditions (not associated with allergies, smokers cough, other known respiratory complaints, etc.):

- ☐ Coughing

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- ☐ Sneezing  
☐ Sore throat  
☐ No ☐ Yes

**5. Have you travelled to any other districts or provinces outside this municipal district within the last 14 days?**

☐ No ☐ Yes

**6. Did you provide care or have close contact with a person with COVID-19 (probable or confirmed) while they were ill (cough, fever, sneezing, or sore throat)?**

☐ No ☐ Yes

**7. Did you have close contact with a person who to any other districts or provinces outside this municipal district within the last 14 days who has become ill (cough, fever, sneezing, or sore throat)?**

☐ No ☐ Yes

If you have checked **Yes** to any of these questions, you are not permitted on this site and you should consider seeking medical attention.

If you have checked **No** but you notice a change in your health within the next 14 days, we ask you to contact your supervisor or us directly. We have a collective responsibility for the safety and health of each other.

**If you are in a high-risk group for COVID-19 (i.e., over age 65, pre-existing respiratory condition) please determine with your supervisor if working on this on this site is appropriate for you given current COVID transmission risks.**

We share a responsibility for keeping each other safe. Thank you for completing this questionnaire. If you have any questions, please speak with your supervisor.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Privacy:** As an employer, ..... may have to collect, use, and disclose employee personal information in order to prevent or manage the risk of COVID-19's rapid spread. In doing this, we need to balance the individual's right to privacy with our obligation to maintain a safe workplace. The information collected in this questionnaire will be treated confidentially and only disclosed to others when required to meet our obligation to maintain a safe workplace

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## APPENDIX 3: SAFE WORK PROCEDURES CLEANING/PROTOCOL FOR CLEANING

### COVID 19 Safe Work Procedures for Cleaning and Disinfecting in the workplace / Protocols for Cleaning

**Document Priority: ALL employees – Ensure all acknowledge with signed attendance register.**

**Frequency: Weekly**

#### **Purpose**

To set a standard to clean and disinfect all areas in order to prevent the spreading and contamination with the COVID virus.

#### **The difference between disinfecting and cleaning**

When it comes to preventing the spread of germs, it helps to understand the difference between cleaning and disinfecting. Cleaning is the act of removing germs, dirt, and impurities (like when you use a soapy sponge to wipe off a visibly dirty counter or stovetop). Disinfecting is when you use chemicals to kill germs (like spraying with a bleach solution). By cleaning first, then disinfecting, you can lower the risk of infection.

#### **Follow these cleaning guidelines**

Guidelines to follow when cleaning and disinfecting the work areas on a construction site.

1. Wear disposable gear while you clean. Personal protective items like gloves, gowns, and face masks or cloth facial coverings can provide additional protection. Make sure to throw gloves out after each cleaning and then immediately wash your hands.
2. Ventilate rooms before you clean. Allow fresh air to circulate for at least 20 minutes. If possible, leave all windows open during the entire cleaning process.
3. Wash your hands thoroughly before and after each cleaning. Use soap and water, and wash for at least 20 seconds. If that's not possible, use a hand sanitizer with at least 70% alcohol. Learn more about proper hand washing
4. Clean, then disinfect. Use detergent or soap and water to remove dirt, grease, dust, and germs. Once the surface is clean, spray with a disinfectant. Let it stand for a few minutes, then wipe—and if you're not using paper towels or disposable wipes, it's best to use a new cleaning cloth for each guest.
5. Avoid touching your face while cleaning. To prevent the spread of germs, the CDC recommends not touching your face, nose, and eyes with unwashed hands—so pay extra attention when cleaning.
6. Use the right disinfectant. Most common household disinfectants as well as cleaning solutions with diluted household bleach or at least 70% alcohol, are believed to be effective against the coronavirus. Pay special attention to frequently touched surfaces, like light switches, doorknobs, remote controls, and faucet handles. (See our full list of surfaces to disinfect at the bottom of the page.)
7. Don't forget about sofas, rugs, drapes, and other soft, porous surfaces. Carefully remove any visible dirt or grime, then clean with the appropriate cleaners indicated for use on these surfaces. If possible, machine-wash items according to the manufacturer's instructions.

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8. Wash all linens at the highest heat setting recommended by the manufacturer. That includes hand and bath towels, kitchen towels, and blankets. Remember to wear gloves when handling dirty laundry, and take care to avoid shaking laundry, which could increase the spread of germs.
9. Clean and disinfect laundry baskets and hampers. If possible, consider using a liner that is either disposable or that you can throw into the washing machine.
10. Empty the vacuum cleaner after every cleaning. You should wipe down the vacuum cleaner with disinfectant, along with appliances like your dishwasher and washing machine.
11. While restocking your supplies, take a moment to check expiration dates. And remember to never mix household bleach with ammonia or any other cleaning solution that can release toxic gases that are dangerous to inhale.
12. Line trash cans. Placing bags into trash bins will make it easier to dispose of tissues and other waste.
13. After use wipe off all utensils and equipment used with disinfectant including, brooms buckets and brushes
14. Dispose of or wash your cleaning supplies. If you're using paper towels, disinfectant wipes, and other disposable cleaning supplies, take the trash out after you're done. If you're using cleaning cloths and other reusable products, make sure to machine-wash them at the highest heat setting appropriate for the material.
15. Safely remove any cleaning gear. When you're done cleaning, immediately remove any protective outerwear like gowns, gloves, or masks, and dispose of them or wash accordingly. Remember to wash your hands for at least 20 seconds afterwards.
16. Wipe off all tools with disinfectant before and after use and before storage.
17. Wipe off all surfaces on plant and vehicles with disinfectant before and after operations
18. Tools, vehicle and plant users are responsible for the cleaning of the tools, plant and vehicles they use.
19. Employees working or entering offices, kitchens, bathrooms, toilets and eating areas to clean their hands before entering and open windows and maintain good ventilation.

Make sure you are well-stocked with the essential amenities and consider adding a few extras. Things like:

- Antibacterial hand sanitizer
- Disposable gloves and wipes
- Hand soap
- Paper towels
- Tissues
- Toilet Paper

Checklist of items to clean and disinfect Office and General:

- Doorknobs
- Air vents Surfaces
- Light switches Remote controls
- Keyboards
- Telephones Desks/Tables Chairs
- Cabinet handles and pulls Windowsills and window handles
- Stationery and utensils (stapler, punch etc.) Keys
- Railings
- Garbage and recycling bins

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Employer

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**Kitchen and Eating area:**

- Sinks
- Cabinet handles and pulls
- Appliances: oven, toaster, pressure cooker, coffee maker, etc.
- Condiments: oil, salt and pepper shakers, commonly used spices and containers, etc.
- Kitchenware that isn't dishwasher safe: ceramic bowls, kids' plasticware, etc.
- Hard-backed chairs

**Bathroom:**

- Sinks Toilets
- Door handles Faucet handles Showers and tubs
- Shower curtains and doors
- Shampoo, conditioner, body wash, and soap dispensers

**Work Area:**

- All tools including hand tools
- Control devices – Levers and switches
- All surfaces that are exposed to human contact

**Vehicles and Plant:**

- Door handles
- Keys
- Seats and armrests Steering wheel
- Control levers and switches
- Windows – side windows and mirrors

## **Additional Information**

### **Important**

Never mix household bleach with ammonia or any other cleanser.

Do not use bleach on electronics such as computer displays or keyboards. It

All disposable materials must be placed into a leak proof garbage bag and sealed for Disposal

Prepare a bleach solution (alternative disinfecting solution) by mixing:

- 5 tablespoons (75ml -1/3 cup) bleach per 4L of water. This is equal to 1 parts bleach to 49 parts water or 200 mL in a 10 L bucket.
- The solution will be required to be made daily and is not to be re-used except on the shift that it was prepared for.
- Place the bleach solution into a spray bottle or use the solution from a bucket.
- If applying the solution using a spray bottle, apply the solution to all surfaces and allow to remain wet for 10 minutes.
- If using the solution in a bucket, using sponges, rags or mops, apply the solution to all surfaces and allow to remain wet for 10 minutes.
- After 10 minutes, dry surfaces using sponges, rags, mops or disposable paper towels.
- Change the sponge, rag or mop being used often

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Contractor

Witness 1

Witness 2

Employer

Witness 1

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## APPENDIX 4: CHECKLISTS FOR CLEANING

### Cleaning Checklist for Offices, Kitchen and Eating Areas.

#### Ventilate rooms before you clean.

Allow fresh air to circulate for at least 20 minutes. If possible, leave all windows open during the entire cleaning process.

#### Wash your hands thoroughly before and after each cleaning.

Use soap and water, and scrub for at least 20 seconds. If that's not possible, use a hand sanitizer with at least 60% alcohol.

#### Wear disposable gloves while you clean.

Gloves should be thrown out after each cleaning. And make sure to wash your hands immediately after gloves are removed.

#### Stock up on paper towels, disinfectant wipes, and other disposable cleaning supplies.

If you prefer to clean with reusable products, machine-wash them at the highest heat setting appropriate for the material.

#### Clean, then disinfect.

Cleaning is when you use soap or detergent and water to remove dirt, germs and impurities. Disinfecting refers to the use of chemicals like bleach or alcohol to kill germs. Doing both is the best way to reduce the spread of infection

#### Use the right disinfectant.

Diluted household bleach solutions, cleaning products with at least 70% alcohol, and most common disinfectants registered by the Environmental Protection Agency are believed to be effective against the coronavirus

#### Focus on frequently touched surfaces.

Light switches, doorknobs, remote controls, and faucet handles are just a few of the areas you'll need to disinfect. (Check list of Items to clean and frequently touched surfaces attached.)

#### Don't forget about sofas, rugs, drapes, and other soft, porous surfaces.

Carefully remove any visible dirt or grime, then use the appropriate cleaner for the material. If possible, machine-wash items according to the manufacturer's instructions.

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Witness 2

Employer

Witness 1

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**Wash all linens at the highest heat setting recommended by the manufacturer.**

That includes bed sheets, mattress covers, hand and bath towels, kitchen towels, and blankets.  
Wear gloves when handling dirty laundry.

**Clean and disinfect laundry baskets and hampers.**

Consider using a liner that's either disposable or machine washable.

**Empty the vacuum cleaner after every cleaning.**

Disinfect the vacuum cleaner, along with other cleaning appliances like the dishwasher and washing machine.

**Clean utensils, broom, brush and buckets after use**

Disinfect the broom, along with other cleaning utensils

**Checklist of items to clean and disinfect Office and General:**

- Doorknobs Air vents Surfaces
- Light switches Remote controls Keyboards Telephones Desks/Tables Chairs
- Cabinet handles and pulls Windowsills and window handles
- Stationery and utensils (stapler, punch etc.) Keys
- Railings
- Garbage and recycling bins

**Kitchen and Eating area:**

- Sinks
- Cabinet handles and pulls
- Appliances: oven, toaster, pressure cooker, coffee maker, etc.
- Condiments: oil, salt and pepper shakers, commonly used spices and containers, etc.
- Kitchenware that isn't dishwasher safe: ceramic bowls, kids' plasticware, etc.
- Hard-backed chairs
- 

**Bathroom:**

- Sinks Toilets
- Door handles
- Faucet handles Showers and tubs
- Shower curtains and doors
- Shampoo, conditioner, body wash, and soap dispensers

**Work Area:**

- All tools including hand tools
- Control devices – Levers and switches
- All surfaces that are exposed to human contact

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## APPENDIX 5: PRE-START-UP CHECKLIST

### PRE-START-UP CHECKLIST: Revision 2.200511

<b>PROJECT NR:</b>	
<b>PROJECT DESCRIPTION:</b>	
<b>CONTRACTOR:</b>	
<b>COMPLETED BY:</b>	
<b>DATE:</b>	

#### Findings:


No.	Subject	Y/N	Comment
1.	Have a Risk assessment been done related to COVID 19 for the project		
2.	Have all "high contact" areas and activities been identified		
3.	Is a plan developed in line with guidelines to manage the implementation of measures to prevent the spread and infection of the COVID 19 virus on this project		
4.	Have all offices, workshops, and facilities been sanitized and cleaned		
5.	Is there a cleaning routine with records in place		
6.	Is access restricted and notices installed to this affect		
7.	Are wash stations provided at the entrance to the site yard		
8.	Are there a sufficient supply of PPE available specific to requirements related to COVID 19		
9.	Are there adequate supplies of cleaning materials, disinfectant, Sanitizing decanters and consumables available.		

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

10.	Have all employees been issued with 2 washable face masks		
11.	Have notices been installed to raise awareness regarding COVID-19		
12.	Are all employees and visitors screened for symptoms of COVID-19		
13.	Are records kept of all screening done on site		
14.	Are measures in place to accommodate social distancing on site		
15.	Have a COVID Coordinator been appointed		
16.	Did the COVID Coordinator receive training regarding his responsibilities		
17.	Have a team been appointed to ensure regular cleaning and disinfecting of "high contact areas"		
18.	Are Site Rules regarding COVID-19 communicated		
19.	Are adequate arrangements in line with regulations for transport of workers in place		
20.	Is the Company Policy regarding management of COVID-19 on display and endorsed by the CEO		
21.	Are Site Rules regarding COVID-19 on display		
22.	Are there sanitizing dispensers available at toilets		
23.	Are there sanitizing dispensers available at entrance to eating areas		
24.	Are there sanitizing dispensers available at entrance to offices and storage areas		
25.	Are there enough lined waste bins on site and emptied at regular intervals		
26.	Are there valid Medical Fitness Certificates for all employees on site		
27.	Are high risk and vulnerable people been identified and provided for as per guidelines issued by NDoH		

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Witness 2

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28.	Are the correct protocols available in case of a suspected COVID infected person on site		
29.	Are there an isolation room/area available in case someone is identified as a possible COVID case		
30.	Is there a written plan for the phased return to work for all employees		
31.	Have emergency plans been reviewed to make provision for COVID related emergency procedures and issues		
32.	Is there a schedule to stagger starting times for workers and activities		
33.	Is 2 non-touch thermal thermometers and extra batteries available on site		
34.	Is single use alcohol testing units available – no breathalysers		
35.	Have any special conditions or issues been identified that can impact on the Risks and management of the risks related to COVID		

**No work on site can commence before all the questions have been answered positively. The questions are in line with requirements as issued under Lockdown Regulations. Failure to comply is an offence and can lead to arrest and or a fine.**

**COVID-19 HOTLINE: 0800 02 99**

#### Acknowledgement and Approval

Date	Designation	Name	Signature

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2