



public works & infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

TENDER NO: KIM 02/2024

CLOSING DATE: 27 MARCH 2024

PROCUREMENT DOCUMENT: VOLUME 3/3

TENDERING PROCEDURES

KIMBERLEY: TSWELOPELE CORRECTIONAL CENTRE: REPLACEMENT AND UPGRADING OF HEAT PUMPS

ISSUED BY:
THE DIRECTOR GENERAL
DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PROJECT MANAGER:
MR. SANDISO COSA
TELEPHONE: 079 516 9085

21-23 MARKET SQUARE
OLD MAGISTRATES BUILDING
KIMBERLEY
8301

NAME OF TENDERER:.....

CIDB Registration Number:.....CIDB Grade.....



**EXPANDED PUBLIC WORKS PROGRAMME
CONTRIBUTING TO A NATION AT WORK**

VOLUME 3: THE CONTRACT

KIMBERLEY TSWELOPELE: CORRECTIONAL CENTRE: REPLACEMENT AND UPGRADING OF HEAT PUMP INSTALLATION

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DPW-05(EC): CONTRACT DATA

C1.2.1 DPW 05(EC): CONTRACT DATA

DPW-05: (EC) CONTRACT DATA - GCC 2015: 3RD EDITION

Project title:	Kimberley Tswelopele Correctional Centre: Replacement and Upgrading of Heat Pump Installation			
Tender no:	KIM 02/2024	WCS no:		Reference no: 19/2/4/2/2/2327/491

	<p>The Conditions of Contract applicable to this Contract are clauses 1 to 10 and contract price adjustment schedule of the GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS, THIRD EDITION (2015) prepared by The South African Institution of Civil Engineering Private Bag X200, Halfway House, 1685.</p> <p>Contractors are cautioned to read the GCC Third Edition (2015) and Contract Data [DPW-05 (EC)] together as some clauses in the GCC Third Edition (2015) have been amended in the Contract Data [DPW-05 (EC)]</p> <p>Specific data, which together with these General Conditions of Contract, collectively describe the risks, liabilities and obligations of the contracting Parties and the procedures for the administration of the Contract. Clauses as amended in the Contract Data amends or replaces the corresponding clauses in the GCC Third Edition (2015).</p> <p>Copies of these conditions of contract may be obtained through www.saice.org.za.</p>
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	<p>CONTRACT VARIABLES</p> <p>THE SCHEDULE (Contract Data [1.1.1.8])</p> <p>The schedule is the listed variables in this agreement and contains all variables referred to in this document including specific changes made to GCC Third Edition (2015) documentation. It is divided into part 1: contract data completed by the employer and part 2: contract data completed by the contractor. Part 1 must be completed in full and included in the tender documents. Both the part 1 and part 2 form part of this agreement</p> <p>Spaces requiring information must be filled in, shown as ‘not applicable’ but not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross referenced to the applicable clause of the schedule. Key cross reference clauses are italicised in [] brackets</p>
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PART 1: CONTRACT DATA COMPLETED BY THE EMPLOYER:

A PROJECT INFORMATION

A 1.0 Works [1.1.1.35]

Works description	Refer to document <i>PG01.1 (EC) – Scope of Works</i> for detailed description
Replacement and Upgrading of Heat Pump Installation at Kimberley Tswelopele Prison	

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A 2.0 Site [1.1.1.29]

Erf / stand number	
Site address	Department of Correctional Services, Tswelopele Correctional Centre
Township / Suburb	
City / Town	Kimberley
Province	Northern Cape Province
Local authority	Sol Plaatje
GPS Coordinates	

A 3.0 EMPLOYER AND ITS REPRESENTATIVE

A 3.1 Employer:

Official Name of Organ of State / Public Sector Body	Government of the Republic of South Africa in its Department of Public Works & Infrastructure		
Business registration number	Not applicable	VAT number	Not applicable
E-mail	Not Applicable	Telephone	053 838 5200
Postal address	Private Bag X 5002 Kimberley 8301		
Physical address	National Department of Public Works and Infrastructure Old Magistrate Building 21 - 23 Market Square Kimberley, 8301		

A 3.2 Employer's Representative:

Name	Sandiso Cosa	Telephone number	053 838 5356
E-mail	sandiso.cosa@dpw.gov.za	Mobile number	079 516 9085
Postal address	Private Bag X 5002 Kimberley 8301		
Physical address	National Department of Public Works and Infrastructure Old Magistrate Building 21 - 23 Market Square Kimberley, 8301		



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A 4.0	Employers Agent/s		
A 4.1	Principal Agent [1.1.1.16]	Discipline	Mechanical Engineer

Name	National Department of Public Works and Infrastructure		
Legal entity of above		Contact person	Mr Ngoako Lehong
Practice number		Telephone number	012 406 1564
Country		Mobile number	066 282 6866
E-mail	Ngoako.Lehong@dpw.gov.za		
Postal address	Private Bag: X 65 Pretoria 0001		
Physical address	Department of Public Works, Tshwane Central, CGO Building, 256 Madiba Street Pretoria		

A 4.2	Agent [1.1.1.16]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address			
Physical address			

A 4.3	Agent [1.1.1.16]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address			
Physical address			

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A 4.4	Agent [1.1.1.16]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address			
Physical address			

A 4.5	Agent [1.1.1.16]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address			
Physical address			

A 4.6	Agent [1.1.1.16]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address			
Physical address			



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A 4.7	Agent [1.1.1.16]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address			
Physical address			

A 4.8	Agent [1.1.1.16]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address			
Physical address			

A 4.9	Agent [1.1.1.16]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address			
Physical address			

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B CONTRACT INFORMATION

B 1.0 Definitions [1.1.1.2]

Bills of quantities: System / Method of measurement	SANS 1200
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B 2.0 Law, regulations and notices [1.3.2]

Law applicable to the works [1.3.2]	Law of the Republic of South Africa
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B 3.0 Offer and acceptance [1.1.1.20]

Currency applicable to this agreement [1.1.1.20]	South African Rand
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B 4.0 Documents [1.1.1.7]

The original signed agreement is to be held by the principal agent [1.1.1.7], if not, indicate by whom	Employer
Number of copies of construction information issued to the contractor at no cost. (3 Copies of all relevant construction documentation – this to includes 1 priced Bills of Quantities and 2 unpriced Bills of Quantities)	3

Documents comprising the agreement	Page numbers
GCC GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS, THIRD EDITION (2015)	
DPW-05: (EC): GCC 2015: 3RD EDITION	1 to 30
The GCC General Preliminaries for use with the GCC 2015: 3RD EDITION	
Contract participation goal documentation as further defined in clause 1.1.1.37 [CD] and B16 [CD]	
Drawings as per drawing register issued with the tender	
Specifications issued with the tender	
Schedules issued with the tender	
Bills of Quantities issued with the tender	
Addenda as issued during tender stage, if applicable	As issued

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B 5.0 Employer's agents [3.0]

Authority is delegated to the following agents to issue contract instructions and perform duties for specific aspects of the works [3.0] [3.2.3 [CD]]

Principal Agent

Principal agent's and agents' interest or involvement in the works other than a professional interest

N/A

B 6.0 Insurances [8.6]

Insurances by contractor

NB: Insurances submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 53 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990).

Insured amounts to include VAT.

	The Contract Price [8.6.1.1.1] New Works With a deductible not exceeding 5% of each and every claim [8.6.2]	Contract sum plus 10%	Select
Or	The Contract Price [8.6.1.1.1] Works with alterations and additions (reinstatement value of existing structures / works without or including new works) with a deductible not exceeding 5% of each and every claim [8.6.2]	Contract sum plus 10%	Applicable
Or	The Contract Price [8.6.1.1.1] Works with practical completion in sections with a deductible not exceeding 5% of each and every claim [8.6.2]	Contract sum plus 10%	Select
	Plant and materials supplied by the Employer [8.6.1.1.2]	R Eng / PQS to determine value	Select
	Professional fees not included in the Contract Price, payable in respect of the repair or reinstatement of damage to the Works or said movables, plus Escalation thereon (if not included above). Minimum R1m unless other amount indicated. [8.6.1.1.3]	R Eng / PQS to determine value	Select
	Direct contractors [8.6.1.1.2] where applicable, to be included in the contract works insurance	R Eng / PQS to determine value	Select
	Special Risks Insurance issued by Sasria [8.6.1.2]	R Eng / PQS to determine value	Select

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Public liability insurance [8.6.1.3]	R 5 000 000	Applicable
Ground support insurance [8.6.1.4]	R Eng / PQS to determine value	Select
Subcontractors insurance [8.6.3] where applicable, if not included in works insurance nor by sub-Contractors	R Eng / PQS to determine value	Select
Other insurances [8.6.1.5]		
Free issue where applicable, to be included in the contract works insurance	R Eng / PQS to determine value	Select
Hi Risk Insurance when the project is being executed in a geological area classified as a "High Risk Area" [8.6.8[CD]]	R Eng / PQS to determine value	Select
Other insurances: If applicable, description 1:	R Eng / PQS to determine value	Select
Other insurances; If applicable, description 2:	R Eng / PQS to determine value	Select

B 7.0 Obligations of the employer

Existing premises will be in use and occupied [5.4.1 & 5.4.2]	Applicable
If applicable, description: The facility is a correctional centre with inmates to full capacity	
Restriction of working hours [5.8]	Applicable
If applicable, description: No work will be done on weekends	
Natural features and known services to be preserved by the contractor [4.7]	Select
If applicable, description:	
Restrictions to the site or areas that the contractor may not occupy [5.4.1 & 5.4.2]	Applicable
If applicable, description: Prison cells and any high risk security areas	

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Supply of free issue of material and goods [8.6.1.1.2]	Amount	R	Select
If applicable, description:			

B 8.0 Subcontractors [4.4]

Select	If applicable, description of specialisation
Specialisation 1	
Specialisation 2	
Specialisation 3	
Specialisation 4	
Specialisation 5	

B 9.0 Description of different portions of the works, if applicable [5.14.7, B10.3 [CD]]

Select	If applicable, description of sections
Section 1	
Section 2	
Section 3	
Section 4	
Section 5	
Section 6	
Remainder of the works.	

B 10.0 Contract period [B18: 1.2], Construction period [B18: 1.1], Possession of site [5.4.1], Practical Completion [1.1.1.14, 5.14.1], Completion (Final Approval Certificate) [5.16.1] and Penalties [5.13]

B 10.1 Contract Period

Contract period: Period in **months** as indicated, include the time from the date of award (commencement date [5.2.1]) for submitting contractual obligatory documents, submission of Health & Safety Plan and approval, period for obtaining the Construction Permit (if applicable), the Construction Period and the Defect Liability Period up to and including Final Completion

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The contract period is determined as follows (Period/s indicated in months):	
Period to submit contractual obligatory documents including submission and approval of health and safety plan by the appointed Health & Safety Agent	1
Period to obtain Construction Permit from Department of Labour upon approval of the Health & Safety Plan by the appointed Health & Safety Agent	2
Total construction period for the Works as a whole from date of Access to and Possession of the Site up to and including Practical Completion , as indicated below [1.1.1.14, 5.4.1, 5.14.1]	13
Period to achieve Completion [5.14.4]	
Defect liability period up to and including issuing Final Approval Certificate in months [5.16.1]	12
Total Contract Period	28

B10.2 Construction Period for completion of the Works as a whole

Construction period [B18: 1.2] and Practical Completion for the Works as a whole [5.14.1] The time for achieving Practical Completion of the whole of the Works is measured from the date of Access to and Possession of the site (5.4.1) by the contractor inclusive of all public holidays, special non-working days and builders' holiday shut down periods .	Applicable
The date for practical completion for the works as a whole shall be the period in months as indicated, starting from the date of Access to and Possession of the site by the contractor inclusive of all special non-working days and builders' holiday shut down periods [1.1.1.14, 5.4.1, 5.14.1]	13
Notification period for inspection in working days by the principal agent.	10
Penalty amount per calendar day for late submission of contractual obligatory documents: Ten percent (10%) of the penalty amount per calendar day for late Practical Completion, excluding VAT. [5.13]	R 718.00
Penalty amount per calendar day for late Practical Completion , excluding VAT. [5.13].	R 7 180.00
Penalty amount per calendar day for late Completion [5.14.4, 5.13]: Thirty percent (30%) of penalty amount per calendar day for late Practical Completion, excluding VAT.	R 2 154.00
Penalty amount per calendar day for late Final Completion (Issuing of Final Approval Certificate) [5.16, 5.13]: Fifteen percent (15%) of penalty amount per calendar day for late Practical Completion, excluding VAT.	R 1 077.00

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B10.3 Construction Period for completion of the Works in portions

Construction period and Practical completion for portions of the Works [5.14.7]					Not Applicable	
Portions of the Works in sections:	1	2	3	4	5	6
Notification period for inspection by the principal agent in working days .						
The date for practical completion shall be the period in months as indicated from the date of access and possession of the site by the contractor [1.1.1.14, 5.4.1, 5.14.1]						
The date for practical completion for the whole of the Works, if applicable shall be the period in months as indicated from the date of Access to and Possession of the Site by the contractor inclusive of all public holidays, special non-working days and builders' holiday shut down periods [5.4.1, 12.2.7; 24.1]						N/A
Penalty for late Practical Completion, if completion in sections is required , excluding VAT [5.13]						
The penalty amount per day for failing to complete section 1 of the Works is:						R
The penalty amount per day for failing to complete section 2 of the Works is:						R
The penalty amount per day for failing to complete section 3 of the Works is:						R
The penalty amount per day for failing to complete section 4 of the Works is:						R
The penalty amount per day for failing to complete section 5 of the Works is:						R
The penalty amount per day for failing to complete section 6 of the Works is:						R
The penalty amount per day for failing to complete the whole of the Works, if applicable, is:						R
Penalty amount per calendar day for late submission of contractual obligatory documents: To be calculated at Ten percent (10%) of penalty / calendar day to complete the whole of the Works as indicated above, excluding VAT.						
Penalty amount per calendar day for late Completion [5.14.4, 5.13]: To be calculated at Thirty percent (30%) of penalty / calendar day to complete Select , excluding VAT						
Penalty amount per calendar day for late Final Completion (Issuing of Final Approval Certificate) [5.16, 5.13]: To be calculated at Fifteen percent (15%) of penalty / calendar day to complete Select , excluding VAT						

B 11.0 Criteria to achieve Practical Completion [1.1.1.14, 5.14.1]

Criteria to achieve Practical Completion not covered in the definition of practical completion	
13.1	Obtain Occupation Certificate from the relevant authority prior to issuing the Practical Completion certificate
13.2	All relevant CoCs
13.3	All guarantees

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13.4	Training on electrical, security and mechanical installations if contractually required
13.5	Maintenance / operating manuals
13.6	CPG and cidb BUILD programme achievement certificates submitted with substantiating documentation
13.7	
13.8	
13.9	
13.10	

B 12.0 Defects liability period [5.16]

Defects liability period: Refer B10.1

Select	If applicable, description of applicable elements
14.1	Air conditioning system and plant
14.2	Mechanical equipment (e.g. pumps including switchgear, etc.)
14.3	
14.4	
14.5	
14.6	
14.7	
14.8	
14.9	
14.10	

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B 13.0 Payment [6.10]

Date of month for issue of regular payment certificates Refer [6.10.1]	20 th every month or first working day thereafter
Contract price adjustment / cost fluctuations [6.8.2]	Applicable
If yes, method to calculate [6.8.2 [CD]]	Contract price adjustment factor
Employer shall pay the contractor within: Refer [6.10.4 [CD]]	Thirty (30) calendar days

B 14.0 Dispute resolution [10.5 [CD]]

Mediation	YES
Name of nominating body	Association of Arbitrators (Southern Africa)
Appointment of Mediator	State Attorney
Litigation	Court with Jurisdiction

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B 15.0 SPECIFIC CHANGES MADE TO GCC 2015: 3RD EDITION

CONTRACT SPECIFIC DATA	
The following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition (2015) are applicable to this Contract:	
CLAUSES	COMPULSORY DATA
1.1.1.8	Amend Clause 1.1.1.8 to include the word “rights” to read as follows: “Contract Data” means the specific data which, together with these General Conditions of Contract, collectively describe the rights, risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract.
1.1.1.9	Add to Clause 1.1.1.9 the following: “If the Contractor constitutes under the Law of the Republic of South Africa (B2.0) a joint venture, consortium or other unincorporated grouping of two or more persons: (a) these persons shall be deemed to be jointly and severally liable to the Employer for the performance of the Contract; (b) these persons shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these persons; and (c) the Contractor shall not alter its composition or legal status without the prior consent of the Employer.”
1.1.1.13	Amend Clause 1.1.1.13 as follows: “Defects Liability Period” means the period stated in the Contract Data, commencing on the date indicated on the Certificate of Completion for the works as a whole or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works, during which the Contractor has both the right and the obligation to make good defects in the materials, Plant and workmanship covered by the Contract. Defects Liability Period is: 12 months . The Defects Liability Period for the works shall commence on the calendar day following the date of the Certificate of Completion for the works as a whole or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works and end at midnight (00:00) three hundred and sixty five days (365) calendar days from the date of the Certificate of Completion.
1.1.1.14	Amend Clause 1.1.1.14 as follows: “Due Completion Date” means the date of expiry of the time stated in the Contract Data for achieving Practical Completion of the Works, calculated from the date of Access to and Possession of Site date (5.4.1) and as adjusted by such extensions of time or acceleration as may be allowed in terms of Contract (5.12).
1.1.1.15	The name of the Employer: Refer to A 3.1 [CD]
1.1.1.16	The name of the Employer’s Representative: Refer to A 3.2 [CD]
1.1.1.17	The name of the Employer’s Agent: Refer to A 4.0 and B 5.0 [CD]

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1.1.1.20	Amend Clause 1.1.1.20 by inserting the following words at the end of this definition: "If the Acceptance section of the Form or Offer and Acceptance" contains conditional statements or a schedule of deviations is attached to the Form of Offer and Acceptance, then Form of Offer and Acceptance means the Contract Agreement, that shall be substantially in accordance with the form attached to the Scope of Works, and the date of signing the Contract Agreement shall be the date of the Form of Offer and Acceptance"
1.1.1.21.A	Add new Clause 1.1.1.21.A The interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999) as amended, calculated as simple interest, in respect of debts owing to the State, and will be the rate as published by the Minister of Justice and Correctional Services from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975) as amended, calculated as simple interest, in respect of debts owing by the State.
1.1.1.27	This Pricing Strategy is a: Re-measurement Contract.
1.1.1.31	Not applicable to this Contract.
1.1.1.35	Insert the definition of "Value of Works" as Clause 1.1.1.35: "Value of Works" means the value of the Works certified by the Employer's Agent as having been satisfactorily executed and shall include the value of the works done, the value of the materials and/or plant and Contract Price Adjustments.
1.1.1.36	Insert the definition of "Latent and Patent Defects" as Clause 1.1.1.36: A 'latent defect' is a material defect, which was not visible after 'reasonable' inspection. The latent defect period commences at the date of Final Approval Certificate and ends 5 years [after that date [5.16.3]. A patent defect is a flaw that is not hidden and ought to be easily identified upon reasonable inspection.
1.1.1.37	Add new Clause 1.1.1.37 Contract participation goals applicable to this Contract are as indicated in B16 [D] and described in the following tender documents: DPW 03 (EC): TENDER DATA, PG 01.1 (EC) SCOPE OF WORK and PG 02.1 (EC) PRICING ASSUMPTIONS.
1.2.3.	Replace Clause 1.2.3. with the following: The Employer's Agent is as indicated in clause B 5.0 and shall have the authority to act on behalf of the employer as indicated in the contract document read with the contract data. [3.2.3].
1.2.6	Add new Clause 1.2.6 The priority of the documents shall be in accordance with the following sequence: (a) The Form of Offer and Acceptance and the signed Schedule of Deviations, (b) Contract Data, (c) These General Conditions of Contract, (e) Scope of Work, and (f) Pricing Data
1.3.4	Not applicable to this Contract.

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<p>1.3.5</p>	<p>Replace Clause 1.3.5 with the following:</p> <ul style="list-style-type: none"> (a) The Employer will become the owner of the information, documents, advice, recommendation and reports collected, furnished and/or compiled by the Contractor during the course of, and for the purposes of executing this Contract, all of which will be handed over to the Employer on request during the contract, but in any event on completion of contract, the termination and/or cancellation of this Contract for whatever reason. The Contractor relinquishes its lien / retention or any other rights thereon to which it may be entitled. (b) The copyright of all documents, recommendations and reports compiled by the Contractor during the course of and for the purposes of finalizing the Works will vest in the Employer, and may not be reproduced or distributed or made available to any person outside the Employer's service, or to any institution in any way, without the prior written consent of the Employer. The Employer shall have the right to use such material for any other purpose without the approval of information or payment to the Contractor. (c) The copyright of all electronic aids, software programmes etc. prepared or developed in terms of the Contract shall vest in the Employer, who shall have the right to use such material for any other purpose without the approval of, information or payment to the Contractor. (d) In case of the Contractor providing documents, electronic aids, software programs or like material to the Employer, the development of which has not been at the expense of the Employer, copyright shall not vest in the Employer. The Contractor shall be required to indicate to which documents, electronic aids, software programs or like material this provision applies. (e) The Contractor hereby indemnifies the Employer against any action, claim, damages or legal cost that may be instituted against the Employer on the grounds of an alleged infringement of any copyright, patents or any other intellectual property right in connection with the Works outlined in this Contract. (f) All information, documents, recommendations, programs and reports collected or compiled must be regarded as confidential and may not be communicated or made available to any person outside the Employer's service and may not be published either during the currency of this Contract or after termination thereof without the prior written consent of the Employer.
<p>1.3.7</p>	<p>Replace Clause 1.3.7 with the following</p> <p>By entering into this contract, the Contractor waives any lien that he may have or acquire, notwithstanding any other condition/s in this contract.</p>
<p>3.2.3</p>	<p>Add to Clause 3.2.3 the following:</p> <ul style="list-style-type: none"> 1. The Employer's Principal Agent's authority to act and/or to execute functions or duties or to issue instructions are expressly excluded in respect of the following, unless same has been approved by the employer: <ul style="list-style-type: none"> (a) Appointment of Subcontractors – clause 4.4.4; (b) Granting of an extension of time and/or ruling on claims associated with claims for extension of time – clauses 5.12, 10.1.5; (c) Acceleration of the rate of progress and determination of the cost for payment of such acceleration – clause 5.12.4; (c) Rulings on claims and disputes – clauses 10.1.5, 10.2.3 and 10.3.3; (d) Suspension of the Works – clause 5.11.2; (e) Final Payment Certificate – clause 6.10.9;

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	<p>(f) Issuing of <i>mora</i> notices to the Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1;</p> <p>(g) Cancellation of the contract between the Employer and Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1.</p> <p>(h) Any variation orders – clause 6.3.1</p> <p>2. In order to be legally binding and have legal bearing and consequence, any ruling in respect of the above matters (a) to (h) must be on an official document, signed and issued by the Employer to the Contractor.</p> <p>3. The Contractor must submit claims, demands, notices, notifications, updated particulars and reports in writing, as well as any other supporting documentation pertaining thereto, in respect of any of the above listed matters (a) to (h), to the Employer’s Agent within the time periods and in the format(s) as determined in the relevant clauses of the Conditions of Contract. Failing to deliver such to the Employer’s Agent and in the correct format will invalidate any claim and the consequences of such failure will <i>mutatis mutandis</i> be as stated in clause 10.1.4.</p> <p>4. Clauses 6.10.9 and 10.1.5 shall be amended as follows to indicate the limitation on the Employer’s Agent authority in respect thereof:</p> <p>Clause 6.10.9 – Amend to read as follows:</p> <p>Within 14 days of the date of final approval as stated in the Final Approval Certificate, the Contractor shall deliver to the Employer’s Agent a final statement claiming final settlement of all moneys due to him (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11, and not yet resolved).</p> <p>The Employer’s Agent shall within 14 days issue to the Contractor a Final Payment Certificate the amount of which shall be paid to the Contractor within 30 days of the date of such certificate, after which no further payments shall be due to the Contractor (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11 and not yet resolved).</p> <p>Clause 10.1.5 – Amend to read as follows:</p> <p>Unless otherwise provided in the Contract, the Employer shall, within 28 days after the Contractor has delivered his claim in terms of Clause 10.1.1 as read with Clause 10.1.2, deliver to the Contractor his written and adequately reasoned ruling on the claim (referring specifically to this Clause). The amount thereof, if any, allowed by the Employer shall be included to the credit of the Contractor in the next payment certificate. If no ruling has been made within the 28 days, as referred to in clause 10.1.5. or any extension thereof as agreed to by the parties, the claim shall be regarded as rejected by the Employer.</p> <p>5. Insert the following under 3.2.3:</p> <p>Provided that, notwithstanding any provisions to the contrary in the Contract, the Employer shall have the right to reverse and, should it deem it necessary, to amend any certificate, instruction, decision or valuation of the Employer’s Agent and to issue a new one, and such certificate instruction, decisions or valuations shall for the purposes of the Contract be deemed to be issued by the Employer’s Agent, provided that the Contractor shall be remunerated in the normal manner for work executed in good faith in terms of an instruction issued by the Employer’s Agent and which has subsequently been rescinded.</p>
3.3.2.1	<p>Amend Clause 3.3.2.1 to insert the word “plant” to read as follows:</p> <p>Observe how the Works are carried out, examine and test materials, plant and workmanship, and receive from the Contractor such information as he shall reasonably require.</p>

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3.3.2.2.3	Add to Clause 3.3.2.2.3 the following: All oral communication must be reduced into writing to be binding on the parties.
3.3.2.2.4	Add to Clause 3.3.2.2.4 the following: All oral communication must be reduced into writing to be binding on the parties.
3.3.3.2	Amend Clause 3.3.3.2 to insert the word "plant" to reads as follows: Notwithstanding any authority assigned to him in terms of Clauses 3.3.2 and 3.3.4, failure by the E Employer's Agent's Representative to disapprove of any work, workmanship, plant or materials shall not prejudice the power of the Employer's Agent's thereafter to disapprove thereof and exercise any of his powers in terms of the Contract in respect of thereof.
4.4.4	Ref Clause 3.2.3.
4.4.6	Not applicable to this Contract.
4.8.2.1	Amend Clause 4.8.2.1 to include the word "person", as follows: Makes available to the Employer, or to any such contractor, person or authority, any roads or ways for the maintenance of which the Contractor is responsible, or
4.8.2.2	Amend Clause 4.8.2.2 to include "Employer" and "contractors", as follows: Provides any other facility or service of whatsoever nature to the Employer or to any of the said contractors, persons or authorities,
4.12.3	Add to Clause 4.12.3 the following: All oral communication must be reduced into writing to be binding on the parties.
5.3.1	Add to Clause 5.3.1: The documentation required before commencement with Works execution are: <ul style="list-style-type: none"> • Health and Safety Plan to be provided within 14 calendar days from award (Ref Clause 4.3) • Initial programme to be provided within 21 calendar days of handing over the site to the contractor (Clause 5.6) • Security (C1.0, Clause 6.2) • Insurance/s (B6, Clause 8.6) • <i>insert other requirements</i> • insert other requirements • insert other requirements
5.3.2	Add to Clause 5.3.2: The time to submit the documentation required before commencement with Works execution is: 21 calendar days.
5.4.2	Add to Clause 5.4.2: The access to, and possession of, the Site referred to in Clause 5.4.1 shall be "not exclusive" to the Contractor. In the event of access to, and possession of, the Site is not exclusive to the Contractor, the following limitations apply: The site is a correctional centre with restricted access to high security risk areas

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5.6.2.2	<p>Replace Clause 5.6.2.2 with the following:</p> <p>The sequence, timing of activities and resources for carrying out the Works.</p>
5.6.2.7	<p>Add the following to Clause 5.6.2.7:</p> <p>Updated cash flows and construction programme/s to be submitted on a monthly basis to the Employer's Agent and the Employer.</p>
5.8.1	<p>Add the following to Clause 5.8.1:</p> <p>The non-working days are: Saturdays and Sundays</p> <p>The special non-working days are: Public Holidays and the year-end break annually published by the BCCEI (Bargaining Council for the Civil Engineering Industry)</p>
5.9.1	<p>Amend Clause 5.9.1 as follows:</p> <p>On the Commencement Date, the Engineer shall deliver to the Contractor three (3) copies, at no cost to the Contractor, of the drawings and any instructions required for the commencement of the Works. The cost of any additional copies of such drawings and/or instructions, as may be required by the Contractor, will be for the account of the Contractor.</p>
5.11.2	Ref Clause 3.2.3
5.12	Ref Clause 3.2.3
5.12.2.2	<p>Amend Clause 5.12.2.2 as following:</p> <p>"Abnormal climatic conditions, therefore any weather conditions i.e. rain, wind (speed or dust), snow, frost, temperature (cold or heat) that have an adverse effect on the progress of the Works and during which no work is possible on site."</p>
5.13.1	<p>Add the following to Clause 5.13.1:</p> <p>The penalty for failing to complete the Works: Refer to B10 CD</p>
5.14.1	<p>Amend the second paragraph of Clause 5.14.1 as follows:</p> <p>When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Employer's Agent shall, within 14 days after receiving such request, issue to the Contractor a written list setting out the work to be completed to justify Practical Completion. Should the Employer's Agent not issue such a list within the 14 days, the Contractor shall notify the Employer accordingly. Should the Employer not issue such a list within 7 days of receipt of such notice, Practical Completion shall be deemed to have been achieved on the 14th day after the contractor requested the Certificate of Practical Completion.</p>
5.14.4	<p>Add the following to Clause 5.14.4:</p> <p>Penalty for late Completion will be 30% of penalty applicable to late Practical Completion / calendar day.</p> <p>Penalty for late Final Completion will be 15% of penalty applicable to late Practical Completion / calendar day.</p>
5.16.1	Amend Clause 5.16.1 by deleting the provision in the third paragraph of this clause.

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5.16.2	<p>Amend Clause 5.16.2 as follows:</p> <p>No certificate other than the Final Approval Certificate referred to in Clause 5.16.1 shall be deemed to constitute approval of the Works or shall be taken as an admission of the due performance of the Contract or any part thereof, nor of the accuracy of any claim made by the Contractor, nor shall any other certificate exclude or prejudice any of the powers of the Employer's Agent and/or the Employer.</p>
5.16.3	<p>The latent defect period for all works is: 5 years</p>
6.2.1	<p>The type of security for the due performance of the Contract, as selected by the Contractor in the Contract Data, must be delivered to the Employer.</p>
6.2.3	<p>Amend Clause 6.2.3 as follows:</p> <p>If the Contractor has selected a performance guarantee as security, he shall ensure that it remains valid and enforceable as required in terms of the Contract.</p>
6.3.1	<p>Amend first paragraph to Clause 6.3.1 as follows:</p> <p>If, at any time before the issue of the Practical Completion, the Employer's Agent shall require any variation of the form, quality or quantity of the Works or any part thereof provided that such Variation Order shall not substantially alter the Scope of Work, he shall have power to order the Contractor to do any of the following subject to obtaining approval from the Employer (3.2.3):</p>
6.5.1.2.3	<p>The percentage allowance to cover overhead charges is 33%, except on material cost where the percentage allowance is 10%.</p>
6.8.2	<p>When Contract Price Adjustment is applicable [B13] the value of payment certificates is to be adjusted by a Contract Price Adjustment Factor (CPAF):</p> <p>The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Factor with the following values:</p> <p>The value of "x" is 0.15.</p> <p>The values of the coefficients are: a = 0.25. (Labour) b = 0.3 (Contractor's equipment) c = 0.3 (Material) d = 0.15 (Fuel)</p> <p>The values of the coefficients for "Repair and Maintenance Project" (RAMP) contracts are: a = 0.35 (Labour) b = 0.20 (Contractor's equipment) c = 0.35 (Material) d = 0.10 (Fuel)</p> <p>The urban area nearest the Site is Kimberley. (Select urban area from Statistical News Release, P0141, Table A)</p> <p>The applicable industry for the Construction Material Price Index for materials / plant is insert name of industry. (Select the applicable industry from Statistical News Release, P0151.1, Tables 2,4,5)</p> <p>The area for the Producer Price Index for fuel is insert name of area. (Select the area from Statistical News Release, P0142.1, Table 1.)</p> <p>The base month is insert month insert year. (The month prior to the closing of the tender.)</p>



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6.8.3	Price adjustments for variations in the costs of special materials are not allowed.
6.9.1	Replace Clause 6.9.1 with the following: "Plant and materials will only be certified and paid for upon furnishing proof of ownership by the contractor. Once paid, material and goods shall become the property of the Employer and shall not be removed from site without the written authority of the Employers Agent.
6.10.1	Add at end of Clause 6.10.1 The contractor shall provide the Employer's Agent every month, on dates as agreed between parties / instructed by the Principal Agent, with the following information: (a) Monthly Local content report, (b) EPWP / NYS payment register, labour reports and certified ID document of EPWP/ NYS beneficiaries, Contract between Contractor and EPWP/ NYS beneficiaries, attendance register. (if applicable) (c) Tax Invoice (d) Labour intensive report (e) Contract participation goal reports (f) Updated construction programme (g) Revised cash flows
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is: 85 % .
6.10.3	The limit of retention money is dependent on the security to be provided by the Contractor in terms of Clause 6.2.1.
6.10.4	Replace "28 days" with "30 days" provided all required documents including an invoice have been submitted and are correct in all respects.
6.10.5	Replace Clause 6.10.5 with the following: <u>In respect of contracts up to R2 million and in respect of contracts above R2 million where the Contractor elects a security by means of a 10% retention, 50% of the retention shall be released to the Contractor when the Employer's Agent issues the Certificate of Completion in terms of clause 5.14.4. The remaining 50% of the retention shall be released in accordance with the provisions of the conditions of contract and will become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate.</u> <u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or fixed guarantee of 5% of the Contract Sum (excl. VAT) and a 5% retention of the Value of the Works (excl. VAT), the cash deposit or fixed guarantee, whichever is applicable, shall be refunded to the Contractor or return to the guarantor, respectively, when the Employer's Agent issues the Certificate of Completion in terms of Clause 5.14.4. The 5% retention of the Value of the Works (excl. VAT) shall become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate.</u> <u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or a variable guarantee of 10% of the Contract Sum (excl. VAT), the cash deposit or the variable guarantee, whichever is applicable, will be reduced to 5% of the Value of the Works (excl. VAT) when the Employer's Agent issues the Certificate of Completion in terms of Clause 5.14.4. The balance of the cash deposit shall become due and payable or the variable guarantee shall expire when the Contractor becomes entitled in terms of Clause 5.16.1 to receive the Final Approval Certificate.</u>

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6.10.6.2	Replace Clause 6.10.6.2 with the following: “In the event of failure by the Employer to make the payment by the due date, he shall pay to the Contractor interest, at the rate as published by the Minister of Justice and Correctional Services from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975) as amended, calculated as simple interest, in respect of debts owing by the State”. (1.1.1.21.A).
6.10.9	Ref Clause 3.2.3.
7.2.1	The last sentence to read “Failing requirements or instructions, the Plant, workmanship and materials of the respective kinds shall be suitable for the intended purpose provided that materials procured for the works are from South African manufactures and suppliers. Imported materials shall only be considered under exceptional circumstances, based on compelling technical justifications, and subject to the approval by the DPWI. Failing to comply, unless specified or approval granted will result in a ten percent (10%) penalty of the value of imported material used without approval.
7.5.3	Add the following to Clause 7.5.3 “Should the work inspected by the Employer’s Agent be rejected, all consultant’s fees / costs pertaining to the unsuccessful inspection shall be recovered from the contractor”.
7.9.1	Insert the following at the end of Clause 7.9.1: Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other previous or subsequent contract between the Contractor and the Employer.
8.2.2.1	Insert the following as a second paragraph to Clause 8.2.2.1: The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, failing which the Employer may cause same to be done and recover the reasonable costs associated therewith from the Contractor.
8.3.1.10	Replace Clause 8.3.1.10 with the following: “Ionising, radiation, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuels, excluding leakages of any radioactive material / gases / corrosive liquids/chemicals, which are harmful to the environment and biological life, brought on to site for installation or used in the Works prior to final approval”.
8.4.3	Add the following as Clause 8.4.3: Where the Contractor has caused damage to property (moveable and immovable), of any person, the Employer or third parties, the Contractor shall on receiving a written instruction from the Employer’s Agent immediately proceed at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the Works.
8.6.1	Replace Clause 8.6.1 with the following: Except if provided otherwise in the Contract Data, the Contractor, without limiting his obligations in terms of the Contract, shall effect and keep the respective insurances [CD] in force, in favour of the employer as beneficiary, from the date of possession of the site until the issue of the certificate of practical completion and with an extension to cover the contractors obligations after the date of practical completion [8.2.1]
8.6.1.1.1	Ref B6.0 CD for value of insurance.
8.6.1.1.2	Ref B6.0 CD for value of insurance.

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8.6.1.1.3	Ref B6.0 CD for value of insurance.
8.6.1.3	<p>Amend Clause 8.6.1.3 as follows:</p> <p>Liability insurance that covers the Contractor against liability for the death of, or injury to any person, or loss of, or damage to any property (other than property while it is insured in terms of Clause 8.6.1.1) arising from or in the course of the fulfilment of the Contract, from the Commencement Date to the date of the end of the Defects Liability Period, if applicable, or otherwise to the issue of the Certificate of Completion.</p>
8.6.4	Not applicable to this Contract.
8.6.6	<p>Replace Clause 8.6.6 with the following:</p> <p>Without limiting the contractor's obligations in terms of the contract, the contractor shall, within twenty-one (21) calendar days of the date of letter of acceptance, but before commencement of the works, submit to the employer all the policies by which the insurances are effected and due proof of upfront payment of all premiums thereunder to keep the policies effective from the Commencement Date to the date of the end of the Defects Liability Period, if applicable, or otherwise to the issue of the Certificate of Completion.</p>
8.6.7	<p>Replace Clause 8.6.7 with the following:</p> <p>If the Contractor fails to effect and keep in force any of the insurances referred to in Clause 8.6.1, the Employer may cancel the Contract in terms of Clause 9.2.</p>
8.6.8	<p>Add new Clause 8.6.8.</p> <p>HIGH RISK INSURANCE</p> <p>In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:</p> <p>(1) Damage to the Works</p> <p>The Contractor shall, from the date of Commencement of the Works until the date of the Certificate of Completion, bear the full risk of and hereby indemnifies and holds harmless the Employer against any damage to and/or destruction of the Works consequent upon a catastrophic ground movement as mentioned above. The Contractor shall take such precautions and security measures and other steps for the protection of the Works as he may deem necessary.</p> <p>When so instructed to do so by the Employer's Agent, the Contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, at the Contractor's own costs.</p> <p>(2) Injury to Persons or Loss of or damage to Properties</p> <p>The Contractor shall be liable for and hereby indemnifies and holds harmless the Employer against any liability, loss, claim or proceeding arising during the Contract Period whether arising in common law or by Statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above.</p> <p>The Contractor shall be liable for and hereby indemnifies the Employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or</p>

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	<p>immovable or personal property or property contiguous to the Site, whether belonging to or under the control of the Employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the Contract Period.</p> <p>(3) It is the responsibility of the Contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in Clauses 8.6.8(1) and 8.6.8 (2) above. Without limiting his obligations in terms of the Contract, the Contractor shall, within 21 days of the Commencement Date and before Commencement of the Works, submit to the Employer proof of such insurance policy, if requested to do so.</p> <p>(4) The Employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the Contractor's default of his obligations as set out in Clauses 8.6.8 (1), 8.6.8 (2) and 8.6.8 (3). Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other existing or subsequent contract between the Contractor and the Employer.</p>
9.1.1	Ref Clause 3.2.3
9.1.2.1	Ref Clause 3.2.3
9.1.4	<p>Replace the first paragraph of Clause 9.1.4 with the following:</p> <p>"In the circumstances referred to in Clauses 9.1.1, 9.1.2 or 9.1.3 (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents), and whether or not the Contract is terminated under the provisions of this Clause, the Contractor shall be entitled on proof of payment of any increased cost of or incidental to the execution of the Works which is specifically attributable to, or consequent upon the circumstances defined in Clauses 9.1.1, 9.1.2 or 9.1.3; necessary changes"</p>
9.1.5	<p>Replace the first paragraph of Clause 9.1.5 with the following:</p> <p>If the Contract is terminated on any account in terms of this Clause (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents) , the Contractor shall be paid by the Employer (insofar as such amounts or items have not already been covered by payments on account made to the Contractor) for all measured work executed prior to the date of termination, the amount (without retention), payable in terms of the Contract and, in addition: "</p>
9.1.5.5	Not applicable to this Contract.
9.1.6	Not applicable to this Contract.
9.2.1	Ref Clause 3.2.3
9.2.1.3.9	<p>Add new Clause 9.2.1.3.9:</p> <p>Has failed to effect and keep in force any of the insurances referred to in Clause 8.6.1.</p>
9.2.4	<p>Add the following as Clause 9.2.4:</p> <p>In the case where a contract is terminated by the Employer by no fault by any party, the contractor shall be entitled to no other compensation than for work done and materials on site as certified by the Principal Agent at the date of termination.</p>

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9.3.2.2	<p>Replace Clause 9.3.2.2 with the following:</p> <p>All Plant and Construction Equipment, Temporary Works and unused materials brought onto the Site by the Contractor, and where ownership has not been transferred to the Employer (see Clause 6.9.1), shall be removed from the Site on termination of the contract by any party.</p>
9.3.2.3	<p>Not applicable to this Contract.</p>
9.3.3	<p>Add the following at the end of Clause 9.3.3</p> <p>After cancellation of the Contract by the Contractor, the Contractor, when requested by the Employer to do so, shall not be entitled to refuse to withdraw from the Works on the grounds of any lien or a right of retention or on the grounds of any other right whatsoever.</p> <p>Nothing in this Clause shall prejudice the right of the Contractor to exercise, either in lieu of or in addition to the Contractor rights and remedies specified in this Clause, any other rights or remedies to which the Contractor may be entitled under the Contract or common law.</p>
10.1.3.1	<p>Replace Clause 10.1.3.1 with the following:</p> <p>All facts and circumstances relating to the claims shall be investigated as and when they occur or arise. For this purpose, the Contractor shall deliver to the Employer's Agent, records in a form approved by the Employer's Agent, of all the facts and circumstances which the Contractor considers relevant and wishes to rely upon in support of his claims, including details of all construction equipment, plant, labour, and materials relevant to each claim. Such records shall be submitted promptly after the occurrence of the event giving rise to the claim.</p>
10.1.3.6	<p>Replace Clause 10.1.3.6 with the following:</p> <p>The Employer, the Employer's Agent and the Contractor shall in any proceedings in accordance with Clauses 10.3 and 10.11 be entitled to give or lead evidence of or rely on any fact or circumstance not recorded in terms of this Clause, if other party to the dispute is prejudiced by such non-recording of the facts.</p>
10.1.4	<p>Ref Clause 3.2.3.</p>
10.1.5	<p>Ref Clause 3.2.3.</p>
10.1.6	<p>Add new Clause 10.1.6:</p> <p>If the Employer fails to give his ruling within the period referred to in Clause 10.1.5 he shall be deemed to have given a ruling dismissing the claim.</p>
10.1.3.6	<p>Replace Clause 10.1.3.6 with the following:</p> <p>The employer, the Employer's Agent and the Contractor shall in any proceedings in accordance with Clauses 10.3 and 10.11 be entitled to give or lead evidence oof or rely on any fact or circumstance not recorded in terms of the Clause, if the other party to the dispute in prejudiced by such nor-recording of the facts.</p>
10.2.1	<p>Replace Clause 10.2.1 with the following:</p> <p>In respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer shall have the right to deliver a written dissatisfaction claim to the Employer's Agent. This written claim shall be supported by particulars and substantiated.</p>

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10.2.2	<p>Replace Clause 10.2.2 with the following:</p> <p>If, in respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer fails to submit a claim within 28 days after the cause of dissatisfaction, he shall have no further right to raise any dissatisfaction on such matter.</p>
10.2.3	Ref clause 3.2.3.
10.3.2	<p>Replace Clause 10.3.2 with the following:</p> <p>If either party shall have given notice in compliance with Clause 10.3.1, the dispute shall be referred immediately to mediation under Clause 10.5, unless amicable settlement is contemplated.</p>
10.3.3	<p>Replace Clause 10.3.3 with the following::</p> <p>In respect of a ruling given by the Employer (Ref clause 3.2.3), and although the parties may have delivered a Dispute Notice, the ruling shall be in full force and carried into effect unless and until otherwise agreed by both parties, or in terms of a mediation decision or court judgement.</p>
10.4.2	<p>Replace Clause 10.4.2 with the following:</p> <p>If the other party rejects the invitation to amicable settlement in writing, or does not respond in writing to the invitation within 14 days, or amicable settlement is unsuccessful, referral to mediation shall follow immediately. Should mediation be unsuccessful, the dispute shall be resolved by Litigation.</p>
10.4.4	<p>Replace Clause 10.4.4 with the following:</p> <p>Save for reference to any portion of any settlement, or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf of either party in any subsequent court proceedings, to any outcome of an amicable settlement, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of the amicable settlement.</p>
10.5	<p>Replace Clause 10.5 with the following:</p> <p>The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event:</p> <p>10.5.1 The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties.</p> <p>10.5.2 Regardless of the outcome of a mediation the parties shall bear their own costs concerning the Mediation and equally share the costs of the mediator and related expenses.</p>
10.6	Not applicable to this Contract.
10.7	Not applicable to this Contract.
10.10.3	<p>Replace Clause 10.10.3 with the following:</p> <p>The court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Employer's Agent and Employer and neither party shall be limited in such proceedings before such court to the evidence or arguments put before the Employer's Agent or Employer for the purpose of obtaining his ruling.</p>

Tender / Quotation no: KIM 02/2024

B 16.0 CONTRACT PARTICIPATION GOAL TARGETS AND CIDB B.U.I.L.D. PROGRAMME

The contractor shall achieve in the performance of the contract the following Contract Participation Goals (CPGs) as described in PG-01.2 (EC): Scope of Work and PG-02.2 (EC): Pricing Assumptions and in accordance with the feasibility study, which forms part of the specifications in the CPG Section of the Specification of this contract.

(a)	Minimum Targeted Local Manufacturers of Material Contract Participation Goal, in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Select
(b)	Minimum Targeted Local Building Material Suppliers Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Select
(c)	Minimum Targeted Local Labour Skills Development Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Select
(d)	cidb BUILD Programme: Minimum Targeted Enterprise Development Contract Participation Goal in accordance with the cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Select
(e)	cidb BUILD Programme: Minimum Targeted Contract Skills Development Goal in accordance with the cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 48491 of 28 April 2023. and the cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Select
(f)	DPWI National Youth Service training and development programme (NYS) – Condition of Contract.	Applicable
(g)	Labour Intensive Works – Condition of Contract.	Select
(h)		Select
(i)		Select

Tender / Quotation no: KIM 02/2024

PART 2: CONTRACT DATA COMPLETED BY THE TENDERER:

C TENDERER'S SELECTIONS

C 1.0 Securities [11.0]

In respect of contracts with a contract sum up to R1 million, the security to be provided by the contractor to the employer will be a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT).

In respect of contracts with a contract sum more than R1 million, the security to be provided by the contractor to the employer will be selected by the Contractor as indicated below:

Guarantee for construction: Select Option A, B, C, D or E

Option A	cash deposit of 10 % of the contract sum (excluding VAT)
Option B	variable construction guarantee of 10 % of the contract sum (excluding VAT) (DPW-10.3 EC)
Option C	payment reduction of 10% of the value certified in the payment certificate (excluding VAT)
Option D	cash deposit of 5% of the contract sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT)
Option E	fixed construction guarantee of 5% of the contract sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) (DPW-10.1 EC)

NB: Insurances submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 53 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

Guarantee for payment by employer [11.5.1; 11.10]	Not applicable
Advance payment, subject to a guarantee for advance payment [11.2.2; 11.3]	Not applicable

Tender / Quotation no: KIM 02/2024

C 2.0 Payment of preliminaries [25.0]

Contractor's selection

Select Option A or B

Where the **contractor** does not select an option, Option A shall apply

Payment methods

Option A	The preliminaries shall be paid in accordance with an amount prorated to the value of the works executed in the same ratio as the amount of the preliminaries to the contract sum , which contract sum shall exclude the amount of preliminaries . Contingency sum(s) and any provision for cost fluctuations shall be excluded for the calculation of the aforesaid ratio
Option B	The preliminaries shall be paid in accordance with an amount agreed by the principal agent and the contractor in terms of the priced document to identify an initial establishment charge, a time-related charge and a final dis-establishment charge. Payment of the time-related charge shall be assessed by the principal agent and adjusted from time to time as may be necessary to take into account the rate of progress of the works

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations.

C 3.0 Adjustment of preliminaries [26.9.4]

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations.

Contractor's selection

Select Option A or B

Where the **contractor** does not select an option, Option A shall apply.

Provision of particulars

The **contractor** shall provide the particulars for the purpose of the adjustment of **preliminaries** in terms of his selection. Where completion in **sections** is required, the **contractor** shall provide an apportionment of **preliminaries per section**.

Option A	An allocation of the preliminaries amounts into Fixed, Value-related and Time-related amounts as defined for adjustment method Option A below, within fifteen (15) working days of the date of acceptance of the tender
Option B	A detailed breakdown of the preliminaries amounts within fifteen (15) working days of possession of the site . Such breakdown shall include, inter alia, the administrative and supervisory staff, the use of construction equipment , establishment and dis-establishment charges, insurances and guarantees, all in terms of the programme

Tender / Quotation no: KIM 02/2024

Adjustment methods

The amount of **preliminaries** shall be adjusted to take account of the effect which changes in time and/or value have on **preliminaries**. Such adjustment shall be based on the particulars provided by the **contractor** for this purpose in terms of Options A or B, shall preclude any further adjustment of the amount of **preliminaries** and shall apply notwithstanding the actual employment of resources by the **contractor** in the execution of the **works**.

Option A	<p>The preliminaries shall be adjusted in accordance with the allocation of preliminaries amounts provided by the contractor, apportioned to sections where completion in sections is required</p> <p>Fixed - An amount which shall not be varied.</p> <p>Value-related - An amount varied in proportion to the contract value as compared to the contract sum. Both the contract sum and the contract value shall exclude the amount of preliminaries, contingency sum(s) and any provision for cost fluctuations.</p> <p>Time-related - An amount varied in proportion to the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4].</p>
Option B	<p>The adjustment of preliminaries shall be based on the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4]. The adjustment shall take into account the resources as set out in the detailed breakdown of the preliminaries for the period of construction during which the delay occurred.</p>

Failure to provide particulars within the period stated

Option A	<p>Where the allocation of preliminaries amounts for Option A is not provided, the following allocation of preliminaries amounts shall apply:</p> <p>Fixed - Ten per cent (10%) Value-related - Fifteen per cent (15%) Time-related - Seventy-five per cent (75%)</p> <p>Where the apportionment of the preliminaries per section is not provided, the categorised amounts shall be prorated to the cost of each section within the contract sum as determined by the principal agent</p>
Option B	<p>Where the detailed breakdown of preliminaries amounts for Option B is not provided, Option A shall apply</p>

KIMBERLEY TSWELOPELE: CORRECTIONAL CENTRE: REPLACEMENT AND UPGRADING OF HEAT PUMP INSTALLATION

TENDER NO: KIM 02/2024

FORM OF GUARANTEE

C1.3 FORM OF GUARANTEE

DPW-10.2(EC): VARIABLE GUARANTEE
DPW-10.4(EC): FIXED GUARANTEE

KIMBERLEY TSWELOPELE: CORRECTIONAL CENTRE: REPLACEMENT AND UPGRADING OF HEAT PUMP INSTALLATION

TENDER NO: KIM 02/2024

DPW-10.2 (EC): VARIABLE CONSTRUCTION GUARANTEE – (GCC (2010) 2ND EDITION: 2010)

C1.3.1 DPW-10.2(EC): VARIABLE GUARANTEE

DPW-10.2 (EC): VARIABLE CONSTRUCTION GUARANTEE GCC 3rd Edition (2015)

Director-General
Department of Public Works and Infrastructure
Government of the Republic of South Africa

FOR ATTENTION

The Regional Manager
Private Bag X 5002
Kimberley
8301

Sir,

VARIABLE CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC 3rd Edition (2015)

1. With reference to the contract between _____
_____ (hereinafter referred to as the “**contractor**”) and the Government of the Republic of South Africa in its Department of Public Works and Infrastructure (hereinafter referred to as the “**employer**”), Contract/Tender No: **KIM 02/2024**, for the **Kimberley Tswelopele Correctional Centre: Replacement and Upgrading of Heat Pump Installation** (hereinafter referred to as the “**contract**”) for the sum of R _____, (_____), (hereinafter referred to as the “**contract sum**”).

I / We, _____
in my/our capacity as _____ and hereby
representing _____ (hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the **employer’s** disposal the sum of R _____, (_____) being 10% of the **contract sum** (excluding VAT), for the due fulfilment of the **contract**.
2. I / We advise that the **guarantor’s** liability in terms of this guarantee shall be as follows:
 - (a) From and including the date on which this guarantee is issued and up to and including the day before the date on which the last **certificate of completion** of works is issued, the **guarantor** will be liable in terms of this guarantee to the maximum amount of 10% of the **contract sum** (excluding VAT);
 - (b) The **guarantor’s** liability shall reduce to 5 % of the **value of the works** (excluding VAT) as determined at the date of the last **certificate of completion** of works, subject to such amount not exceeding 10% of the **contract sum** (excluding VAT);
 - (c) This guarantee shall expire on the date of the last **final approval certificate**.
3. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis; and de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer’s** opinion and sole discretion):
 - (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**;
or

Tender no: (Insert Tender Number)

- (b) the **contractor's** estate is sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.
- 4. Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
- 5. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.
- 6. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the foregoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.
- 7. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor's** liability ceases.
- 8. This guarantee is neither negotiable nor transferable, and
 - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 5 above, or
 - (b) shall lapse in accordance with clause 2 (c) above.
- 9. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than payment of the amount guaranteed.

SIGNED AT _____ **ON THIS** _____ **DAY OF** _____ **20** _____

AS WITNESS

1. _____

2. _____

By and on behalf of

(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____
(duly authorised thereto by resolution attached marked Annexure A)

DATE: _____

- A. No alterations and/or additions of the wording of this form will be accepted.**
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.**
- C. This GUARANTEE must be returned to:** _____

KIMBERLEY TSWELOPELE: CORRECTIONAL CENTRE: REPLACEMENT AND UPGRADING OF HEAT PUMP INSTALLATION

TENDER NO: KIM 02/2024

DPW-10.4 (EC): FIXED CONSTRUCTION GUARANTEE (GCC (2015) 3rd EDITION)

C1.3.2 DPW-10.4(EC): FIXED GUARANTEE

DPW-10.4 (EC): FIXED CONSTRUCTION GUARANTEE GCC 3rd Edition (2015)

Director-General
Department of Public Works and Infrastructure
Government of the Republic of South Africa

FOR ATTENTION

The Regional Manager
Private Bag X 5002
Kimberley
8301

Sir,

FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC 3rd Edition (2015)

- With reference to the contract between _____
_____ (hereinafter referred to as the “**contractor**”) and the Government of the Republic of South Africa in its Department of Public Works and Infrastructure (hereinafter referred to as the “**employer**”), Contract/Tender No: **KIM 02/2024**, for the Kimberley Tswelopele Correctional Centre: Replacement and Upgrading of Heat Pump Installation (hereinafter referred to as the “**contract**”), for the sum of R _____, (_____), (hereinafter referred to as the “**contract sum**”).

I / We, _____
in my/our capacity as _____ and hereby
representing _____ (hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the **employer**’s disposal the sum of R _____, (_____) being 5% of the **contract sum** (excluding VAT), for the due fulfillment of the **contract**.
- The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis; and de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer**’s opinion and sole discretion):
 - the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**;
or
 - the **contractor**’s estate is sequestrated; liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.
- Subject to the above, but without in any way detracting from the **employer**’s rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
- The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.

5. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the foregoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.
6. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor's** liability ceases.
7. This guarantee is neither negotiable nor transferable, and
 - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 4 above, or
 - (b) shall lapse on the date of the last **certificate of completion** of works.
8. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than the payment of the amount guaranteed.

SIGNED AT _____ ON THIS _____ DAY OF _____ 20_____.

AS WITNESS

1. _____

2. _____

By and on behalf of

(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____
(duly authorised thereto by resolution attached marked Annexure A)

DATE: _____

- A. No alterations and/or additions of the wording of this form will be accepted.**
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.**
- C. This GUARANTEE must be returned to:** _____

SUPPLEMENTARY TECHNICAL SPECIFICATION

FOR THE

HEAT PUMP INSTALLATIONS

AND

HOT WATER STORAGE

A. GENERAL

1. SCOPE OF WORKS

This particular Technical Specification is for the supply and installation of the hot water generating installations: Heat pumps and storage cylinders.

- a) This specification covers the particulars of the hot water generating systems and the supply and installation of new heat pumps and cylinders systems at the Tswelopele Correctional Centre.
- b) The installation to be installed and maintained under this contract includes the following systems and equipment:
 - Hot water storage system (with inline electric heating)
 - Building circulating pumps
 - Hot and cold water piping and valves in plant room (complete plant room piping installation)
 - Air to water heat pumps, dedicated water pump circulating system and control panels. Heat pumps shall be quite in operation as they are situated adjacent to cells.
- c) All electrical and piping connections for the complete hot water generating air to water heat pump with independent motor control panels for each machine.
- d) Complete piping and electrical installation including all valves, gauges fittings, controls, strainers, insulation, pipe supports, expansion legs and anchors, safety valves, vent pipes, air release valves, solenoid valves etc. associated with the installation.
- e) Make off power supplies to the pump room control panel, to the two heat pump control panels and the supplementary hot water cylinder control panels.
- f) Complete insulated hot water storage cylinders fitted with supplementary heater and flanged connections.
- g) Commissioning and testing of the heat pumps, cylinders, pumps, controls, equipment piping etc. and the handover of a complete operation installation.

2. GENERAL

This supplementary specification is to be read as forming part of one or more Department of Public Works Standard Specifications. The clauses that maybe referred to herein are clauses of the Standards Specifications. Relevant clauses not specifically mentioned shall also apply.

The Department Standard Specifications for the Electrical Installations and Electrical Equipment pertaining to Mechanical Services shall also apply.

All equipment and installations shall comply with the requirements of the Occupational Health and Safety Act.

Where conditions are at variance this supplementary specification shall have preference over both the standards specifications and the drawings.

3. MATERIAL AND WORKMANSHIP

All material and equipment shall be new, free from rust, defects, undamaged and suitable for the purpose for which it will be used. Material shall comply with the latest issue of the relevant SANS specification where applicable.

If any material or workmanship is not to the satisfaction of the department, it shall be rectified and /or replaced at the contractor's cost and all rejected material shall immediately be removed from the site. The contractor is responsible for the correct and complete erection of the installation and inspections executed by the Department do not exempt the contractor of this obligation.

4. DRAWING

Any drawing which accompany this specifications are schematic and did not show exact dimensions or positions of equipment. Tenders must satisfy themselves that the equipment offered by them shall fit in the available space and can be positioned so that access for maintenance, repair or removal is not encumbered.

Note: Final dimensions must be taken on site before any equipment or material is either purchased or manufactured.

5. COMPREHENSIVE CONTRACTS AND SUB-CONTRACTORS

Only specialists sub-contractors who have previously successfully completed mechanical installations of the extent and type specified in this document shall be considered.

Note: No change in make type, or capacity of equipment specified in the schedule of particulars shall be allowed after acceptance of the tender without the written approval of the Department.

6. MANUFACTURER'S RATINGS

All equipment shall be able to work within the rated capacity, as determined by the manufacturer. Any equipment offered for the use out of these limits shall not be considered. Contractors shall hand in the rated capacities of all equipment as well as descriptive literature with the tender documents.

7. SHOP DRAWINGS

Within 14 days of being awarded the contract the contractor will produce a complete layout in the form of a shop drawing with all the required service connections detailed and dimensioned. Any other shop drawings required to effect the installation shall be produced as required. At the end of the contract, three full sets of "as built" drawings and manuals shall be provided for this contract.

The successful tenderer shall before commencing manufacture of any of the equipment provide a dimensioned shop drawing for approval.

Approval of the contractor's drawings in no way indemnifies him from being responsible for the correctness of the drawings and satisfactory operation of the installations and for equipment.

8. BUILDING WORK

All building work to be done by the building contractor as shown on the mechanical shop ratings. All other small building work such as cutting and drilling of holes forms part of this contract.

9. SITE INSPECTION

Tenderers are advised to visit the site to acquaint themselves with the local conditions, accessibility, etc. No claims for compensations due to lack of knowledge of conditions will be accepted.

10. PAINTING

All exposed steel surfaces, excluding new galvanised and stainless steel, shall be painted. Thereafter the surfaces shall be painted with a zinc chromate primer, followed by one coat of

universal undercoat and one final coat of high gloss enamel paint, the colour of which shall be determined by the Regional Representative.

All piping and cladding inside the building shall be painted. The paint shall be to SANS standard for that product.

All black steel shall be thoroughly wire brushed and painted with three coats of self-etching red oxide primer before final colour coded enamel paint. Galvanised and copper piping shall be left unpainted.

11. DETAILS OF MAINTENANCE WORK

The contractor shall be responsible for the complete maintenance of all the equipment, components, installations and systems forming part of this installation for 12 months.

12. GUARANTEE

The tenderer shall guarantee equipment for a period of twelve months from the date on which the installation/fixing of all the units is satisfactorily completed.

The contractor shall repair, at his own cost, defects that may become defective during the guarantee period due to the inferior materials or workmanship (fair wear and tear excluded). Any part so replaced, shall be guaranteed for a further year from the date of replacement.

The tenderer shall also allow for a Defects Liability Period of 5 years for the installations.

13. SANS SPECIFICATION

All references to the South African National Standards and Codes of Practice shall be deemed to be references to the latest issues of such specifications and codes.

14. INSTRUCTIONS MANUALS

A maintenance and operation instruction manual, including spare parts list shall be provided with each mechanical and electrical unit.

15. SIMILAR OR EQUAL

Any trade name mentioned merely serves as a guideline and doesn't indicate preference for that specific make. Tenderers are at liberty to offer any other equipment and /or material, which compile with the specification requirements

16. POWER SUPPLY

The electrical equipment shall be suitable for connection to 400/230V 3 phase 50Hz 4 wire AC supply.

17. SPARE PARTS

Spare parts for each mechanical and electrical appliance shall be readily available in the Republic of South Africa, for a minimum period of 10 years.

18. DAMAGE

The tendered will be held liable entirely responsible for any damage which may occur to equipment during the transportation, setting into position and fixing and must make good any such damage at his own risk.

No patching or repairing of damaged units will be allowed unless such damage can be completely effectively repaired and to the entire satisfactions of the Representative/Agent.

19. COLD AND HOT WATER RETICULATIONS

Tenderer shall allow for the complete plant room pipework installation including cold and hot water supply, re-circulation and drain piping. The plumber shall connect to the outgoing hot, cold and return water lines.

For the distribution of hot and cold water inside the building, insulated copper piping shall be used. All copper piping shall conform to SANS 460 Class 0 for all sizes. Piping and pipe fittings shall comply with SANS 1067 Part 2 for capillary fittings. All piping chased into walls must be class 2 copper piping.

Pipework shall be laid out in consultation with and to the satisfaction of the Representative of the Department. Piping penetrations through walls shall be cored for the appropriate sleeve size and shall be grouted and made good after installation of the pipework and insulation.

20. PIPE FITTINGS

Copper piping must be joined with capillary soldered fittings. These must be silver soldered using hard solder complying with SANS 23-1992 as amended.

Conical type screw connections can only be used and must be installed at removable components up to a pipe size 80mm diameter. On larger piping flanges must be used. Solder must have a melting point of no less than 500°C and shall comply with SANS 24 and must be of lead free.

All fittings shall be of the same size as piping reducers and bushes shall not be used unless by express permission of the Department.

Bends shall be used throughout and not elbows, unless by express permission of the Department. Provide and install full way valves in hot water piping.

21. LAGGING

All insulation shall be applied after the erection of equipment and pipework and after all joints have been completed and tested.

B. PARTICULAR TECHNICAL SPECIFICATIONS FOR THE SUPPLY, DELIVERY AND INSTALLATION OF HEAT PUMPS

1. SITE

The site is situated at Kimberly, in the Northern Cape Province.

2. GENERAL HEAT PUMP SPECIFICATION

The heat pump installation is to be supplied complete with all control and starters; local isolator; fully weatherproof panel and electrics; full diagnostics; supply water control and solenoid valves; water circulating pumps and valves; water flow switch and interlock head pressure control; anticyclone timers; low voltages and single phasing protection; HP; LP; oil press and anti-freeze safety switches and de-icing cycles; whether part of the heat pump unit or installed in the plant room.

Compressors shall be hermetic or semi hermetic direct drive reciprocating machines.

Casing shall be constructed of stainless steel sheeting with corrosion proof fans and fitting suitable for outdoor applications. No black steel components allowed.

Correct oil and refrigerant charges to be supplied with the machines on site before commissioning. In the event of a gas leak, the gas will be removed, the system will be cleaned and re-charged. Each circuit shall incorporate filter dryer, sight glass, thermostatic expansion valve and suction accumulators.

Condenser shells shall be manufactured entirely out of type 304 stainless steel. Heating coils/tubes shall be copper. Condensate drip tray and drain piping shall be 304 stainless steel. Evaporators shall be copper tubing with mechanically bonded aluminium fins. Counter flow heat exchangers will be preferred.

The condenser fan motors shall be of the totally enclosed squirrel cage induction type for 3-phase connection or of the capacitor start type for single phase which must have a power factor of not less than 0,85. Small fans up to 230mm diameter may have shaded pole motors. Motor bearings shall be silent running ball or roller bearing except for small fans which bearings may be porous bronze. Sealed ball bearings with life lubrication may also be used.

The motor supporting arms shall have resilient supports where connections to the ring or diaphragm plate is made. Fans are to be supplied with vibration isolating fixings.

The blades shall be robust and preferably of steel and painted. They shall be formed to an aerodynamic shape to ensure quiet running. When bearings require oiling, lubrication points must be readily accessible. Evaporating pressure control for operation down to -5°C wb ambient with de-icing cycles. Corrosion proof condensers suitable for "hard" water complete with cleaning ports and acid cleaning pot and valving arrangement.

The compressors will be mounted in such a way to minimize vibration and sound levels. Overall a noise level of NC 65 shall be achieved, measured 2,0m away from the Heat Pump.

Automatic restart on power failure, full diagnostic and displays with fault contacts for remote monitoring.

Lighting protection and suppression of control systems shall be incorporated in any electronic control system. Effective hail guards shall be fitted to the evaporator coils without excessive restriction of air flow. Expanded metal is not sufficient or acceptable.

The machines shall incorporate at least the following features:

- Part wind start.
- Controlled lubrication pressure and crankcase heaters.
- Suction filter, liquid dryer, moisture indicators, and strainers.
- Maximum discharge temperature control and constant hot water temperature control. The maximum discharge condensing temperature should not exceed 55°C at the manufacturer's stated hot water temperature.
- Oil pressure control.
- High performance copper bundle insulated condenser fully serviceable.
- Copper tubes, aluminium fin coil ≤ 14 fins/inch evaporator.
- Weatherproof fans and fan motors.
- Fully weatherproof, anti-corrosion enclosure and frame work. The entire unit shall be corrosion protected (inside and outside). All steel components shall be pre-galvanised: no painted black steel shall be allowed.
- Complete electric control panel to EN 60204 with full power and control circuit protection. This panel may be mounted separately from the heat pump unit.
- Microprocessor control module fully surge protected and lightning protected.
- Fault display and memory with remote fault monitoring capability.
- Potential free common fault output indication for remote hardwire monitoring panel.

3. AIR TO WATER HEAT PUMPS

No off	54
Net heating capacity	66kW, 0.5l/s with $\Delta T = 47^{\circ}\text{C}$
Net heating capacity nominal	130kW, 0.70l/s with $\Delta T = 47^{\circ}\text{C}$
Water temperature off heat pump	$60 \pm 2^{\circ}\text{C}$
Minimum water on heat pump	5°C
Water flow m^3/h ($\Delta T = 47^{\circ}\text{C}$)	Min 2
Ambient conditions at duly rating	(summer) 40°C db, 24°C wb (winter) 5°C db, 1°C wb
Condenser fouling factor	$0.176\text{m}^2\text{K}/\text{kW}$
Air on evaporator (minimum/maximum)	0°C db, -2°C wb / 40°C db, 24°C wb
Refrigerant	R134a
Power supply	400V/50Hz/3 ϕ
Cond pressure drop	40kPa max
Altitude	1200m
Maximum summer ambient temperature	40°C
Minimum overall COP at above winter duly ratings conditions	2.38 at 0°C Ambient

Note: These values may vary from manufacturer to manufacturer.

4. HOT WATER PUMPS

Supply and install where shown on the drawings hot water circulating pumps, inline heater circulating pumps and heat pump circulating pumps for the hot water reticulation systems of each of the heat pump and cylinder installations. The pumps shall have the minimum capacities shown at the heads indicated:

Location	Number of Pumps (Run and stand by)	Capacity l/s (each)	Head (m)
All Cylinder Rooms	28 x 2	0,5	10
Inline Heater Pump	27 x 2	0,25	5
Heat Pump	54 x 2	0,3 – 0,8	5

NB: These pumps may form part of the heat pump or inline heater package unit and duties may vary to suit different machines.

The pumps shall be of the centrifugal in-line type. Pumps shall be suitable for hot water temperature of up to 75°C and shall incorporate mechanical seals. The pumps shall be installed in the return leg of each ring main.

Each pump shall be provided with a nameplate giving particulars of duty viz. r/min, liters per second and head. Pumps and motors shall be silent in operation. Pumps shall be installed between flanges or between unions for easy removal for repair and maintenance purposes. Valves and strainers shall be provided before and after each pumps as shown on the drawings. The standby pump shall be automatically activated on failure of the duty pump. The pumps shall configure to run approximately equal hours during their lifespan (flip flop starting).

Pumps shall be selected for steep head characteristics. Pump efficiency shall exceed 75% at the operating point. Pumps shall not be selected at maximum impeller size.

Pump motors shall be sized for the selected operating point plus at least 15% spare available power. They shall be non-overloading for the selected impeller.

Pump impellers shall be bronze, shafts shall be stainless steel grade 316. All pumps shall be fitted with heavy duty high quality mechanical seals.

All pumps shall be aligned and balanced before delivery to site. Propriety heavy duty, hot dipped GMS steel bass shall be used. Should any imbalance develop after installation the pump and base shall be removed for rebalancing off site.

Pump assemblies shall be mounted on heavy duty mounts selected for the pump and base mass. The entire pump assembly and motor shall be fully weatherproof. Motors shall be TEFC.

Supply and install circulating pumps in the positions where indicated on the drawings. The pumps shall be equipped with a 220V single phase 3 speed electrical motor with adjustment to change the speed of the motor during commissioning of the plant. The internal components of the pumps shall be manufactured from non-toxic rust-free material and shall be capable to withstand water temperatures up to 100°C and water pressures up to 500 kPa.

5. HOT WATER STORAGE CYLINDERS

Provide as shown on the drawings, fifty six insulated vertical hot water storage cylinders. They shall be supplied with cold water at 400 kPa and 5°C (winter).

Hot water cylinders shall be of welded construction, manufactured from grade 304 L stainless steel and capable of withstanding a pressure of 500 kPa. The cylinder shall be suitable to be installed outside.

Each storage cylinder shall be supplied with a sacrificial anode magnesium. (1m long) fixed to a removable flange for replacement purposes.

LOCATION	NO. OF UNITS	TEMPERATURE RANGE °C	STORAGE CAPACITY EACH LITRES
K-Units	48	5 - 65°C	5000
Kitchen	2	5 - 65°C	5000
Medical	2	5 - 65°C	5000
Laundry	2	5 - 65°C	5000
Total	56		

Each storage cylinder shall be provided with connections for heat pump flow and return, hot water flow and return and cold water feed pipes for parallel or series operation. A dial thermometer and pressure gauge shall be fitted on the top of the cylinder. A safety valve at least 25mm in diameter, shall be provided for each cylinder (water side) to protect the cylinder against excessive water pressure. A hot water expansion valve (20mm) shall also be provided.

A 400kPa PRV shall be provided for each plant room.

The heat pump contractor shall provide, install and connect all hot and cold water piping to and from the cylinder. The hot water return piping to the circulating pump set and to the cylinder, the cold water feed and drain connections to the cylinder, the connections to the heat pumps and circulating pump set. The plumber shall interface with the water piping at the cold water entry point and at the cold, hot and return exit points. Two electronic thermostats will be provided with buckets for each tank.

Cylinders shall be insulated with 75mm thick (47,5kg/m³) glass fibre bats clad in 0,6mm thick GMS sheeting with petal section domed ends.

After manufacture, a certified pin-hole test shall be carried out internally on each tank which uses an epoxy based paint. Surface preparation (internal and external) shall be "Abrasive Blasting" to SANS 064 clause 4.3.

6. ELECTRICAL INLINE HEATING CYLINDERS

All plant rooms will be equipped with one 48kW inline electrical heating cylinder. The equipment can be either of the packaged unit type or of the individual tank/element and pump configuration. Electrical elements shall be of the long life, direct immersion, in alloy type.

Elements shall be 400V, wired in 3 steps. Phases shall be balanced (20% spare elements to be provided). The inline unit will supply hot water at a constant temperature of 58°C ±2°C. An individual control panel will indicate the status of the elements and the pumps. No elements will be allowed for to recuperate the circulation losses.

7. ELECTRICAL EQUIPMENT AND WIRING

This contract includes all electrical work associated with the hot water heat pumps, circulating pumps and storage cylinders. Included are 2 control panels, one for each of the two heat pumps.

The electrical supply available is 400/231 volts, 3 phase, 4 wire, 50 Hz. The switchboards shall be in accordance with the drawings. Three phase power will be available at the switchboards.

Tenders must allow for the complete electrical installation and wiring in accordance with the Standard Specification for the Electrical Installation and Electrical Equipment pertaining to Mechanical services.

8. HOT WATER STORAGE CYLINDER PLANT ROOMS

Each plant room shall be supplied with a wall mounted main power distribution and motor control panel. The panel shall incorporate the follow:

- Main Isolator
- MCB and contactor feeds to inline heater and cylinder heating elements
- MCB feeds to circulating pumps
- MCB feeds to heat pump proprietary panel
- MCB feed to controls and transformer for heating elements
- Re circulating pump on-off switch (pump shall run 24/7)
- For each pump run and trip indication (x4)
- Hot water high temperature alarm and hooter (100W) set at 70°C
- For each pump a starter complete with contractor, O/L and single phasing protection.
- Each storage cylinder's heating elements shall be energized in one step via a control panel selector switch. They shall also be interlocked with the respective Heat Pump's compressor to prevent simultaneous use of the two systems.

Each external control panel consist of at least the following:

- 1) Weatherproof control panel.
- 2) Circuit breaker feeds to each motor and to the control circuit.
- 3) Motor contactors and starters including OL, single phasing, and low voltage protection.
- 4) Run and trip indication for each motor.
- 5) Sensors from the lead-lag switch for each pump.
- 5) Sensors from the storage cylinders and temperature controllers.

- 7) Interlocks between the heat pump and compressors and storage cylinder's auxiliary heating elements.
- 8) Selector switch for heat pump or electric heating.

The system shall be engineered and controlled to operate as follows:

- A low level temperature sensor/controller in the storage cylinder shall start the lead primary hot water pump when the water temperature drops below 40°C and 2nd thermostat (45°C) mounted higher in the tank also requests the heat pump to run.
- The heat pump shall be interlocked with the duty pump and shall start immediately. A delay timer (adjustable 0-60 s) shall bridge out the respective heat pump flow switch interlock and shall allow the generated hot water to reach 60°C before opening the heat pump water temperature control and solenoid valves (second delay timer adj. 0-60s) and enabling the flow switch . If there is still no stop and a no flow indication alarm light shall be energized. A manual push button shall reset the no flow situation and restart the sequence.
- When a heat pump is isolated / stopped or tripped its respective water solenoid valve shall be closed (to prevent mixing).
- The heat pump shall operate automatically always at full load, producing hot water at temperature of 58°C ± 2°C.
- Once the low level cylinder temperature sensor reaches more than 45°C the interlocked heat pumps shall cycle out on temperature and the primary water pump shall be stopped.
- On duty primary pump trip an automatic change over shall start the lag pump. The trip indication shall remain energized.
- All proprietary heat pump controls and safety switches shall remain operational at all times.
- The system shall operate on a 24 hour basis in the event of a heat pump failure the heat pump and its respective water solenoid valve shall shutdown. An outside air temperature sensor shall prevent the heat pump operation at ambient conditions outside its efficient operating range.
- Primary pumps shall be selected for flat head characteristics so that if one heat pump only is operating the increase in water flow through it will be negligible.

- A winter hot gas defrost cycle shall be included in the proprietary controls together with a cut out thermostat which shall isolate the heat pump at low ambient temperatures when COP drop below 1:2.5 Low efficiency indication shall be provided.
- When manually switched on a contactor (interlocked with the respective heat pump contactor) shall power the auxiliary electric heaters and isolate the heat pump. A thermostat shall cycle the heaters (1 step) to maintain 60°C.
- The heat pumps shall be configured in such a way that both units will run in winter and only one unit will run in summer. An outside temperature sensor will be used to select the mode of operation. The heat pumps will run equally in summer (flip flop start). Once the temperature drops below 0°C, the heat pumps will be locked out and the electrical heater will be the preferred heating system.
- The controller will have a 365 day/52 week programmable function so that one can programme the heating equipment to run in off peak hours during summer or other appropriate times. The outside temperature sensor will also be used to ascertain whether off peak generation is appropriate.
- The controller will lock out the circulation pumps soon as the outside temperature drops below 10°C.

9. PIPING INSTALLATION

The installation, thermal insulation, supports and fittings shall be in accordance with the Standard Specification. Isolating gaskets shall be fitted between the copper piping and any steel isolating component.

All piping installations shall be carried out with provision for thermal expansion. Anchor points shall always be fixed to concrete.

Insulation shall be applied after the erection of all hot water piping and equipment and after all joints have been completed and pressure tested. All insulation shall be clad with GMS steel (0,6 mm thick) sections strapped and screwed into place. The cladding shall be painted, and colour coded.

10. COLD, HOT AND RETURN WATER SUPPLY PIPING AND FITTINGS

Cold, hot and return water supply piping and fittings in the plant room shall be installed and connected under this contract. The heat pump contractor shall supply the interconnecting flanges. The solder used for the capillary joints shall contain no-lead and shall be approved by the manufacturer.

11. VALVES & FITTINGS

BALL VALVES ($\leq 110\text{MM } \Phi$) (FOR COPPER PIPING)

Ball valves shall be full bore, serviceable (two piece) of the brass or bronze type with 316 stainless steel ball and shaft. The valve shall be equipped with a hand lever (cast iron) which shall close the valve in a clockwise direction, Valve working pressure to be 1600 kPa.

NON-RETURN VALVES ($\leq 80\text{mm } \phi$)

The non-return valve shall be of the flap type, brass to brass.

AUTOMATIC AIR VENTS

The air vents shall be of the small orifice type for the inside buildings with at least a 15mm BSP connection and shall seal tight to prevent water leaking out.

VACUUM BREAKER

The vacuum breaker shall be of the minimum size of 15mm with a drip tight sealing on the air inlet.

STRAINERS ($\leq 50\text{mm } \phi$)

The strainer shall be equipped with a brass or bronze body with stainless steel screen with maximum 1mm ϕ hole sizes and screwed BSP ends. The screen shall be removable for cleaning purposes. The strainer shall be capable of withstanding a working pressure of 1600kPa.

12. STERILIZING

Before any domestic water or storage cylinder or pipeline is taken into use, the entire system shall be sterilized. It shall be filled with potable water, chlorinated to a concentration of 15mg of chlorine per litre of water which shall remain in contact with the inner surface of the pipeline for a period of not less than 24 hours. The system shall be filled for sterilizing in such a manner that no shock is created or air trapped in the pipeline.

At least 14 days prior to the commencement of sterilizing the contractor shall submit full details of the provided method of sterilizing the system to the engineer for his approval.

The cost of water for filling the system for sterilizing shall be borne by the contractor.

The Contractor shall provide all necessary materials, tools, equipment and labour necessary to sterilize the system. After sterilizing the pipeline, the contractor shall, at no extra cost, empty the pipeline and dispose of the water in a manner approved by the engineer.

The contractor may use the following products as a source of chlorine:

- a) Chloride of lime to SANS 295, yielding 33% free chlorine by mass
- b) Calcium hypochloride to SANS 295, yielding 70% free chlorine by mass.
- c) Chlorine gas applied by chlorinator

13. PRESSURE TESTING

Completed sections of the pipe installations shall be filled with water after all branches have been plugged, sealed, or closed.

The section of pipe shall be pressure tested by means of suitable manually operated or mechanically driven pressure pump.

A pressure of at least 1,5 times the working pressure of the class pipes, or fittings shall be applied for a period of time specified in the specifications or as recommended by the manufacturers. (Refer to SANS 1200 for minimum and maximum test pressures).

Tests should not be performed against closed valves. Leakage which occurs shall be measured and calculated and checked against the allowable losses.

If the completed section of pipe complies with all specification and pass the test and inspection, it could be approved.

The Supervisor shall also check that all valves operate satisfactory and open and close in the correct rotation as specified.

14. LAGGING

All insulation shall be applied after equipment and piping has been installed and all joints completed, tested, and painted. All steel surfaces and pipework shall be primed and painted before any lagging is applied.

All hot & cold water piping in general shall be lagged with factory-applied fabric-covered performed mineral wool pipe lagging (density 80kg/m³) 25 mm thick. Longitudinal and circumferential overlap of fabric shall be fixed with suitable adhesive. Non-corroding fixing bands shall be applied at the rate of 2 per performed section length, i.e. one in the centre and covering the circumferential overlap.

At pipe bends, the performed sections shall be properly metered to suit the bend radius to ensure a good fit and applied in two staggered layers to ensure good cover. The bends shall be finished with hard setting cement at least 6mm thick and reinforced with an open wave fibre membrane trowelled into the surface. The surface shall be symmetrical and smooth.

The pipework insulation on piping shall be applied so that cracking or other adverse effects as a result of thermal expansion under the conditions of use are reasonably guarded against, e.g. by the use of expansion joints where necessary.

All exterior and plant room lagging shall be clad with 0.8 galvanised iron sleeves fixed with non-corroding fixing bands. The sleeve joint shall in all instances be at the bottom of the pipe.

NOTE: No asbestos or products containing asbestos shall be used.

15. OPERATIONS, MAINTENANCE AND SERVICING

The DCS maintenance team must be given training on operations and maintenance procedures by the contractor. Furthermore, operational procedures for each plant room must be framed and fixed to the internal walls.

The Contractor shall be responsible for all maintenance for a period of 12 months after practical completion. During this period, the Contractor shall make good any defect due to inferior materials or workmanship and maintain all plant and equipment in perfect operating condition.

The Contractor shall be entirely responsible for carrying out regular monthly inspections and for full servicing of all components of the installation in accordance with the manufacturer's instructions at intervals not greater than 3 months. For this purpose, the Contractor shall prepare a detailed inspection and service report in the form of a check list and log sheet

showing all functions to be carried out at each inspection and service. Copies of these service reports shall be regularly submitted to the Department after each service.

The Contractor shall also maintain a plant logbook on site in which he shall record, sign and date all work carried out at each inspection.

The Contractor shall allow for all expendable materials necessary for servicing such as lubricating oils, grease, and cleaning materials. The Contractor shall also allow for cost of labour, travelling, etc.

16. SCHEDULES OF PARTICULARS

All schedules which accompany this tender notice, form an integral part of it and shall be duly completed in every detail: FAILING which, the tender in question may be rendered ineligible for consideration. Under no circumstances will statements such as:

- See attached pamphlets
- Refer to catalogue
- Data to follow
- As given by the supplier

be acceptable to the Department.

Equipment offered and listed on the schedule shall be capable of performing the specified duties and complying with the Specification requirements in all respects: SHOULD it transpire that such equipment, even when offered by make, model and/or type, is unsuitable or incapable of meeting, or performing in accordance with, the Contractor or Sub-contractor shall nevertheless be responsible for any additional costs incurred in providing the required or suitable equipment.

Whenever a specific make, model or type of equipment has been prescribed in the specification and the tender offers alternative, or equal make or type of equipment in his tender, the Department will in acceptance of such a tender inform the prospective contractor in writing as to the make, and/or type of equipment accepted. HOWEVER, it should be noted that the use of works "OR EQUAL" by the tender is to be discouraged and could lead to the disqualification of the tender.

17. EPWP IMPLEMENTATION

Due to the nature of the works involved, this type of project is feasible as a labour Intensive project i.e. the construction activities will require skilled/unskilled labour. Noted that only few items were identified to be implemented LI on the BOQ. Below are some of the potential focus areas where employment creation can be optimized. The following activities must be marked in the bill of quantities with the letter (LI);

LI Activities
All excavations works not exceeding 1.5 m
Masonry
Brickwork
Waterproofing (requires skilled labour and semi-skilled labour)
Cleaning of roof
Carpentry and joinery (requires skilled and semi-skilled labour)
Shelving
Installation of handle doors, door closers, nameplates, bathroom fittings
Signage,
Installation of pinning boards , writing boards
Plastering (Internal and External)
Tiling
Plumbing and Drainage & stormwater drainage
Paintwork
Installation of Fencing
Landscaping
Sewer connections
Water connections
Road signs
Paving to parking area
Fencing and installation of gate

17.1 Employment Targets

The contractor needs to provide jobs that the project has the potential to create throughout the project duration as the project will be implemented using Labour Intensive Construction methods on elements where it is economical and feasible for this construction method.

Estimated no of jobs to be created =4

17.2 Employment requirements

Tenderers are advised that this contract will be subject to the Expanded Public Works Program (EPWP) aimed at alleviating and reducing unemployment.

Tenderers must allow for any costs for the following employment requirements of the EPWP

60% women

55% youth aged between 18 and 35 years

2% people with disability

100% unskilled labour utilized must reside within the boundaries of the Municipality ward where this contract is executed, with preference to the local community closest or at the walking distance to the contract site. Wherever possible local skilled tradesmen are to be employed on this contract with the view to maximize utilization of local resources.

17.3 Employment of Community Liaison Officer (CLO)

The Contractor shall allow for and pay any and all costs necessary for the engagement of the services of a Community Liaison Officer (CLO) for the full duration of a project.

A CLO will be identified by the local structures (Project Steering Committee) of the ward areas and appointed following a fair and transparent interviewing process, to be conducted in the presence of local structures and the contractor representative, in order to assist the Contractor in the procurement of any local labour, etc. required for this project.

The Contractor is to liaise with the CLO and afford him any assistance needed in ensuring sound working relations with the local community.

Key Responsibilities of the CLO are envisaged to include and not necessary be limited to:

- a) Assisting local leadership in conducting skills and resources audit which facilitates sourcing labour from within the ward or targeted areas for employment, as required by contractor,
- b) Assisting in the procurement of materials from local resources, as required by the contractor,
- c) Assisting the contractor by identifying areas of potential conflict and or threats to the project or to stakeholders in the project and recommend appropriate action to the contractor.
- d) Assisting contractor and stakeholders in the project in the resolution of any conflict which may arise.
- e) Establishing and ensuring that sufficient and open communication channels between the contractor and the work force are maintained.
- f) Establish and ensuring that efficient and open communication channels between the contractor and the community are maintained

- g) Identifying and reporting to the Contractor regarding issues where communication between stakeholders is necessary, recommend courses of action and facilitate such communications
- h) Assisting the Contractor and the work force in the establishment of grievance procedures and necessary recommendation to the Contractor regarding the grievances and solution thereto.
- i) Attending to site meetings and project implementation meetings as required by the Contractor and prepare periodic reports as may be required by the Contractor from time to time.
- j) Attending to such other duties which are consistent with the functions of a CLO, as may be required by the Contractor from time to time.

17.4 EPWP Branding

Signboard

EPWP Programme at the project level shall always be promoted through the projects signage board that embrace EPWP logo at the bottom, correct measurement for this signage board will be provided by the project leader during the site handing over meeting.

The Contractor is responsible for ensuring that the project board remains neatly and safely erected for the full duration including the maintenance period, after which the project board and posts are to be dismantled and handed to the client in good order

Personal Protective Equipment (PPE)

All local labourers including contractor & sub-contractors' shall be provided with EPWP branded Personal Protective Equipment (PPE), as per the branding specifications.

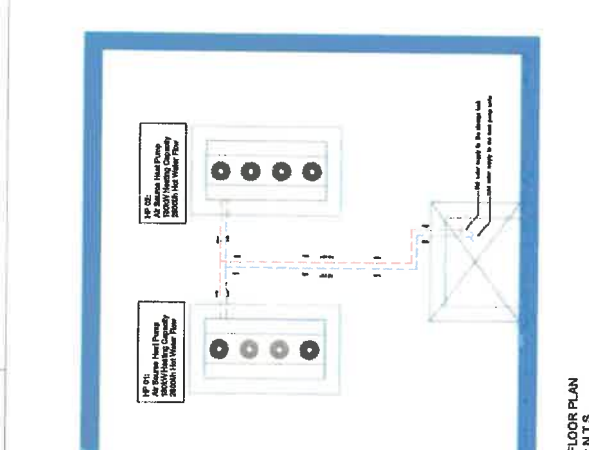
Overalls to be orange in colour as per EPWP Corporate image and requirements (Annexure E). Branding to be done in full colour. Specification with the exception of Correctional Services contracts where the participants top and bottom would be green.

NOTES:

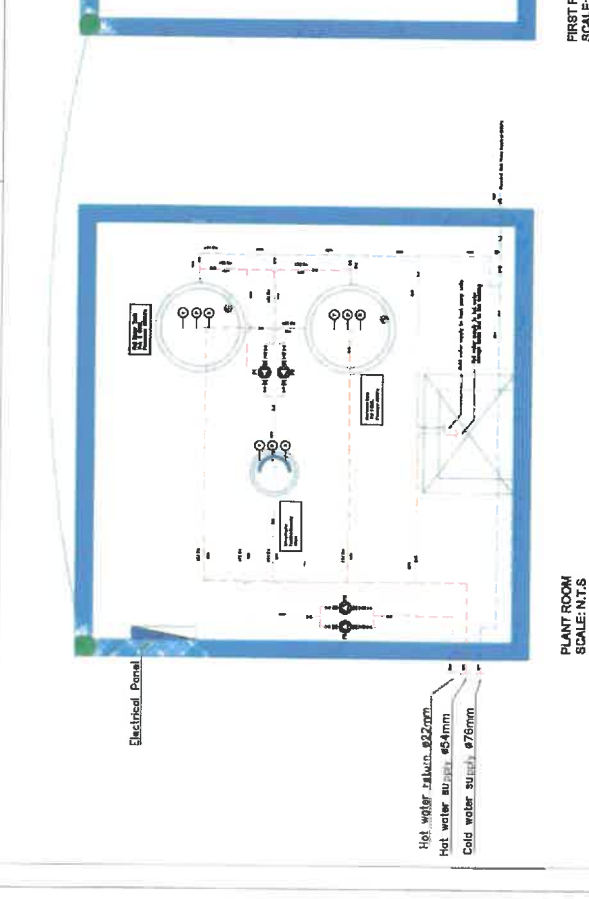
- Coordinate drawing with other sections.
- All cold water piping shall be copper pipe.
- All hot water shall be copper pipe, insulated and supported in accordance with the code.
- All dimensions indicated are in millimeters (mm).
- Piping shall be complete with appropriate valves where necessary, all pipe fittings, pipe supports and hangers shall be installed in accordance with the code.
- All water pipe fittings shall be rated at 8000PSI.
- All valves for cold water shall be clearly marked as such and painted in red color.
- All valves for hot water shall be clearly marked as such and painted in red color.
- All vent penetrations shall have 200mm diameter caps.
- All penetrations shall be neatly finished.
- All piping installations shall be pressure tested for leak proof.
- Piping shall be installed in the wall where practicable.
- Outdoor unit confirm all measurements on-site prior to start of work.
- All plumbing work shall be executed by a qualified plumber, and leave Certificate of Compliance (COC), and leave Certificate of Completion (CCO), and leave Certificate of Completion (CCO).
- Drain pipes shall be installed at an angle to enable them to drain freely.
- All pipe work shall be supported by means of clamps, brackets, etc.

LEGEND:

- 1. Hot Water Heating
- 2. Cold Water Supply
- 3. Hot Water Return
- 4. Hot Water Supply
- 5. Cold Water Return
- 6. Hot Water Heating
- 7. Cold Water Supply
- 8. Hot Water Return
- 9. Hot Water Supply
- 10. Cold Water Return



FIRST FLOOR PLAN
SCALE: N.T.S.



PLANT ROOM
SCALE: N.T.S.

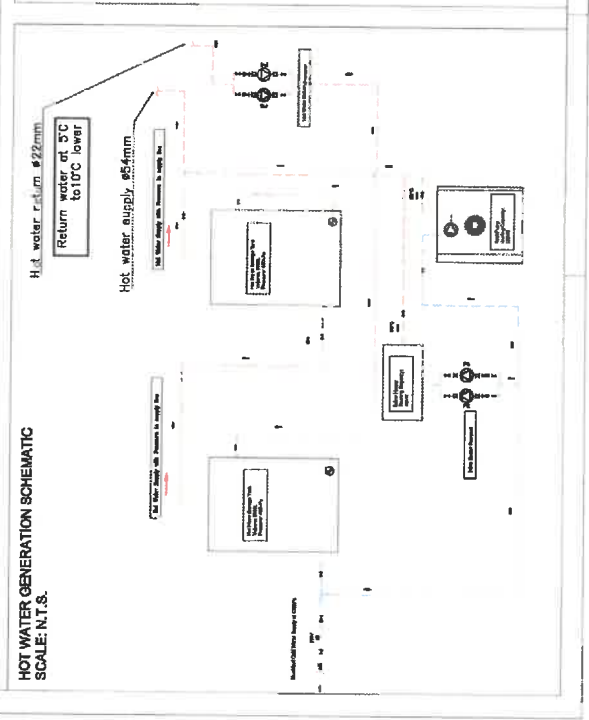
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- 7. Cold Water Supply
- 8. Hot Water Return
- 9. Hot Water Supply
- 10. Cold Water Return

Type	Mark	Area Served	Hot Water Heating Units Schedule			Hot Water Storage Tanks Schedule		
			Heating Capacity (kW)	Water Volume (Litres)	Pressure (Bar)	Type	Volume (Litres)	Pressure (Bar)
UH	UH 01	UH 01	150	2000	32	UHST 01	2000	32
UH	UH 02	UH 02	150	2000	32	UHST 02	2000	32
UH	UH 03	UH 03	150	2000	32	UHST 03	2000	32
UH	UH 04	UH 04	150	2000	32	UHST 04	2000	32
UH	UH 05	UH 05	150	2000	32	UHST 05	2000	32
UH	UH 06	UH 06	150	2000	32	UHST 06	2000	32
UH	UH 07	UH 07	150	2000	32	UHST 07	2000	32
UH	UH 08	UH 08	150	2000	32	UHST 08	2000	32
UH	UH 09	UH 09	150	2000	32	UHST 09	2000	32
UH	UH 10	UH 10	150	2000	32	UHST 10	2000	32



HOT WATER GENERATION SCHEMATIC
SCALE: N.T.S.

APPROVED

23/10/2023

PG-03.1 (EC) SITE INFORMATION – GCC 3rd Edition (2015)

Project title:	<i>Kimberley Tswelopele Correctional Centre: Replacement and Upgrading of Heat Pump Installation</i>		
Tender no:	XXXXXXXXXXXX	WCS no:	055411
		Reference no:	19/2/4/2/2/2327/491

C4 Site Information

C4 Site Information

The site is situated at Kimberly, in the Northern Cape Province.

The work to be done is in the security area of a working prison.

Access to and from the site is under strict security enforced by the DCS. The contractor's workers, equipment and material will be subjected to inspection when entering and leaving the site.

DCS reserves the right to refuse any person access to the facility at any time and without providing reasons.

The work will be in existing heat pump plantrooms that form part of the prison buildings. Access to the plantrooms are directly from the outside of the prison buildings.



public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA



EPWP IMPLEMENTATION FRAMEWORK ON NDPWI PROJECTS

***Project Name* - Tswelopele Replacement of Heat Pumps**

In order to make tender / contract documents fully EPWP compliant (labour-intensive construction projects) the following clauses and / or additions need to be included in the documentation:

1. Tender Document Cover

The following EPWP Logo to be included on the bottom of the front cover



2. Tender Notice and Invitation to Tender

The following must be included in the notice and invitation to tender (for Contract Documentation for the Works):

"Only tenderers who employ staff which satisfy EPWP requirements are eligible to submit tenders."

3. Tender Data

The following must be included in the tender data in accordance with the provisions of the CIDB Standard for Uniformity in Construction Procurement:

F.2.1 only those tenderers who have in their employ management and supervisory staff satisfying the requirements of the scope of work for labour-intensive competencies for supervisory and management staff are eligible to submit tenders.

F.2.18 The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.

4. Contract Data

The following must be included in the contract data in the contract with the Employer:

Payment for the labour-intensive component of the works

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.



Linkage of payment for labour-intensive component of works to submission of project data

The Contractor’s payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The contractor’s invoices shall not be paid until all pending labour information has been submitted.

Applicable labour laws

The current Ministerial Determination (also downloadable at www.epwp.gov.za), Expanded Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice , shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.

5. Bill of Quantities

- Due to the nature of the works involved, this type of project is feasible as a labour Intensive project i.e. the construction activities will require skilled/unskilled labour.
- Noted that only few items were identified to be implemented LI on the BOQ. The QS is kindly requested to identify more activities that will be done LI in the BOQ.
- Below are some of the potential focus areas where employment creation can be optimized. The following activities must be marked in the bill of quantities with the letter (LI);

LI Activities
All excavations works not exceeding 1.5 m
Masonry
Brickwork
Waterproofing (requires skilled labour and semi-skilled labour)
Cleaning of roof
Carpentry and joinery (requires skilled and semi-skilled labour)
Shelving
Installation of handle doors, door closers, nameplates, bathroom fittings
Signage,
Installation of pinning boards , writing boards
Plastering (Internal and External)
Tiling
Plumbing and Drainage & stormwater drainage
Paintwork
Installation of Fencing
Landscaping
Sewer connections



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Water connections
Road signs
Paving to parking area
Fencing and installation of gate

6. Employment Targets

The contractor needs to provide a realistic estimate on the number of jobs that the project has the potential to create throughout the project duration as the project will be implemented using Labour Intensive Construction methods on elements where it is economical and feasible for this construction method.

Estimated no of jobs to be created = 4

7. Employment requirements

Tenderers are advised that this contract will be subject to the Expanded Public Works Program (EPWP) aimed at alleviating and reducing unemployment.

Tenderers must allow for any costs for the following employment requirements of the EPWP

60% women

55% youth aged between 18 and 35 years

2% people with disability

100% unskilled labour utilized must reside within the boundaries of the Municipality ward where this contract is executed, with preference to the local community closest or at the walking distance to the contract site. Wherever possible local skilled tradesmen are to be employed on this contract with the view to maximize utilization of local resources.

8. Employment of Community Liaison Officer (CLO)

- 8.1. The Contractor shall allow for and pay any and all costs necessary for the engagement of the services of a Community Liaison Officer (CLO) for the full duration of a project.
- 8.2. A CLO will be identified by the local structures (Project Steering Committee) of the ward areas and appointed following a fair and transparent interviewing process, to be conducted in the presence of local structures and the contractor representative, in order to assist the Contractor in the procurement of any local labour, etc. required for this project.
- 8.3. The Contractor is to liaise with the CLO and afford him any assistance needed in ensuring sound working relations with the local community.
- 8.4. Key Responsibilities of the CLO are envisaged to include and not necessary be limited to:



- a) Assisting local leadership in conducting skills and resources audit which facilitates sourcing labour from within the ward or targeted areas for employment, as required by contractor,
- b) Assisting in the procurement of materials from local resources, as required by the contractor,
- c) Assisting the contractor by identifying areas of potential conflict and or threats to the project or to stakeholders in the project and recommend appropriate action to the contractor.
- d) Assisting contractor and stakeholders in the project in the resolution of any conflict which may arise.
- e) Establishing and ensuring that sufficient and open communication channels between the contractor and the work force are maintained.
- f) Establish and ensuring that efficient and open communication channels between the contractor and the community are maintained
- g) Identifying and reporting to the Contractor regarding issues where communication between stakeholders is necessary, recommend courses of action and facilitate such communications
- h) Assisting the Contractor and the work force in the establishment of grievance procedures and necessary recommendation to the Contractor regarding the grievances and solution thereto.
- i) Attending to site meetings and project implementation meetings as required by the Contractor and prepare periodic reports as may be required by the Contractor from time to time.
- j) Attending to such other duties which are consistent with the functions of a CLO, as may be required by the Contractor from time to time.

9. Project Steering Committee

9.1. Composition of Project Steering Committee (PSC)

The PSC shall consist of the following stakeholders;

- National Department of Public Works representative
- Municipal representative
- Community representatives
- User Client/Department representative
- Main Contractor
- Consultant representatives
- Community Liaison Officer (Secretariat)

9.2. Roles of the PSC

The PSC shall oversee the following

- a) The PSC will adhere to government legislation and policy guidelines which are relevant to enable it to execute its work. The Intermediary guidelines will also be adhered to e.g. procurement policies
- b) scheduling of meetings
- c) monitoring set targets
- d) That local labour is recruited according to agreed procedures and processes
- e) Manage EPWP participants' grievances



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- f) Responsible for communication with local EPWP participants'

9.3. PSC Secretariat

The contractor shall appoint a Community Liaison Officer (CLO) who shall provide secretariat support to the PSC

9.4. Frequency of the meetings

The PSC shall meet once a month prior to the site meetings and report the resolutions at the site meeting

9.5. PSC Funding

The activities of the PSC will be voluntary and members would receive no remuneration for their time. The contractor may provide refreshments on the day of a meeting. It is thus important that community members of the PSC be drawn from the local area in order to avoid travelling costs.

10. EPWP Branding

10.1. Signboard

EPWP Programme at the project level shall always be promoted through the projects signage board that embrace EPWP logo at the bottom, correct measurement for this signage board will be provided by the project leader during the site handing over meeting.

The Contractor is responsible for ensuring that the project board remains neatly and safely erected for the full duration including the maintenance period, after which the project board and posts are to be dismantled and handed to the client in good order

10.2. Personal Protective Equipment (PPE)

All local labourers including contractor & sub-contractors' shall be provided with EPWP branded Personal Protective Equipment (PPE), as per the branding specifications.

Overalls to be orange in colour as per EPWP Corporate image and requirements (Annexure E). Branding to be done in full colour. Specification with the exception of Correctional Services contracts where the participants top and bottom would be green.

11. Reporting

The Contractor's payment invoice shall be accompanied by labour information for the corresponding period in an EPWP reporting format (Annexure B). The completed EPWP reporting template should be accompanied by the following supporting documents:

- Contract of employment (Individual and/or Entity) - once-off



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- Certified South African ID copy (certification date not older than 3 months)- once-off
- Attendance register of participants- periodically
- Proof of payment of participants- periodically
- Schedule of payment for SMMEs- periodically (N/A)

The Consultant shall, before certifying a contractor's payment certificate, ensure that contractor has submitted labour information in a format and timeframe specified by the employer.

If the information submitted by the contractor is inadequate the consultant shall not submit the payment certificate to the employer for payment. If the contractor chooses to delay submitting payment invoices, labour information shall still be submitted as per frequency and timeframe stipulated by the Employer. The contractors invoice shall not be paid until all pending labour information has been submitted.



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12. MEASUREMENTS AND PAYMENT

The number of youth workers specified for employment in this contract is 4.

12.01 EMPLOYMENT OF YOUTH WORKERS

12.01.01 Employment of youth workers.....**R118 096**.....Unit: Prov.Sum

The unit of measurement shall be the number of youth workers at the labour rate of R 2 684- per month (22 working days) as the amount indicated by EPWP Ministerial Determination rate per day (R122) multiplied by the period employed in months and the rate tendered shall include full compensation for all costs associated with the employment of youth workers and for complying with the conditions of contract. This item is based on 11 months appointment for youth workers.

SL 11.02 ACCREDITED TECHNICAL TRAINING CONDUCTED OFF SITE

SL 11.02.01 Skills development and technical training for youth workers for an average period of 84 days per youth worker.....**R76 000,00**
Unit: worker-days

12.02 PROVISION OF EPWP DESIGNED OVERALLS, HARD HATS TO YOUTH WORKERS AS WELL AS ONE PAIR OF SAFETY BOOTS.

12.02.01 Supply 2 x EPWP branded overalls and 1 x EPWP branded hard hat and 1 pair of safety boots to youth each youth worker
R8 000.....Unit: PC.Sum



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Youth worker overalls should be orange (top and bottom) as per EPWP branding specification with the exception of Correctional Services contracts where the overalls should be blue (top and bottom). **A minimum of two sets of overalls and 2 pair of safety boots per youth worker should be supplied.** Hard hats should be orange and branded as per the EPWP branding specification which shall be provided to the Contractor.

12.03 PROVISION OF SMALL TOOLBOX FOR YOUTH WORKERS

12.03.01 Provide all youth workers with prescribed tools for their respective trades. Specification for the mentioned tools to be provided by the NYS Manager to the Contractor. These toolboxes will become the property of the youth workers after the completion of the project...
(allowed R 1350-00 / youth worker)R5 400.....Unit: PC.Sum

Profit and attendance.....
Unit: %

12.04 **Provision for medical fitness test for the learners before coming to site**
(allowed R580 / youth worker)R2 320.00.....

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C3.3 PARTICULAR SPECIFICATIONS

C3.3: PARTICULAR SPECIFICATIONS

THE FOLLOWING SPECIFICATIONS DEAL WITH THE PARTICULAR REQUIREMENTS OF WORK TO BE EXECUTED

CONTENTS

PARTICULAR SPECIFICATION AO: OCCUPATIONAL HEALTH AND SAFETY

PARTICULAR SPECIFICATION PQ: EMPLOYMENT AND TRAINING OF YOUTH PARTICIPANTS ON THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP) INFRASTRUCTURE PROJECTS: NATIONAL YOUTH SERVICE (NYS)

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PARTICULAR SPECIFICATION AO: OCCUPATIONAL HEALTH AND SAFETY

CONTENTS

AO-1	SCOPE
AO-2	DEFINITIONS AND ABBREVIATIONS
AO-3	HEALTH AND SAFETY POLICY
AO-4	ROLES AND RESPONSIBILITIES
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AO-7	DUTIES
AO-8	MANAGEMENT AND SUPERVISION
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AO-17	INCIDENT MANAGEMENT
AO-18	PROJECT SPECIFIC CONSTRUCTION REQUIREMENTS
AO-19	MEASUREMENT AND PAYMENT

AO1 SCOPE

The Occupational Health and Safety Act, Act 85 of 1993 and its Regulations together with SANS Codes set out minimum standards with regards to Occupational Health and Safety. The Client has developed this Occupational Health and Safety Specifications with these minimum standards in mind and in certain stages the requirements of the Client exceeds the minimum legal requirements to follow best practices and to ensure a healthy and safe workplace for all.

The Client in no way assumes The Principal Contractors legal liabilities and responsibilities. The Principal Contractor is and remains accountable for the quality and execution of his health and safety programme for his employees. This Health and Safety Specification reflects minimum legal and Client requirements and should not be construed as all encompassing. This Particular Specification does not replace or take precedence over, nor detract from the Occupational Health and Safety Act or its Construction Regulations 2014 as well as Additional specification: C3.4: OCCUPATIONAL HEALTH & SAFETY SPECIFICATION (NDPW) (bound in the tender document) that provides the specific requirements of the Department of Public Works. The specification shall be read in conjunction with the other Project Specifications, Particular Specifications, Standard Specifications, Occupational Health and Safety Act (Act No. 85 of 1993) and the Construction Regulations, 2014.

Nothing in this Specification shall relieve the Contractor of any obligations or responsibilities with regard to health and safety conditions and practices on site.

It is realised that the Contractor has its own Health and Safety Management system and safe work practices. The intention of this Health and Safety Specification is not to change The Contractors Health and Safety management system, but for the Contractor to use its current Health and Safety management system to draw up a project specific Health and Safety plan according to these specifications as well as to legally comply with the Construction Regulations, GNR.84 of 2014.

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It is the responsibility of the Principal Contractor and other Contractors to make themselves conversant and comply with the requirements and conditions contained in the various legislation pertaining to their profession and scope of works at all times.

This specification is not exhaustive of all duties imposed by the Occupational Health and Safety Act, Act 85 of 1993 and its Regulations, governing the duties and obligations, of a Designer, Principal Contractor and Contractor performing duties in terms of an agreement with the Client. These duties are fully described in the Occupational Health and Safety Act, Act 85 of 1993 and its Regulations and it is the duty of every Designer, Principal Contractor and Contractor to acquaint themselves therewith before commencing work.

Words used herein in the singular shall be deemed to include the plural and male shall include female and vice versa, unless the context otherwise requires.

This specification is compiled to ensure that the Principal Contractor and any other Contractors working for the Client directly or through a Principal Contractor, are aware of the Occupational Health and Safety requirements when working on a National Department of public Works contract, as well as to make them aware of their legal liabilities and responsibilities as per the Occupational Health & Safety Act, Act 85 of 1993, and its Regulations.

AO2 DEFINITIONS AND ABBREVIATIONS

Assessment – An opinion or a judgment about someone or something that has been thought about very carefully.

At-risk behavior – Conduct that unnecessarily increases the likelihood of an injury or incident.

Audit – A systematic and documented review of the effectiveness of implementation of processes, programmes and procedures, based on general process criteria.

Baseline risk assessment - This is the initial assessment of risk in a workplace. It is a broad assessment and includes all activities taking place on site but does not include risk control measures or safeguards.

CIDB – Construction Industry Development Board

Client – Any organization or person for whom construction work is performed. For the purpose of this document, the Client is the National Department of Public Works.

Communicate – The process of two way dialogue which is understood by both parties.

Competence – A combination of attributes such as knowledge, training, experience, and qualifications to assure successful performance.

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.

Consequence – Outcome or impact of an event.

Continual Improvement – A recurring process of enhancing performance to achieve consistent improvements in overall performance.

Contractor – An employer as defined in section 1 of the OHS Act, who performs construction work and includes Principal Contractors and Sub-Contractors.

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Construction Work – 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.

Corrective Action – An action taken to eliminate the cause of a detected non-conformity or other undesirable situation.

Construction Regulations (CR) – Construction Regulations, GNR. 84 of 2014

Critical equipment – A piece of equipment or a structure whose failure to perform to design specification, has the potential to result in a major accident event.

Design – in relation to any structure, includes drawings, calculations, design details and specifications.

Designer – 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
 - a) an architect or engineer contributing to, or having overall responsibility for a design;
 - b) a building services engineer designing details for fixed plant;
 - c) a surveyor specifying articles or drawing up specifications;
 - d) a contractor carrying out design work as part of a design and building project; or
 - e) an interior designer, shop fitter or landscape architect.

DMR – Driven Machinery Regulations, GNR. 295 of 26 February 1988

Documents – Structured units of recorded information and its supporting medium (paper or electronic). Most records are documents, but not all documents are records. A document becomes a record when it is part of a business transaction, is kept as evidence of that transaction and is managed within a record-keeping system.

EIR – Electrical Installation Regulations, GNR. 242 of 6 March 2009

Emergency – An abnormal occurrence that pose a threat to the safety or health of employees, customers, or local communities, or which can cause damage to assets or the environment.

Employee – An individual who is employed by or works for an Employer and who receives or is entitled to receive any remuneration or who works under the direction or supervision of an employer or any other person.

Employer – Any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerates him, but excludes a labour broker as defined in section 1(1) of the Labour Relations Act, 1956 (Act No. 28 of 1956).

EMR – Electrical Machinery Regulations, GNR. 250 of 25 March 2011

Environment – The surroundings or conditions in which a person, animal or plant lives or operates, including air, water, land, natural resources and habitats.

Excavation work – The making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping

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GAR – General Administrative Regulations, GNR. 929 of 25 June 2003

GMR – General Machinery Regulations, GNR. 1521 of 5 August 1988

GSR – General Safety Regulations, GNR. 1031 of 30 May 1986

Harm – A significant and or long lasting adverse effect on people, the environment or the community.

Hazard – A source, situation or act with a potential for harm in terms of human injury or ill health.

Health and Safety File – Means a file, or other record in permanent form, containing the information in writing as required by the Construction Regulations, GNR. 84 of 7 February 2014, Section 7(1)(b).

Health and Safety Plan – Means a project specific documented plan in accordance with the Client's health and safety specifications, as required by the Construction Regulations, GNR. 84 of 7 February 2014, Section 7(1)(a).

Health and Safety Specification – Means a project specific document prepared by the Client pertaining to all health and safety requirements related to construction work, as required by the Construction Regulations, GNR. 84 of 7 February 2014, Section 5(1)(b).

HSE – Health, Safety and Environment. Commonly used in the format HSE.

Incident – Work-related events (including accidents which give rise to injury, ill health, fatality or emergencies) that have resulted in, or has the potential to result in adverse consequences to people, the environment, property, reputation or a combination of these.

Likelihood – A description of probability or frequency, in relation to the chance that something will occur.

Lost Time Injury (LTI) – When a person is injured during the execution of his/her duties and as a result of the injury is unable to perform his/her regular duties for one full shift or more on the day following the day on which the injury has incurred, whether a scheduled work day or not(weekend).

Management System – Management processes and documentation that collectively provide a systematic framework for ensuring that tasks are performed safely, correctly, consistently and effectively to achieve a specified outcome and to drive continual improvement in performance.

Mandatory – An agent, contractor or sub-contractor for work, but without derogating from his status in his own right as an employer or a user.

MSDS – Material Safety Data Sheet

Near Hit / Near Miss – Any occurrence or situation which had the potential for adverse consequences to people, the environment, property, reputation or a combination of these.

Non-conformance – Any deviation from work standards, practices, procedures, regulations that could either directly or indirectly lead to injury or illness, property damage, damage to the environment or a combination of these.

OHS Act – Occupational Health & Safety Act, 85 of 1993

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Policy – Statement by an organization of its intentions and principles in relation to its overall performance, which provides a framework for action and for the setting of its objectives and targets.

PPE – Personal Protective Equipment

Preventive Action – An action implemented to eliminate the cause of a potential non-conformity or other undesirable potential situation.

Principal Contractor – An employer appointed by the Client to perform construction work and who is in overall control and management of a part of or the whole construction site.

Procedure – A specific documented way to carry out an activity or a process.

Records – Recorded information, in any form that is kept as evidence. Records include monitoring results, evidence of training, audits, inspections and calibration reports.

Risk Assessment – A process of evaluating the risk(s) arising from hazards taking into account the adequacy of any existing controls and deciding whether or not the risk(s) is acceptable.

Risk Management – The ongoing treatment of risks through the application of management policies, processes, procedures and risk control measures.

Risk – A combination of the likelihood of an occurrence of a hazardous event or exposure and the severity of injury or ill health that can be caused by the event or exposure.

Root Cause – The cause of the incident that, when rectified, will prevent the recurrence of not just incidents with those exact circumstances, but others with similar causes.

SACPCMP – South African Council for Project and Construction Management Professions

Supplier – A person or company that supplies material or equipment to a contractor on a construction site, but does not physically carry out construction work on the construction site.

The Act – The Occupational Health and Safety Act No. 85 of 1993

The Site – The area where work is carried out for the Client as defined in the Scope of Work of this document.

WAH – Acronym for Working at Heights.

AO3 HEALTH AND SAFETY POLICY

Contractors are expected to have their own written Health and Safety Policy. The policy should declare their attitude and approach to the health, safety, and welfare of their employees and others. Provision must be made to review the policy regularly and the CEO or Managing Director must sign and date the policy to indicate his commitment to ensuring the health and safety of his employees.

AO4 ROLES AND RESPONSIBILITIES

Every Contractor is considered to be an employer in his own right and shall comply with all legal requirements pertaining to an employer, which include the responsibility to provide as far as reasonably practicable a safe and healthy working environment for his employees, as per Section 8 of the OHS Act.

In conjunction with Section 8 of the OHS Act, all employees on the project are responsible for their own safety as well as the safety of persons who may be affected by their acts, as per Section

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14 of the OHS Act. It is the responsibility of each employee to ensure that he acts in a safe manner before, during and after work is carried out.

The Principal Contractor shall ensure that where required by the OHS Act and Regulations, competent employees are appointed in writing. These appointments must be project/contract specific and specific to the tasks that will be performed. Every appointment must display the duties of the person appointed and training certificates from a registered training provider must be attached to such appointment (where applicable). A list of possible appointments can be found in clause AO10 below.

AO5 HSE TRAINING AND COMPETENCE

Where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2000 (Act No. 67 of 2000), those qualifications and training must be regarded as the required qualifications and training and employees must have attended courses of the aforementioned nature to be considered competent in the task.

All employees that forms part of the construction work must be trained and competent. Employees formally appointed to perform a certain duty must be in possession of a training certificate, received from a registered training provider. All employees must as a minimum have received site-specific safety induction training and must receive daily safe task instruction training (DSTI) before any work commences.

a) Training Needs

There shall be a system in place to determine the training requirements of each individual, based on the tasks that the employee will perform as well as to ensure the health and safety of fellow employees and the public. Special attention should be given to employees who are new hires, new to the task or have combined responsibilities.

b) Basic Safe Work Training (Induction Training)

Every contractor shall ensure that his employees are inducted into his own company Health and Safety System as well as basic safe work training (HSE Induction Training). The Principal Contractor shall ensure that his, all his Contractor's employees and visitors are inducted on the specific site safety procedures.

A Daily Safe Task Instruction (DSTI) must be conducted on site with all employees involved in the project. The DSTI must be carried out each day before work commences and proof thereof must be available on site. Each work crew may conduct their own specific DSTI to discuss the hazards, risks and control measures associated with their task for the day.

Where two or more contractors or work crews work in the same area, they should have a combined DSTI to ensure they know of the additional hazards the other contractor or work crew will introduce to their operations and what precautions to put in place.

The Principal Contractor shall have evidence that employees have been trained on the relevant procedures prior to and during the project duration. The evidence will be in a form of attendance register.

c) Formal Training

All qualifications for which there are SAQA registered training courses, must be regarded as the minimum required qualifications and training. To be deemed "competent" an employee must have received training at a registered training provider, the training course must be registered and if there is an assessment, the employee must have been found competent after the assessment. A person cannot be deemed competent after awareness training only.

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The Principal Contractor shall ensure that his employees, as well as the employees of any contractors that may be used, have received appropriate training for the type of work that will be performed, e.g. First Aid, Flag Man, Mobile Plant Operator, Working at Heights, Risk Assessment training etc.

d) Records

Record of all training shall be kept by the employer and shall be readily available. Records shall make provision for refresher training where applicable. Where an employee is legally appointed with certain duties and responsibilities a copy of the training certificate must be attached to the appointment.

AO6 APPLICATION FOR CONSTRUCTION WORK PERMIT

Construction Regulation, 2014 Section 3 requires that the Client apply for a construction work permit at least 30 days before construction work is started, if the intended construction work will: exceed 365 days and will involve more than 3 600 person days of construction work; or if the tender value limit is a CIDB grade 7, 8 or 9.

If approved, the provincial director will issue a construction work permit in writing to perform construction work within 30 days of receiving the application and assign a site specific number for the construction site. It is the intention of Client to apply for a construction work permit as soon as The Principal Contractor is appointed and his Health and Safety Plan is received, in order to minimize construction delays.

The site specific construction work permit number must be displayed at the main entrance to the site and a copy of the construction work permit must be kept in the principal contractors health and safety file for inspection purposes.

AO7 DUTIES

Various duties are imposed on the Client, designer, principal contractor and other contractors by the Construction Regulation, 2014, Sections 5, 6 & 7. The Client will comply and carry out the required duties as contemplated in Section 5 of the Construction Regulations, 2014 and it is expected from the designer and every contractor to make themselves conversant with the requirements and duties imposed on them and to ensure that they comply with the requirements of section 6 & 7 at all times.

AO8 MANAGEMENT AND SUPERVISION

The Principal Contractor shall ensure that the project is managed safely and legal compliance is ensured at all times.

A full-time competent person must be appointed as a Construction Manager to manage all construction work, including health and safety compliance. The construction manager may not be appointed to manage more than one single construction site.

The construction manager must appoint construction supervisors responsible for construction activities and ensuring occupation health and safety on the construction site.

The Principal Contractor must appoint a full-time construction health and safety officer, who is registered with the SACPCMP, to assist in the control of health and safety aspects on site.

AO9 RISK MANAGEMENT

The Principal Contractor must follow a formal risk based approach to ensure hazard control measures are implemented to an acceptable reasonable practical level. The Principal Contractor and his employees shall be responsible to ensure all hazards pertaining to his scope of activity

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are proactively identified, the risks assessed and appropriately eliminated or minimized and managed on an ongoing basis. Risk assessments shall also identify possible and potential environmental, health and hygiene issues pertaining to each hazard with potential exposures and limits.

a) Risk Assessment

(i) Hazard Identification and Risk Assessment (Construction Regulation 9)

The Principal Contractor shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, conduct a risk assessment by a competent person, appointed in writing and the risk assessment so produced shall form part of the OH&S plan and be implemented and maintained as contemplated in Construction Regulation 9(1). Competence is a factor of training, knowledge, experience and/or appropriate qualifications.

The risk assessment shall include, as far as is reasonably practicable, at least:

- the task or task step;
- the identification of the risks and hazards to which persons may be exposed during the task or task step;
- the analysis and evaluation of the risks and hazards identified, inclusive of a residual risk rating methodology. The method to be used is not prescribed;
- a documented plan of safe work procedures, to mitigate, reduce or control those residual risks that have been identified as unacceptably high, by means of the rating system;
- a monitoring plan;
- a review plan, inclusive of dates to be adhered to; and
- ergonomic related risks are to be analysed, evaluated and addressed as part of the process.

Based on the risk assessments, The Principal Contractor shall develop a set of site-specific OH&S rules that shall be applied to regulate the OH&S aspects of the construction. The risk assessments, together with the site-specific OH&S rules shall be submitted to the Employer before construction on site commences. The Client has conducted a Baseline Risk Assessment as per clause AO-9 (b) below, which must be used by The Principal Contractor to develop task specific risk assessments before work commences. This does not mean that all possible Risk Assessments must be attended to before work commences, but that all relevant Risk Assessments receive the necessary attention as the contract progresses, and this is the responsibility of The Principal Contractor.

All variations to the scope of work shall similarly be subjected to a risk assessment process.

(ii) Risk Assessment Monitoring

The Principal Contractor shall ensure that a monitoring plan for all risk assessments is in place. Risk assessments must be monitored to ensure effectiveness and employee understanding. The monitoring of risk assessments shall be formal and records thereof shall be available for audit purposes.

(iii) Review of Risk Assessment

The Principal Contractor shall review the hazard identification, risk assessments and standard safe working procedures prior to any work activity commencement and at each production planning and progress report meeting as the contract work develops and progresses and each time changes are made to the designs, plans and construction methods and processes. The Principal Contractor shall provide the Employer, sub-contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated above.

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Activities carried out without conducting a risk assessment or found to be non-compliant with the risk assessment, will be stopped until such time a risk assessment is compiled and work is carried out according to the risk assessment.

Risk assessments must be fully communicated to all relevant personnel and must be considered when establishing training, awareness and competency requirements.

b) Baseline Risk Assessment

The Client prepared a Baseline Risk Assessment from which the Health and Safety Specifications for this project was prepared. The Baseline Risk Assessment highlights all work for which The Principal Contractor must prepare safe work procedures and or work method statements. It must be noted that the Baseline Risk Assessment is not exhaustive and Principal Contractors are required to identify risks and come up with control measures, this must be identified by Principal Contractor when preparing the Issue Based Risk Assessments. During the briefing, the Client will brief Tenderers about the hazards and risks that are associated with the anticipated construction work.

The Baseline Risk Assessment for this Project can be found in clause AO-18.

c) Continuous Risk Assessment

The Principal Contractor shall continuously assess the risks of the activities that are carried out. Risk assessments must be in writing, site specific and must be reviewed continuously to ensure it is current and it address all the relevant hazards and risks associated with the specific activity at the specific site.

The Risk assessment must be discussed with the whole work crew before the activity starts and the work crew must acknowledge in writing having discussed the risk assessment and that they understand it. This acknowledgement must be on site and must be available to the Client for audit purposes.

AO10 LEGAL COMPLIANCE AND DOCUMENT CONTROL

The Principal Contractor is required to implement systems and procedures to ensure legal compliance through the following:

- Identification of all relevant HSE legislation, standards and codes applicable to its operations.
- Have available copies of all relevant HSE legislation, standards and codes for reference purposes.
- Update legislation, standards and codes with any changes.
- Communicate to all employees any changes that may affect their accountabilities and conformance.
- Incorporate any legal requirements into their HSE management system.
- Monitor and review their HSE management system for effectiveness.

The Principal Contractor shall, as a minimum, comply with:

- The Occupational Health and Safety Act and Regulations (Act 85 of 1993), an up-to-date copy of which shall be available on site at all times.
- The Compensation for Occupational Injuries and Diseases Act (Act 130 of 1993), an up-to-date copy of which shall be available on site at all times.
- Where work is being carried out on a "mine", The Principal Contractor shall comply with the Mines Health and Safety Act and Regulations (Act 29 of 1960) and any other OH&S requirements that the mine may specify. An up-to-date copy of the Mines Health and Safety Act and Regulations shall be available on site at all times.

Wherever in the Construction Regulations or this specification there is reference to other regulations (e.g. Construction Regulation 24: Electrical Installations and Machinery on

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Construction Sites) The Principal Contractor shall be conversant with and shall comply with these regulations.

All legal appointments of The Principal Contractor regarding the Health and Safety of his employees who are to work on the project are addressed and governed by the OHS Act and applicable Regulations. Legal appointments must be in place and must reflect in the project safety file before work commences.

a) Overall Supervision and Responsibility for OH&S

The Client will appoint the Principal Contractor in terms of Construction Regulation 5(1)(k). A Mandatory agreement as per Section 37.2 of the OHS Act, shall be signed between the Client and the Principal Contractor.

It is a requirement that the Principal Contractor, when he appoints other contractors in terms of Construction Regulations 7(1)(c), 7(1)(d), 7(1)(f) and 7(3) includes in his agreement with such Contractors the following:

- OH&S Act (85 of 1993), Section 37(2) agreement: "Agreement with Mandatory".
- OH&S Act (85 of 1993), Section 16(2) appointee(s) as detailed in his/her/their respective appointment forms (where applicable).

The signed Mandatory agreements shall be placed in the project file for reference and for audit trail purposes.

b) Specific Supervision Responsibilities for OH&S

The Principal Contractor shall appoint designated competent employees and/or other competent persons as required by the OHS Act and Regulations, as well as this specification. Appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated to and agreed with the appointees. Where applicable, the training certificate must be attached to the appointment. Notice of appointments shall be submitted to the Employer. All changes shall also be communicated to the Employer.

Below is a list of possible appointments for the project, which is not an all-inclusive list, but for reference purposes only:

Appointment	Legal Reference
Assistant to CEO	OHS Act 16(2)
Health and Safety Representative	OHS Act 17(1)
Nominated Health and Safety Committee Member	OHS Act 19(3)
Contractor (Sub-contractor)	CR 7(1)(c)(v)
Construction Manager & Alternate Construction Manager	CR 8 (1)
Assistant Construction Manager	CR 8(2)
Health and Safety Officer	CR 8(5)
Construction Supervisor	CR 8(7)
Assistant Construction Supervisor	CR 8(8)
Risk Assessor	CR 9(1)
Fall Protection Plan Developer	CR 10(1)(a)
Structure Inspector	CR 11(2)(a)
Temporary Works Designer	CR 12(1)
Temporary Works Supervisor	CR 12(2)
Excavation Supervisor	CR 13(1)(a)

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Demolition Supervisor	CR 14(1)
Competent person in the use of Explosives	CR 14(11)
Scaffold Supervisor	CR 16(1)
Suspended Platform Supervisor	CR 17(1)
Rope Access Supervisor	CR 18(1)(a)
Material Hoist Inspector	CR 19(8)(a)
Bulk Mixing Plant Supervisor	CR 20(1)
Explosive actuated fastening device Inspector	CR 21(2)(b)
Explosive actuated fastening device cartridge Controller	CR 21(2)(g)(i)
Construction Vehicle & Mobile Plant Operator Authorised	CR 23(1)(d)(i)
Temporary Electrical Installation Controller	CR 24(c)
Stacking and Storage Supervisor	CR 28(a)
Fire Equipment Inspector	CR 29(h)
Incident investigator	GAR 9(2)
Lifting tackle inspector	DMR 18(10)(e)
Ladder inspector	GSR 13(a)
Certified Explosives Manager	ER 12(1)
First Aider GSR	GSR 3(4)
Hazardous Chemical Substance Supervisor	

In addition to the above, the Employer requires that a Traffic Safety Officer be appointed for work in or close to road reserves.

It is a requirement that The Principal Contractor shall provide the Employer with an organogram of all sub-contractors that he/she has appointed or intends to appoint and keep this list updated and prominently displayed on site.

c) Designation of OH&S Representatives (Section 17 of the OH&S Act)

Where The Principal Contractor employs more than 20 persons (including the employees of sub-contractors) he has to appoint 1 (one) OH&S representative for every 50 employees or part thereof. This is a minimum (legal) requirement. The Principal Contractor may at his own discretion appoint more OH&S representatives according to site-specific requirements. General Administrative Regulation 6 requires that the appointment or election of the OH&S representatives be conducted in consultation with employee representatives or employees (Section 17 of the Act and General Administrative Regulation 6 & 7). OH&S representatives shall be designated in writing and the designation shall include the area of responsibility of the person and term of the designation. OH&S representatives must be experienced, permanently employed by The Principal Contractor or his sub-contractors, trained and able to move freely within their designated areas of responsibility.

d) Duties and Functions of the OH&S Representatives (Section 18 of the OH&S Act)

The Principal Contractor shall ensure that the designated OH&S representatives perform their functions in respect of the workplace or section of the workplace for which they have been appointed. These functions include: conduct continuous monitoring and monthly inspections of their respective areas of responsibility, focusing on unsafe acts and unsafe conditions and report thereon to The Principal Contractor. OH&S representatives shall participate in accident or incident investigations. OH&S representatives shall attend all OH&S committee meetings. The complete list of functions can be found in Section 18 of the OHS Act.

e) Appointment of OH&S Committee (Sections 19 and 20 of the OH&S Act)

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The Principal Contractor shall establish an OH&S committee, which shall meet at least once a month, where two or more Health and Safety Representatives have been appointed. OH&S representatives must be appointed as OH&S committee members. The number of management appointed members may not exceed the number of OH&S representatives on the committee.

AO11 OPERATIONAL INTEGRITY

The operational integrity of plant, equipment, structures and protective systems must be monitored and assured on an ongoing basis throughout the project cycle. Hazards must be identified, assessed and as far as reasonably practicable, eliminated or the risks treated to as low as reasonable practicable (ALARP).

a) Construction Plant & Equipment

The Principal Contractor shall maintain all items of plant and equipment necessary to perform the work in a safe condition.

The Client reserves the right to inspect items of plant and equipment brought to site and used on site by The Principal Contractor. Should it be found that any item is inadequate, faulty, unsafe or in any other way unsuitable for the safe and satisfactory execution of the work for which it is intended, The Principal Contractor will be advised of such observation/inspection, and The Principal Contractor shall be required to repair, make safe or remove such item from operation and replace it with a safe and adequate substitute.

The Principal Contractor shall ensure that all plant, equipment, and power tools that are brought onto and used on site are:

- Appropriate for the type of work to be performed
- Placed on a register and inspected by a competent person or the authorized operator before use, daily or monthly dependent on Legislation and project requirements.
- Record inspection findings on a register that must be kept on site.
- The inspection register shall reflect the serial number of the plant, equipment or power tool.
- Maintained and used in accordance with the manufacturers recommendations
- Have adequate machine guarding fitted to all exposed rotating or moving parts, as reasonably practicable, that have the potential to cause harm
- All electrical power supply units are protected with operational earth leakage devices.
- Any defective, damaged or sub-standard equipment must be marked as unsafe for use and removed from operation as soon as possible

b) Standards and Registers

As standard project procedures, The Principal Contractor is expected to:

- Set up an initial set of registers as per the requirements of the OHS Act and Regulations.
- Complete the registers for each piece of plant, tool and equipment brought on and used on site
- Maintain a complete, continuous and comprehensive inspection and service history in these registers or checklists
- Ensure daily, weekly, monthly inspections are done and recorded for all plant, tools & equipment by a competent person as required by the OHS Act and Regulations.
- Have the inspection and maintenance records available for audit purposes.

AO12 OCCUPATIONAL HEALTH AND HYGIENE

a) Medical Fitness for Duty

All contractor employees shall undergo medical examinations and be certified fit for duty by an Occupational Health Practitioner before they are allowed to work on site.

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The medical certificate must be in the form of Annexure 3 of the Construction Regulations and stipulate the possible exposures the employee might be exposed to during the execution of the project.

It is recommended and in the best interest of The Principal Contractor to implement pre-employment as well as exit medical surveillance, especially with regards to Section 8 of the Noise Induced Hearing Loss Regulation.

b) First Aid

According to GSR 3(4), where more than 10 employees are employed at a workplace/worksites, The Principal Contractor shall ensure that there is at least one trained first aider for every group of 50 employees at the workplace/site. First Aid boxes must be provided where more than 5 employees are employed and must be readily available and accessible for the treatment of injured persons at the workplace.

To ensure immediate treatment of an injured person, it is recommended that all work crews have at least one trained first aider, with a fully stocked first aid box, irrespective of the number of people in the work crew. This is especially important when contractors work at great distances from the nearest emergency facility or town. These persons shall be appointed in writing as the first aiders with their certificates attached as proof of competency.

The minimum contents of the first aid box shall be as per the supplied list in the General Safety Regulations.

All treatments done must be recorded on a register and kept with the first aid box. A trained and appointed first aider must be responsible for the first aid box and its content. Used content must be replenished as soon as possible.

In order to ensure prompt response at the emergency facility it is recommended that the W.CI 2 forms be partially completed with the employers' details.

c) Hygiene Facilities

The Principal Contractor and his contractors shall ensure compliance to Section 30 of the Construction Regulations with regards to facilities on the construction site as well as where accommodation is provided to employees on remote sites. The Principal Contractor shall ensure that the facilities are kept clean at all times, either through a service provider or self-employed persons. The Principal Contractor shall provide employees with at least one sanitary facility for each sex and for every 30 workers, changing facilities for each sex and sheltered eating areas.

AO13 WASTE MANAGEMENT

The Principal Contractor shall comply with all applicable and relevant Waste management legislation, as well as municipal bylaws applicable to waste management.

The Principal Contractor shall remove all waste generated at the construction site on a daily basis or as soon as possible after generation to ensure good housekeeping at all times. The Principal Contractor shall have a waste management plan, which must be implemented on the construction site, and which will have the objective to ensure that waste is managed according to the Waste Management Hierarchy:

- Reduce what you can. If you cannot reduce then,
- Re-use what you can. If you cannot re-use then,
- Recycle what you can. What you cannot recycle,
- Convert into energy sources. If it cannot be converted to an energy source,

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- Dispose of in a landfill – this is only to be done as a last resort and disposed without endangering human health and without using processes or methods which could harm the environment.

AO14 HAZARDOUS SUBSTANCE MANAGEMENT

The Principal Contractor shall ensure that hazardous substances brought onto site are easily identifiable and stored according to the requirements of the General Safety Regulations, GNR. 1031 of 1986, Section 4.

Where flammable liquids are being used or stored, this must be done in a manner which would not cause a fire or explosion hazard.

The Principal Contractor shall have Material Safety Data Sheets (MSDS) readily available for flammable, hazardous and toxic chemical substances and materials brought onto site and shall ensure that his employees are trained in these MSDS's.

Flammable, hazardous or toxic chemical substances may not be stored in empty food or drink containers. Empty flammable, hazardous and toxic containers must be disposed of in a safe manner, which will prevent further use of such a container.

A survey of the construction site must be done during site establishment, to locate any asbestos. Should asbestos be located, the conditions of the Asbestos Regulations, GNR 155 of 2002 must be followed and complied with.

AO15 CONTRACTORS

a) Consultations, Communications and Liaison

OH&S liaison between the Employer, The Principal Contractor, The Contractors, the designer and other concerned parties will be through the OH&S committee. In addition to the above, communication may be directly to the Employer or his appointed agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their construction managers and supervisors, OH&S representatives and the OH&S committee. The Principal Contractor shall be responsible for the dissemination of all relevant OH&S information to The Contractors e.g. design changes agreed with the Employer and the designer, instructions by the Employer and/or his/her agent, exchange of information between subcontractors, the reporting of hazardous/dangerous conditions/situations etc. The Principal Contractors' most senior manager on site shall be required to attend all OH&S meetings.

b) Operational Procedures

Each construction activity shall be assessed by The Principal Contractor so as to identify operational procedures that will mitigate against the occurrence of an incident during the execution of each activity. This specification requires The Principal Contractor:

- to be conversant with all relevant Regulations;
- to comply with their provisions;
- to include them in his OH&S plan where relevant

c) Checking, Reporting and Corrective Actions

(i) Monthly Audit by Employer (Construction Regulation 5(1)(o))

The Employer will conduct monthly health and safety and document verification audits in compliance with Construction Regulation 5(1) (o) in order to ensure that The Principal Contractor has implemented and is maintaining the agreed and approved OH&S plan.

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The Principal Contractor will 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.

The Principal Contractor will be provided with a copy of the Health and Safety audit report within seven days after the audit. The employer or his representative may stop any Principal Contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the Client's health and safety specification and the Principal contractor's health and safety plan for the specific site.

(ii) Other Audits and Inspections by the Employer

The Employer reserves the right to conduct other ad hoc audits and inspections as deemed necessary. This will include site safety walks.

(iii) Principal Contractor's Audits and Inspections

The Principal Contractor must conduct his own regular internal audits to verify compliance with his own OH&S management system, as well as with this specification. The Principal Contractor shall furthermore ensure that each contractor's health & safety plan is being implemented by conducting periodic audits at intervals mutually agreed between The Principal Contractor and contractors, but at least once per month.

(iv) Inspections by OH&S Representatives and other Appointees

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

(v) Recording and Review of Inspection Results

All the results of the abovementioned inspections shall be in writing, reviewed at OH&S committee meetings, endorsed by the chairman of the meeting and placed on the OH&S File.

d) Project Health and Safety Management Plan

As per Section 5(1) (l) and Section 7(1) (a) of the Construction Regulations of 2014, The Principal Contractor shall develop, implement and administer a Health and Safety Management Plan. The plan shall be in writing and shall be negotiated between The Principal Contractor and the Client or designated OHS Agent and must be approved by the Client or the designated OHS Agent prior to the commencement of work on site. The plan shall demonstrate management's commitment to ensure employee health and safety as their primary objective during the contract. As a suggestion, the following elements may be used to develop the H&S plan:

- Introduction
 - Mission
 - Purpose & Scope
 - Health, Safety and Environmental Policy
 - Health, Safety and Environmental Goals
 - Plan Objectives
- Leadership and Commitment
 - Values supporting commitment
 - Roles, Responsibilities and Accountability
- Hazard and Risk Management Process

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- Effective Consultation
- Planning

- Contractor HSE Alignment
 - Sub-Contractors
 - On-Site

- Learning and Competency
 - Project HSE Training and Competency Requirements
 - Contractor & Sub-Contractor Duties
 - Minimum Training Requirements
 - Medical and Induction
 - Employee details
 - Visitors to site
 - Induction

- Involvement, Communication and Motivation
 - Safety Meetings
 - Health & Safety Behavior
 - Information and Learning

- Hazard and Risk Management on site
 - Hazardous Activities
 - Hazardous Areas
 - Hierarchy of Hazard Control
 - Hazard and Risk Identification
 - Risk Analysis and Evaluation
 - Documented safe work procedures for hazardous activities
 - Hazard and Risk monitoring plan
 - Hazard and Risk review plan

- Occupational Health and Hygiene
 - Fitness for Work
 - Hazardous Substances
 - Airborne Chemical Substances
 - Noise and Vibration
 - Personal Hygiene
 - Protection of Outdoor Workers
 - Occupational Health Services on Site

- Performance Tracking and Accountability
 - Positive Performance Indicators
 - Workplace Observations and Audits
 - Reporting

- Incident Management
 - Emergency Preparedness and Response
 - Incident Management
 - Injury Management

- Waste Management
 - Hazardous Waste
 - Non Hazardous Waste - Recyclable
 - Non Hazardous Waste – Non recyclable

- e) **Project Health and Safety File**

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The Principal Contractor shall compile a project specific Health and Safety File that consist of all the relevant project specific documentation. The Health and Safety file may consist of multiple files, which when combined should contain all the required documentation.

It is recommended that the project specific Health and Safety file contain at least the following:

- Scope and summary of the project as well as any scope changes.
- Notification of Construction Work to Department of Labour / Copy of Work Permit
- Proof of COID registration (Letter of Good Standing)
- Contractor Health and Safety Policy statement signed by management
- Mandatory Agreement – OH&S Act 37.2 (Between Employer and Principal Contractor)
- Signed Client Health and Safety specification
- Latest copy of the OHS Act and Regulations
- Company Organogram depicting Health and Safety Responsibilities, including sub-contractors
- Employee list including copy of IDs and medicals
- Project specific Health and Safety Management Plan agreed with the Employer
- Relevant OH&S Legal appointments which includes duties and responsibilities as well as competencies (training certificate)
- Copies of minutes of meetings - OH&S committee and other relevant OH&S meeting minutes
- Designs/drawings (Construction Regulation 7(1)(e))
- Site specific Fall Protection Plan (if applicable)
- Risk Assessments
- Contractor Induction material
- Waste management Plan
- Emergency preparedness (first aid, firefighting, emergency plan, etc.)
- Emergency Contact Telephone numbers
- HIV awareness program
- List of hazardous chemical substances used on site
- Material Safety Data Sheets of hazardous chemicals on site
- List of plant & equipment to be used on site
- Inspection Checklists/Registers of plant & equipment and emergency equipment
- List of Sub-contractors including type of work
- Sub-contractor 37.2 Mandatory Agreements
- Sub-contractor appointments, which shall include the type of work, The Principal Contractor is appointed for.

f) Contracting Philosophy

Any site-specific hazards and safety management expectations will be made known to The Principal Contractor prior to the work commencing on site. Legal OHS requirements contained in the OHS Act and Regulations as well as SANS Codes are the minimum requirements The Principal Contractor must apply during this contract with regards to Occupational Health and Safety. The Principal Contractor shall apply, implement and enforce the minimum OHS Act & Regulations and SANS Codes requirements.

g) Workers Compensation Registration

The Principal Contractor shall ensure that his employees are covered for any occupational injuries and illnesses in terms of the Occupational Injuries and Diseases Act 130 of 1993, which cover shall remain in place and up to date for the duration of the project.

h) HSE Non-Compliance

It is a legal duty of the Client according to the Construction Regulation 5(1) (q) that a Principal Contractor is stopped from executing any activity which poses a threat to the health and safety of

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persons: Depending on the seriousness of the non-compliance, only the specific activity may be stopped until the non-compliance is rectified or the whole operation may be stopped.

It is also the duty of every employee to take reasonable care of his own health and safety and of other persons who may be affected by his acts as per OHS Act, Section 14(a). Keeping this in mind, it is required of The Principal Contractor to ensure his employees has the right to remove themselves from any unsafe situation or work activity, without any negative consequence to them until such time as The Principal Contractor has made the unsafe situation or activity as safe as practicable possible.

i) Indemnity by Contractor

The Principal Contractor shall indemnify the Employer against and from all damages, losses and expenses (including legal fees and expenses) resulting from:

- the loss of output and delay caused by the slowing down or partial or total stoppage of work caused by:
- all or any of The Principal Contractor's workforce as a result of a dispute between all or any of the Principal Contractor's workforce and The Principal Contractor; or
- all or any of the Principal Contractor's suppliers' difficulty or impossibility to deliver goods or materials needed to perform the Works;
- Any unlawful, riotous or disorderly conduct by or amongst the Principal Contractor's personnel."

j) The Principal Contractor Conduct

Guidelines to the most important rules that shall be implemented and maintained by the Principal Contractor:

- Complete compliance to the OH&S Act 85 of 1993 and Regulations.
- Hazard Identification and Risk Assessments for all activities.
- Daily communication of DSTI talk before work commences.
- Safe access and egress to and from work areas.
- Compulsory use of lifelines, Safety Harnesses and Fall Arrestors (Lanyards to be attached at all times).
- Scaffold shall comply with Legal and SANS standards at all times.
- Good housekeeping and stacking practices.
- Safe lifting, rigging and slinging practices
- Complying with legal standards for lifting machinery & equipment.
- No lifting in wind conditions exceeding 30km/h (This is a guide and is dependent on risk assessments).
- Securing of tools, equipment and material at heights.
- Wearing of appropriate personal protective equipment as identified in the risk assessment.

Supervisors in charge are responsible for ensuring that the employees are aware of the hazards / risks involved in the work they will be doing/are doing and shall ensure the safety rules are obeyed.

No person shall act in a manner that endangers or is likely to endanger, the safety of any other person, or cause harm to any other person.

An employee, who observes any dangerous situation, shall as soon as possible inform the person who is responsible for that section of the site.

Any employee, who becomes aware of any person disregarding any safety rules, shall remind that person of the rules. If he persists in disregarding the rules, the matter must be reported to his supervisor.

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No person shall damage, alter, remove, render ineffective or interfere with anything that has been provided for the protection of the site, or for the health and safety of persons.

No person shall interfere with or use firefighting equipment without authority and training.

No person in a state of intoxication or condition that render him incapable of controlling himself shall enter or be allowed to enter the site.

No alcohol or illegal drugs shall be taken onto the site.

All safety and warning signs shall be obeyed.

Always be alert of construction vehicles as well as traffic. Never turn your back to oncoming traffic, always have a line of sight.

k) Principal Contractor and Contractor Management

The Principal Contractor shall establish, maintain and ensure that all his contractors establish and maintain HSE standards and systems as necessary and to comply with the Legal requirements as well as these HSE specifications.

The Principal Contractor shall be solely responsible for carrying out work on the project, having the highest regard for the health and safety of his employees and people in the vicinity of his work area.

i) Public Health and Safety

The Principal Contractor shall, as far as is reasonably practicable, be responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimise those dangers.

This includes:

- Non- employees entering the site for whatever reason
- The surrounding community
- Passers-by to the site.

AO16 DESIGNING FOR HEALTH, SAFETY AND THE ENVIRONMENT

Designing for safety is a process aimed at minimizing injury, death, property damage or destruction and harm to the environment, by utilizing an approach to identify and eliminate or control hazardous areas. The project Designer and Contractor must implement a process that ensures safety is incorporated in the design process, which includes temporary works as contemplated in the Construction Regulations, 2014 Section 12.

The Principal Contractor must communicate the anticipated risks and hazards resulting from the design to his employees and establish safe work procedures for the temporary works.

AO17 INCIDENT MANAGEMENT

The Principal Contractor shall ensure that a culture exists within his company that promotes the recognition, response, reporting and investigation of incidents, including near misses (near hits). The Principal Contractor must implement a procedure for reporting and investigating accidents, incidents and near misses. The Principal Contractor should have a clear objective and target to obtain zero injuries for the duration of the project and such an objective must be communicated to all employees.

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Appropriate corrective actions must be implemented and the applicable learnings must be shared within The Principal Contractors business to prevent a recurrence of the incident or to prevent the near miss from becoming an incident in future.

a) Incidents and Accidents

The Principal contractor and his contractors shall coordinate their investigation of all accidents/incidents where employees and non-employees were injured to the extent that he had to be referred for medical treatment by a doctor, hospital or clinic. The results of the investigation shall be entered into an accident/incident register, which must be updated with each accident/incident.

The Principal Contractor shall notify the relevant Client Project Manager and or Client OHS Specialist of any incident/accident within the Principal Contractors or his Contractors area of responsibility in writing as soon as possible.

Although the accident/incident is reported to the Client, the Principal Contractor has a responsibility and is required by law to report any Section 24 accidents and incidents to the Department of Labour. Any road traffic accident must be reported to the relevant authorities.

It is essential that The Principal Contractor demonstrate that corrective and preventative action has been taken to prevent a similar incident in future and that it is communicated to all The Principal Contractors affected staff. A copy of the investigation, corrective and preventative action taken as well as the attendance register of the employees who attended the discussion of the incident and the action implemented to prevent a similar incident, must be forwarded to the Client Project Manager and or the Client OHS Specialist.

Investigations must be completed for:

- Near miss incidents (To prevent it from becoming an incident).
- First aid case Incidents.
- Medical treatment case Incidents.
- Fatalities.

b) Incident Reporting

The Principal Contractor shall provide the Employer with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring. In addition, The Principal Contractor shall update monthly the Disabling Injury Frequency Ratio (DIFR) and display this information on a signboard at the site office.

The Principal Contractor is responsible for collecting, recording, calculating and reporting his and his sub-contractors Health & Safety statistics to the Client OHS Specialist.

The statistics should contain at least the following for all employees of all contractors working on the project:

- Total Number of workers
- Total Number of hours worked (on the Client project)
- Total Number of Near Miss Incidents
- Total Number of First Aid case Incidents
- Total Number of Medical Treatment case Incidents (Excluding Section 24 type incidents)
- Total Number of Section 24 type Incidents
- Preventative actions taken on incidents that have occurred.
- Communication to employees and contractors of incidents and preventative actions.

AO18 PROJECT SPECIFIC CONSTRUCTION REQUIREMENTS

The clause contains specific requirements for this Contract, which must be adhered to in addition to minimum legislative requirements.

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a) Baseline Risk Assessment

The following is a preliminary (contractor to extend to suit own requirements) list of risks identified which forms the Baseline Risk Assessment for the project prepared by the Client in terms of Construction Regulation 5(1) (a):

Risks in connection with:

- Personal health risks in connection with ablution facilities, eating areas, drinking water.
- Secure/safe storage of materials, plant and equipment
- Safety risk for working in high hazard dolomitic soil conditions
- Safety risk for personnel and equipment working in and around sinkholes and subsidences
- Secure/safe storage and use of hazardous and/or flammable materials
- Maintenance workshop - onsite repairs to construction vehicles, mobile plant & equipment.
- Existing services, e.g. water, gas, telecommunications, electrical supply and similar
- Temporary electrical installations
- Adjacent land uses/surrounding property exposures
- Boundary and access control/public liability exposures (NB: The Client/Employer is also responsible for the OH&S of non-employees affected by his/her work activities)
- **Biological hazards, e.g. bees, snakes, spiders**
- Environmental protection activities (fauna and flora)
- Environmental risks, e.g. lighting, strong winds, heavy rains, dark environments, hot/cold and wet environments
- Exposure to a water environment
- Exposure to noise
- Exposure to vibration
- HIV/Aids and other diseases such as silicosis or asbestosis, where applicable
- Commonly used construction materials and substances that potentially pose health and safety hazards. Typical materials are:
 - Substances in pressurized containers,
 - Certain cleaning substances,
 - Bitumen and tar products,
 - Epoxies,
 - Petroleum and petroleum products,
 - Lime, cement and other stabilizing agents
 - Timber preservatives
 - Paints,
- Use of portable electrical equipment including, but not limited to:
 - Angle grinder
 - Electrical drilling machine
 - Circular saw
 - Generator
 - Power washers
- Excavations including, but not limited to:
 - Ground/soil conditions
 - Trenching
 - Shoring
 - Drainage of trenches
 - Rock removal
- Welding including, but not limited to:
 - Arc welding
 - Gas welding
 - Flame cutting
 - Use of LP gas torches and appliances
 - HDPE welding (all forms of welding)
- Loading and off-loading of trucks, including material deliveries
- Manual and mechanical handling of material

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- Lifting and lowering operations
- Driving and operation of construction vehicles and mobile plant including:
 - Trenching machine
 - Vibrating drum roller
 - Plate compactor
 - Front end loader
 - Mobile cranes and the ancillary lifting tackle
 - Mobile cranes for dynamic compaction
 - Parking of vehicles and mobile plant
 - Towing of vehicles and mobile plant
- Layering and bedding
- Use and storage of nuclear density gauge tools
- Geotechnical drilling work
- Grouting of subsurface cavities
- Backfilling of trenches
- Concrete works and associated activities
- Protection against flooding
- Use of explosives
- Work with flammable liquids
- Overhead Electrical Cables
- Work adjacent or in proximity of traffic (traffic accommodation on military and public roads)
- Working in elevated positions
- Working in confined spaces – tunnelling
- Formwork and support work (temporary works) including scaffolding
- Demolition work, where applicable (structures above and below natural ground level)
- Bulk aggregate sieving plant, where applicable
- Environmental impacts such as pollution of water, air or soil
- Containing/fighting veld fires
- **Work in areas with potential old live ammunition on or below surface.**

b) Daily Site Attendance Register

The Principal Contractor shall keep a daily site register to be able to identify the entire Contractors personnel on site in case of an emergency or evacuation situation. The attendance register must include permanent as well as temporary workers working on the site.

All site visitors and any new contractors shall report to security/reception upon arrival at site. The Principal Contractor will only be granted first time access to work on the site if all required documentation has been provided and approved.

All visitors need to sign an attendance register when visiting the site. Visitors include all persons which are not permanently working on the site, but excludes temporary site workers. Visitors must undergo site induction training before they are allowed on site to make them aware of the site dangers.

c) Emergency Numbers / Emergency Evacuation

A list with emergency numbers must be readily available to first aiders and supervisors. Emergency numbers must be site specific and must display the nearest emergency facilities.

The Principal Contractor shall identify and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in The Principal Contractor's OH&S plan, and communicated as part of induction training. It is the responsibility of the first aid worker, together with the construction supervisor, to make an assessment regarding the severity of injuries and which actions are appropriate. For example: transfer to a medical facility by ambulance or helicopter.

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The Principal Contractor must implement an emergency evacuation procedure on site to ensure that in case of an emergency, all staff will leave their place of work when the emergency siren is sound and proceed to the demarcated emergency assembly point. The emergency assembly point must display the sign "Emergency Assembly Point".

An evacuation route diagram must be displayed and visible at strategic points in buildings and on notice boards.

All staff working on site must be given awareness training on the emergency evacuation procedure and evacuation drills must be exercised to ensure all staff know the correct procedure to follow in case of an emergency.

d) Site Security

Certain areas where work must be carried out, is recognized unsafe areas and certain other areas may from time to time become unsafe, due to 3rd party actions. The Principal Contractor must as far as reasonably possible anticipate unsafe areas and must ensure that his site staff is safe from 3rd party actions, which include but is not limited to:

- Unrest
- Violent Demonstrations,
- Theft,
- Injury from 3rd parties at all times.

The Principal Contractor must, when work is to be carried out in the above-mentioned areas, make provision for security services to accompany site staff during the execution of their work, as The Principal Contractor is responsible for the Health, Safety and Security of his own staff. The provision for security services must form part of The Principal Contractors tender.

e) Personal Protective Equipment

Comply with General Safety Regulations, Section 2

The Principal Contractor shall identify the hazards in the workplace and deal with them. He must either remove them or, where impracticable, take steps to protect workers and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered. The hierarchy of hazard elimination must be followed before the option of personal protective equipment is considered. The following hierarchy of controls must be followed:

- Elimination
- Passive Controls
 - o Substitution – Using a cherry picker or man-lift instead of a ladder.
 - o Engineering Controls – Installing barrier railings; Installing stairs instead of using vertical ladders.
- Active Controls
 - o Administrative policies and procedures
 - o Personal protective equipment

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

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

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

The Principal Contractor shall include in his OH&S plan the PPE he intends issuing to his employees for use during construction and the sanctions he intends to apply in cases of non-conformance by his employees. Conformance to the wearing of PPE shall be discussed at the weekly inspection meetings.

The Principal Contractor shall ensure that all his personnel, excluding those who are permanently office bound, are equipped with reflective safety jackets and that these are worn at all times when working on site. Any person found not wearing a reflective jacket on site must be removed from the site until such time as he is in possession of and wearing a reflective jacket. Reflective safety jackets shall be kept in good condition and any jackets that are ineffective must immediately be replaced by The Principal Contractor.

f) Site Supervision

Comply with Construction Regulation, Section 8

The Principal Contractor shall appoint a competent Construction Manager who shall be responsible for the construction activities and for ensuring occupational health and safety compliance on the construction site.

g) Working in Elevated Positions

Comply with Construction Regulation, Section 10

The Principal Contractor shall ensure that a fall protection plan, developed by a competent person who is designated as the Fall Protection Plan Developer, is available on site and understood by all employees who will be working in elevated positions.

All employees working in elevated positions shall protect themselves from falls by wearing a full body harness, and the lanyard shall be attached as far as possible above the head of the worker to a life line or other approved and tested anchor point.

In addition to obvious elevated work activities, work activities which include:

- Working on the edge of an excavation where there is a risk of falling into the excavation;
- Work on the edge of a vertical drop where there is a risk of falling;
- Work on top of tanker trucks and tanks;

Shall be considered work in elevated positions and Section 10 of the Construction Regulations must be adhered to at all times. The hierarchy of controls must be implemented when such activities are carried out. As a minimum the employee must wear PPE, which shall include a full body harness attached to a restraint.

h) Structures

Comply with Construction Regulations, Section 11.

The Principal Contractor shall ensure that all practicable measures are taken to prevent the uncontrolled collapse of new or existing structures or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work. No structure may be loaded in a manner which would render it unsafe.

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When a structure is of temporary nature, all conditions as required by the Construction Regulations Section 12 - Temporary Works must also be complied with.

i) Excavations

Comply with Construction Regulations, Section 13

The Principal Contractor shall ensure that all excavations are carried out under the supervision of a competent person who has been appointed in writing as Excavation Supervisor.

The Principal Contractor must evaluate the stability of the ground before excavation work begins as well as during excavation work.

Excavations must be barricaded to prevent unauthorized access.

Material removed from excavations, as well as heavy machinery and construction vehicles, must not be closer than 1 meter of the edge of the excavation, to prevent additional loads on the excavation edge, which could cause cave-ins, to prevent construction vehicles from falling into the excavation and to prevent the accumulation of carbon monoxide gas inside the excavation.

The principal contractor and its contractors must cause every excavation which is accessible to the public or which is adjacent to the public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –

- Adequately protected by a barrier or fence and as close to the excavation as is practicable; and
- Provided with warning illuminants or any other boundary indicators that are clearly visible at night or when visibility is poor.

People working in the excavation must be adequately protected from cave-ins, by means of protection systems such as trench boxed and shielding and must have a safe means of access into the excavation and egress from the excavation.

j) Scaffolding

Comply with Construction Regulations, Section 16, General Safety Regulations, Section 6 and SANS 10085 – The Design, erection, use and inspection of access scaffolding

The Principal Contractor shall appoint a competent person in writing as scaffolding Supervisor. Scaffolding inspectors and Scaffolding Erectors must be trained and found competent to carry out scaffolding work. It is important to note that only competent scaffold erectors are allowed to build the scaffolding. The scaffold inspector is not allowed to build the scaffold with the scaffold erector team.

Scaffolding shall be erected according to SANS 10085 and shall be tagged “safe for use” after inspection indicated that the scaffold is safe to use. The inspection of the scaffold shall be in writing and proof thereof shall be available for any user of the scaffold as well as for audit purposes.

Scaffold left erected while The Principal Contractor is not in attendance, must be tagged with a “Not Safe for Use” tag and all reasonably practicable measures must be taken to prevent unauthorised access to the scaffold.

Scaffold must be inspected by the competent scaffold inspector on completion of the scaffold build, weekly thereafter or following severe weather conditions.

Hazards such as overhead power lines must be identified before the scaffold is build and must be reflected in the risk assessment.

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When using mobile scaffold, employees and materials must be removed from scaffold before moving the mobile scaffold. Hazards such as overhead power lines must be identified before moving mobile scaffold and must reflect in the risk assessment.

k) Suspended Platforms

Comply with Construction Regulation, Section 17, SANS 10295-2 - Suspended access equipment Part 2: Temporary suspended platforms (TSPs)

All suspended platform work must be carried out under the supervision of a competent appointed Suspended Platform Supervisor. Suspended platform erectors, operators and inspectors must be competent.

The Principal Contractor must be in possession of a certificate of design for the use of the suspended platform system.

l) Cranes

Comply with Construction Regulation, Section 22, General Machinery Regulation, and Section 18.

Crane operators must be competent to carry out their work safely and must be in possession of a valid medical certificate of fitness, issued by an occupational health practitioner.

The wind factor should always be taken into consideration when operating cranes and that a wind speed device is fitted that provides the operator with an audible warning when the speed exceeds the design engineer specification. Upon noticing that the wind speed is equal or more than the specified speed limit, the operator should stop immediately.

m) Construction Vehicles & Mobile Equipment

Comply with Construction Regulation, Section 23, National Road Traffic Act, 1996

Construction vehicle operators must have received training to operate the class of construction vehicle or mobile equipment and must be in possession of an operator's card as proof of competency. Construction vehicle operators must be authorised in writing and have a medical certificate of fitness issued by an occupational health practitioner to operate the construction vehicle and/or mobile equipment.

n) Electrical Equipment

Comply with Construction Regulations, Section 24.

The Principal Contractor shall take adequate steps to ascertain the presence of and guard against danger to workers from electrical cables or apparatus which is under, over or on the site.

The exact location of underground electric power cables must be determined before any excavators are used for excavation purposes.

The location of overhead electrical cables must be assessed when working with cranes and lifting equipment. Injury may be possible from touching the electrical cables with the crane boom, or from arching when the crane boom comes too close to the electrical cable.

All temporary electrical installations must be inspected at least once a week by a competent person and the records of the inspections must be recorded in a register which must be kept on site.

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Electrical machinery and extension cords must be in a serviceable condition and must be inspected on a daily basis before use on a construction site by the authorised operator and the inspection checklist must be kept on the construction site.

Comply with Electrical Installation Regulations.

All electrical installations shall be inspected and approved by an accredited electrical inspector and a valid Certificate of Compliance must be issued for the installation.

All electrical installations carried out on site (permanent and temporary) must be in accordance and comply with the Electrical Installation Regulations.

All power supplies and generating units must be fitted with a functional earth leakage device.

o) Temporary Storage of Flammable Liquids

Comply with Construction Regulation, Section 25 and General Safety Regulations, Section 4

The Principal Contractor must ensure storage areas of flammable liquids are well ventilated and "No Smoking" signs are placed at the entrances and ventilation ducts of the storage areas. Firefighting equipment must be available in suitable positions around the storage areas.

The Principal Contractor must ensure that good housekeeping is practiced in and around the flammable storage areas.

p) Water Environments

Comply with Construction Regulation, Section 26.

The Principal Contractor must ensure that a lifejacket forms part of the employees PPE and is worn when the employee is exposed to the risk of drowning, by falling into water.

The risk assessment must make provision for the rescuing of persons in danger of drowning and for preventing employees from falling into the water.

When working over water environments, Section 10 of the Construction Regulations – Fall Protection will also apply.

q) Housekeeping

Comply with Construction Regulation, Section 27, Environmental Regulations for Workplaces, Section 6(3).

The Principal Contractor shall ensure that suitable and acceptable housekeeping is continuously implemented and maintained on the construction site. Off-cuts and waste must be removed by the end of the shift or as soon as practicable.

r) Stacking & Storage of Material, Plant & Equipment

Comply with Construction Regulations, Section 28 and General Safety Regulations, Section 8.

The Principal Contractor shall appoint a competent person in writing with the duty of supervising all stacking and storage operations on site.

Stacking shall only take place in areas specifically demarcated for this purpose. Circular items must be secured with wedges or chocks.

Items removed from a stack shall only take place from the top most layer of the stack.

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Stacks shall not obstruct any fire extinguishing equipment, first aid equipment, electrical switchgear (DB Boxes) and ventilation or lighting installations.

Unstable stacks must be broken down immediately.

s) Fire Precautions

Comply with Construction Regulation, Section 29.

The Principal Contractor must provide his own firefighting equipment that is within the service date and safe for use. Firefighting equipment must be on a register and inspected by a competent person who has been appointed in writing.

Suitable and sufficient fire extinguishing equipment must be placed at strategic locations and a sufficient number of firefighters must be available, which must be trained in the use of it.

The Contractor shall ensure his activities are not the cause of veld fires. The contractor shall provide appropriate equipment to protect the works and material on site during a veld fire

t) Intoxicating Liquor and Drugs

Comply with General Safety Regulations, Section 2A.

The site limit for intoxication is set to zero to complement a vision of zero tolerance.

Any person found to be intoxicated, or consuming intoxicating liquor or illegal drugs, will not be allowed onto the premises and/or will be removed from the premises.

The Principal Contractor has the right to test any person entering the premises for intoxicating liquor or illegal drugs and may refuse entrance on the basis of the outcome of the test.

The Principal Contractor shall ensure that employees taking prescription medicine informs The Principal Contractor of such and shall ensure that the side effect of such medicine does not constitute a hazard to the employee himself or people working in close vicinity to the employee.

u) Confined Space Work & Tunnelling

Comply with Construction Regulation, Section 15 and General Safety Regulations, Section 5.

The Principal Contractor shall ensure that only authorized persons enter confined spaces.

An entrance log must be kept to ensure people are not left inside the confined space. Adequate air monitoring must be carried out before entering the confined space. When air monitoring indicated the oxygen to be less than 20% by volume, the confined space must be purged and ventilated to obtain a safe atmosphere or self-contained breathing apparatus must be used.

v) Site Services

The Principal Contractor shall provide and maintain on the Site adequate and suitable sanitary services and a supply of potable water for all persons engaged in managing and working on the construction site and, if necessary, similar facilities elsewhere for such personnel off the Site.

(i) Drinking Water

The Principal Contractor must ensure that an adequate supply of potable drinking water is available for all persons engaged in managing and working on the construction site and, if

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necessary, similar facilities elsewhere for such personnel off the Site. Employees working in hot conditions must consume enough water per hour to prevent dehydration.

Where water is unsafe for human consumption, it must be so indicated by means of adequate signage.

(ii) Accommodation

The Principal Contractor shall comply with the requirements of Construction Regulation 30 with regards to employee's facilities and accommodation. Reasonable and suitable living accommodation must be provided to employees who are far removed from their homes.

(iii) Traffic Accommodation

The Principal Contractor must ensure that the traffic is properly organized and controlled in any work situation by providing adequate signaling or other control arrangement to guard against the dangers relating to the movements of vehicles and plant. The plant and vehicles are equipped with an automatic acoustic reversing alarm.

When the Principal Contractor is executing night work a permission should be sourced from the Engineer. The Principal Contractor must put in place visible or reflective signs that can be seen by motorist at a distance. If a stop and go method is used flag persons must be properly trained on how to control the traffic. The Principal Contractor must develop a clear Traffic Management Plan.

w) Outbreak of illness

- In the event of any outbreak of illness of a highly contagious or epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the relevant authorities.

x) Training

All employees shall be trained in the tasks they are to perform and in use of the material, plant and tools they are required to use.

Before any work commences and thereafter at such times as may be determined in the risk assessment, the Contractor shall ensure that all his employees on site are informed, instructed and trained by a competent person regarding the risks and hazards identified in the risk assessment and their related and other work procedures.

Every employee shall carry proof of his or her health and safety induction training.

y) Audits by the Employer

- The Contractor shall permit the Employer to regularly audit, at an agreed interval, the implementation and maintenance of the approved health and safety plan and shall co-operate and provide all the required documentation, as may be required, in this regard.

As a result of such audits the Employer may order improvements to be made to the health and safety plan.

z) Variations

Should any variations be ordered or design amendments issued the Contractor shall evaluate all the associated potential hazards to ensure that the health and safety aspects of the work ordered are taken into account.

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AO19 MEASUREMENT AND PAYMENT

AO19-1 Basic principles and deemed inclusive costs

In addition to those aspects covered by AO-19-2 and AO-19-3 below, Occupational Health and Safety aspects related to particular items of work will be covered by the tendered sum or rate for that work as measured in the various bills of quantity.

AO19-2 Scheduled fixed charged items

Items scheduled hereunder shall be measured and paid in accordance with the provisions of SABS 1200 A Clause 8.2.1.

AO19-2.1 General safety obligation.....Unit: Sum

Compliance with the general health and safety obligations will be measured and paid by the sum as a fixed charge item for the duration of the project.

The tendered sum(s) shall cover the cost, not included under the scheduled work items (see AO19.1) nor under AO-19.2.2 to AO-19.2.5 below, of establishing and maintaining, on an on-going basis, the general health safety systems and general compliance with the Occupational Health and Safety Act and its Construction Regulations, this PARTICULAR SPECIFICATION AO: OCCUPATIONAL HEALTH AND SAFETY as well Additional Specification (section C3.4): OCCUPATIONAL HEALTH & SAFETY SPECIFICATION (National Department of Public Works).

AO19-2.2 Risk assessment.....Unit: Sum

The tendered sum shall cover the cost of carrying out a risk assessment required in terms of this Specification at the start of the Contract and any subsequent risk assessment that is proved necessary as the work proceeds and the inclusion thereof in the Health and Safety plan.

AO19-2.3 Health and safety plan.....Unit: Sum

The tendered sums shall cover the Contractor's cost of the preparation, approval process, maintenance and implementation of an approved health and safety plan required in terms of this PARTICULAR SPECIFICATION AO: OCCUPATIONAL HEALTH AND SAFETY as well as Additional Specification (section C3.4): OCCUPATIONAL HEALTH & SAFETY SPECIFICATION (National Department of Public Works).

AO19-2.4 Construction Safety Officer and other appointments.....Unit: Sum

The tendered sums shall cover the Contractor's cost of the training and appointment of all safety officers and related staff for duration of the contract. The staff shall be responsible for all tasks related to the implementation and management of the health and safety plan required in terms of this PARTICULAR SPECIFICATION AO: OCCUPATIONAL HEALTH AND SAFETY as well as Additional Specification (section C3.4): OCCUPATIONAL HEALTH & SAFETY SPECIFICATION (National Department of Public Works).

AO19-2.5 Training.....Unit: Sum

The tendered sum/s shall cover the cost of the required training of all staff related to health and safety related matters.

AO19-2.6 Medical assessment of employees.....Unit: Sum

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The tendered sum shall cover the cost of having the all project employees medically assessed with regard to their medical fitness for the work they will be required to perform and/or vehicles or plant they are required to operate and the provision of the appropriate certificate.

AO19-3 SCHEDULED TIME RELATED ITEMS

Items scheduled hereunder shall be measured and paid with each progress certificate and shall be based on the value of the works certified for payment to the contractor.

AO19-3.1 Construction Safety Officer and other appointment.....Unit: Sum

The Construction (Health and) Safety Officer and other appointments will be measured and paid as a proportional amount based on the proportional progress value of the measured works in relation to the original tender sum. The total amount tendered shall be fixed for the duration of the contract and will not be adjusted should the value of the works exceed the original tender amount or should an extension of time be granted in terms of the contact.

The tendered sum shall cover the cost of the provision of a Construction (Health and) Safety Officer and such other appointments of competent persons as required on the site in terms of the Occupational Health and Safety Act as well this specification.



public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

OCCUPATIONAL HEALTH AND SAFETY SAFETY, HEALTH AND ENVIRONMENTAL SPECIFICATION

FOR

**Repair and Replacement of Heat Pumps:
KIMBERLEY: DCS:TSWELOPELE CORRECTION
CENTRE**

MANAGED BY

THE DEPARTMENT OF PUBLIC WORKS

Project Manager: Sandiso Cosa

OHS Manager: Wendy Mbolekwa

1. INTRODUCTION

This Health and Safety Specification has been prepared in terms of Client's responsibility [Construction Regulation 5(1)] to provide the principal Contractor and Contractors with a documented Specification of all Health and Safety requirements pertaining to the associated works on the proposed construction site/so as to ensure the health and Safety of all persons affected by the works. This health and Safety specification highlights, but in no way replaces legal requirements that the principal Contractor and Contractors are bound to comply with in terms of the Department of Public Works program.

- The client has made provisions in the tender for the Principal Contractor to price for the cost of health and safety measures before and during the construction process [Construction Regulation 5(1)(g)]. The Principal Contractor in turn needs to make the same provision when Contractors (Sub-Contractors) tender or quote on work [7(c)(1)].
- The principal Contractor and Contractors are required to prepare a Health and Safety plan based on the Client's health and Safety Specification, which shall be applicable from the date of commencement of and for the duration of work [Construction Regulation 7(1)(a)]. This documented plan must be based on a Hazard Identification and Risk assessment (HIRA) which will serve to identify the hazards, and their associated risks, anticipated for the scope of works [Construction regulation 9].

Principal Contractor tendering must provide the client with an appropriate Preliminary Hand Safety Plan (including a Preliminary Hazard Identification and Risk Assessment) as in Construction Regulation 5(1). This plan must be submitted with the tender.

2. APPLICATION

The Health and Safety specification contains clauses that are applicable to occupational health and safety in construction and the document is intended to impose pro-active controls associated with the activities, plant machinery and other aspects of the proposed construction work that impact on health and safety of persons, by means of a documented H&S Plan prepared by Principal Contractors.

Compliance to the requirements of the OHS act and relevant legislation is in addition to the requirements of the H&S Specification and forms parts of the Principal Contractor's responsibility. The Client and Client's agents will monitor the Principal Contractor to ensure that the Principal Contractor and Contractors comply with the requirement of OHS Act and will not prescribe to the Principal Contractor how such compliance is to be achieved.

3. PURPOSE

The purpose of the Health and Safety Specification is to provide the Principal Contractor and Contractor's tendering for the proposed construction work and /or appointed for the above mentioned construction work with the necessary detail of all health and safety requirements, and hazards pertaining to the associated scope or works, so as to enable the principal Contractor and Contractors to develop a Health and Safety Plan-to be implemented on site in order to ensure the health and safety of all persons while undertaking the said works.

4. REFERENCE DOCUMENTS AND HEALTH AND SAFETY STATUTORY REQUIREMENTS

The following Acts and Regulations are referred to in this document followed by their abbreviations in brackets. Note that this is not an exhaustive list and other documents may be referred to if necessary in order to compile **your Site Specific Health and Safety plan**:

4.1 Occupational Health and Safety Act,(Act No.85 of 1993)-[OHSA] and Regulations as follows:

- Construction Regulations[CR]
- General Administrative Regulations[GAR]
- General Safety Regulations[GSR]
- Environmental Regulations for Workplaces[ERW]
- General machinery Regulations [GMR]
- Hazardous Chemical Substances Regulations[HCSR]
- Electrical Installations Regulations[EIR]
- Electrical Machinery Regulations[EMR]
- Pressure Equipment Regulation [PER]

4.2 Compensation for occupational Injury and Diseases Act-[COIDA]

4.3 South African National Standards, SANS 10147:2014

4.4 Act, Regulations and site safety rules applicable to Department of Public works Construction Sites.

With regards to workplace health and safety, the following Acts, Regulations and safety rules shall apply to all Department of Public works Construction Site and must be fully complied with at all times by all contractors on site:

- Occupational Health and Safety Act(85 of 1993) and Regulations
- Compensation for Occupational Injuries and Diseases Act and Regulations
- This Health and Safety Specification
- Any other relevant statutory laws, including Municipal By-laws where applicable
- As well as any amendments that may arise from time to time;
- As well as any draft amendments to legislation-it is good practice to comply

4.5 Contractor's General Requirements for Health and Safety

4.5.1 The contractor shall be solely responsible for carrying out the work under the contract.

4.5.2 The contractor shall have the highest regards for health and safety of its employees, the Company and any persons at or in the vicinity of the site. This regard shall extend to include the works, temporary work materials, the property of third parties and any purpose relating to the contractor carrying out its obligations under the Contract.

- 4.5.3 The contractor shall initiate and maintain safety programmes to conform to all applicable safety and health laws or other requirements, including ground rules, and the project health and safety specification.
- 4.5.4 The contractor shall, at its own cost, erect and maintain safeguards for the protection of workers and public.
- 4.5.5 The contractor shall manage all reasonably foreseeable hazards created by performance of the work under the contract.
- 4.5.6 Provide all things and take all measures necessary for maintaining proper personal hygiene, ensuring safety of persons and property and protecting the environment at or near the site.
- 4.5.7 Avoid unnecessary interference with the passage of people and property at or near the site.
- 4.5.8 Prevent nuisance and excessive noises and unreasonable disturbances in performing the work under Contract.
- 4.5.9 Be responsible for the adequacy, stability and safety of all of its site operations, of all its methods of design, construction and work and be responsible for all of the work, irrespective of any acceptance, recommendation or consent by the Client, its Contractors, employees, agents and invitees, or any Government body.
- 4.5.10 The contractor shall comply, and shall be responsible for ensuring that all of its subcontractors comply, with the relevant statutory regulations for safety and the Client's requirements included in the contract.

4.6 Site Rules for Contractor

The site rule for contractors' document is the minimum standard with regard to specifications for construction work on this site. Contractors may have existing standards for each specific trade, but where conflict may arise between the contractor's and these Site rule for contractors, the more stringent shall apply.

4.6.1 Rules of Conduct

Contractors and all employees under their control, including any visitors brought onto site must adhere to the following Rules of Conduct on Site:

- Partake of ,possess or sell drugs or alcoholic beverages on site. Any employee or visitor whose actions and demeanour show symptoms of possible narcosis or drunkenness shall be removed from site.
- Indulge in practical jokes, horseplay, fighting or gambling.
- Make use of water from fire hydrants.
- Destroy or tamper with safety devices, symbolic signs or wilfully and unnecessarily discharge fire extinguisher.
- Bring onto site or have in your possession a firearm, lethal weapon ,camera, or any other recording device, unless authorised to do so
- Assault, intimidate or abuse any other person
- Operate construction equipment (vehicle or plant) without the necessary training and authorisation.
- Display insubordination toward any supervisor, foreman or manager in respect to carrying out of properly issued instructions or orders for health and safety reasons.
- Negligently, carelessly or wilfully cause damage to property of others.

- Refuse to give evidence or deliberately make false statements during investigations.
- Enter into any areas where you have no business unless authorised to do so by the person in charge.
- Bring animals onto site.

Insubordination towards any foreman, supervisor or manager could lead to removal from site and or dismissal and or prosecution. Except insofar as the principles of common law, or conditions as determined by any relevant statutes are concerned, the decision of the Client or his agent shall be final and binding in respect of any disputes that may arise from the interpretation of these rules.

5 Definitions

The following definitions apply.

For the purpose of the General Health and Safety Specification, the abbreviations or definitions given hereunder shall apply:

“CR” refers to the Construction Regulations, 2014

“GHSS” refers to this document (the General Health and Safety Specification (including any project specific annexures that the engineers and designers could attach.

“OHSA” refers to the Occupational Health and Safety.

“S” refers to a section in Occupational Health and Safety Act of 1993.

“H&S” refers to Health and Safety.

“Client” Department of Public Works

Incident; means any unplanned event that causes, or has the potential to cause, an injury or illness and/or damage to equipment, buildings, plant or the natural environment. Incident range from near miss incidents to serious incidents and emergencies.

“Near Miss” means an incident which has the potential to cause an injury or illness or damage to company.

“Regulations” means, specifically, the Construction Regulations, 2003 as issued on 18 July 2003, under the Occupational Health and Safety Act of 1993, but not excluding the other applicable regulations existing under the Act.

“Site” means the lands and other places, made available by the Municipality or the Client for the purposes of the Contract, on under over in or through which the construction work is to be executed or carried out.

“Principal Contractor” and contractor shall be as defined in the Regulations.

Construction Work [CR1]:

Means any work in connection with-

- a) The erection, maintenance, alteration, renovation, repair, demolition or dismantling of or an addition to a building or any similar structure.

- b) The installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling.
- c) The construction, maintenance, demolition or dismantling of any bridge, dam canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- d) The moving of earth, clearing of land or making of an excavation or work on any similar type of work.

Hazard, Identification, Risk assessment and risk control (HIRA)

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

Site

Means the area in possession of the Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas, which are reasonably required for the activities for the Contractor, and approved for such use by the client.

Hazards

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

Risk

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

Construction Supervisor [CR 8(1)]

Means a full time, competent employee appointed in writing by the Contractor to supervise construction work. The appointment, as required by OHSA, shall stipulate health and safety responsibilities, area of responsibility and the proposed duration of the project.

Hazardous Chemical Substance (HCS)

Means any toxic, harmful, corrosive, and irritant or asphyxiate substance, or mixture or substance for which an occupational exposure limit is prescribed, or an occupational exposure limit is not prescribed but which creates a hazard to health.

Construction Plant

Encompasses all type of plant including but not limiting to, cranes, piling frames, boring machines, excavators, dewatering equipment and road vehicles with or without lifting equipment

Contractor [CR 1]

Means an employer who performs construction work and includes principal contractors and sub-contractor.

Health & Safety Plan (HSP) [CR 1]

Means a documented plan, which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified

The plan shall be applied from the date of commencement of and for the duration of construction work [CR 5(1)]

Health and Safety File (HSF) [CR1]

The file holding all documentation and records on health and safety for the project, which shall be available at all times for evaluation, and copy of which will be forwarded to the client upon completion of the project.

Disabling Injury Frequency Rate (DIFR)

The number of disabling injuries multiplied by a constant (man hours relative to period worked divided by total man hours worked over a rolling period (usually 12 months, but can be less).

Disabling Injury Severity Rate (DISR)

The number of days lost due to (DI's) multiplied by a constant (man hours relative to period worked) divided by total man hours worked over a rolling period (usually 12 months, but can be less).

Confined Space

An enclosed, restricted or limited space in which, because of its construction, location or contents, or any work carried on therein, a hazardous substance may accumulate or an oxygen deficient atmosphere may occur, and includes any chamber, tunnel, pipe, pit, sewer, container, valve, machinery or object in which a dangerous liquids or dangerous concentration of gas, vapour, dust or fumes may be present.

6. Responsibility of Contractors for Construction Work [CR 4, 7, 8]

6.1 Notification of Intention to Commence Construction Work [CR 4]

The principal contractor shall notify the Provincial Director of the Department of labour before any work commences, in accordance with the following requirements:

- The demolition of a structure exceeding a height of 3 meter; or
- The use of explosives to perform construction work; or
- The dismantling of fixed plant at height greater than 3 meters; or
- The work exceeds 30 days or will involve more than 300 person days of construction work; and
- Includes excavation work deeper than 1 meter; or
- Includes working at height greater than 3 meters above ground or landing.

The notification and submission to the local Department of labour must be done on a form similar to that shown in **Annexure A** of this document and a copy of the completed form kept in the HSF for inspection by inspector, the client or an employees

6.2 Principal Contractor's Responsibilities [CR 7]

6.2.1. Compile a HSP [CR 7]

- 6.2.2.** Ensure co-operation between all contractors [CR 7(c), to comply with the Act
- 6.2.3.** Ensure compliance to the Act in terms of [CR 5(v)]
- a) Provide relevant sections of these specifications to contractors as required
 - b) Appoint each contractor in (a) above in writing. Only contractors who have the necessary competencies and resources may be appointed [CR 7(c) (iii)]
 - c) Ensure each contractor's HSP is implemented and maintained on site
 - d) Stop any contractor from work which is not in accordance with HSP's or which pose a threat to health and safety of persons
 - e) Sufficient information is provided to contractors where there are changes to design and construction
 - f) Ensure every contractor is registered and in good standing with the Compensation Commissioner
 - g) Ensure potential contractors have made provision for the cost of health and safety measures.
- 6.2.4** Negotiate and approve the HSP of each contractor [CR 7()]
- 6.2.5** All HSP's including the principal contractor's to be available on site [CR 7(b)]
- 6.2.6** All HSF's including the principal contractor's to be available on site [CR 7(d)]
- 6.2.7** A consolidated HSF to be handed over to the client on completion of construction including records of drawings, designs etc. [CR 7(e)]
- 6.2.8** HSF to include updated list of all contractors, the agreements and their type of work [CR 7(f)]

6.3 Contractor's Responsibilities [CR 7] (including sub-contractors)

- 6.3.1 Provide their HSP to the principal contractor[CR 7(2)]
- 6.3.2 Where a contractor appoints another contractor(sub-contractor) it is the responsibility of that contractor to apply 4.2 above as if he were the principal contractor [CR 7(3)]
- 6.3.3 No contractor to appoint another contractor(sub-contractor) unless the latter has the necessary competency and resources to perform the required work [CR 7(3)]
- 6.3.4 To provide any information which affects the health and safety of any persons at work to the principal contractor

6.4. Supervision of Construction Work [CR 8]

The appointments embodied in this regulation are as follows:

- 6.4.1 Construction supervisor [CR 8(1)]
- 6.4.2 Assistant Construction Supervisor [CR 8(2)]
- 6.4.3 Safety Officer [CR 8(5)] or Safety Representative OHS Act S17 (1)

The detailed requirements of these appointments can be found under the relevant regulation.

The contractor shall appoint a dedicated competent Safety Officer who will perform his duties at the work Site for the duration of the work under the Contract.

6.5. Legal Appointments

The principal contractor shall ensure copies of the appointment letters of all responsible persons appointed on site will be kept in the HSF. All legal appointments shall be conducted in accordance with the requirements set out in the OHSA and as per this specification. The tables below set out the appointment protocols for CR and OHSA.

NB: It should be noted that these represent complete lists and not all these appointments may be required.

6.5.1

The responsibilities of each appointment are detailed in the relevant form, which are signed by both the authorised person and the appointee and kept in the Health and Safety File. An example of an appointment form for a Construction Supervisor can be found under Annexure B.

7. Documentation and Procedures

All required HSE documentation for the construction work, shall be kept in the HSF, which shall be available on site. The Construction Supervisor shall be responsible for the file and the Project manager shall ensure that documentation is valid and up to date. The procedures to be used for the project are to be in accordance with contractor policy and as per the outcome of the HIRA exercise. It is required that the documentation is filled in an orderly fashion for easy access. The following sections are suggested:

- Policy permits etc.
- Health & safety plans, specifications
- Appointments
- Incidents management
- Inspection check lists
- Risk assessments
- Training
- Safe work Procedure
- Hazardous Chemical Substances

8. Application of COIDA and OHSA to Construction Work

8.1 Compensation of Occupational Injuries and Diseases Act, Act No.130 of 1993(COIDA)

Every contractor shall provide proof of registration and letter of good standing with the Compensation Commissioner.

8.2 Occupational Health and Safety Policy [OHSA 7]

Every contractor's OH&S Policy statement should be available for security and as evidence of their commitment to their employees' occupational health and safety

8.3 Health and Safety Training and Competency

Training of personnel is a necessity and a legal requirement when required. A record of all training shall be kept and provided on request.

8.3.1 Induction Training

The principal contractor shall be responsible for the induction of all personnel entering the site including visitors, inspectors etc. Contractors doing specific construction work shall be responsible for the induction of their employees with respect to that specific work. Records to be kept of all personnel that undergo induction training.

8.3.2 Awareness Training

In addition, the client would favour awareness training to be carried out such as weekly Toolbox Talks on relevant topics e.g. wearing PPE, manual lifting, safe use of portable electric tools etc.

8.3.3 Competency and CV's

Where applicable, valid copies of certificates of competency of appointed personnel to be provided and kept in the HSF. Other training requirements such as those identified through the HIRA process, to be completed and proof of that training also kept in the HSF. Where competency is achieved through experience, a brief CV will be required.

8.3.4 Specific OH&S Training

Valid certificates of training from registered service providers preferably accredited by the appropriate SETA are required for First Aiders, H&S Reps, Fire Marshals, Fire Equipment Inspector etc.

8.3.5 Medical Fitness

All work in elevated positions [tower crane operators (CR 20(g)), workers on elevated structures requiring fall protection (CR 8 (2b)), suspended platform workers (CR 15(12a))] and operators of construction vehicles and mobile plant (CR 21(d)) require certificates of physical and psychological fitness.

Valid certificates of training from registered service providers preferably accredited by the appropriate SETA are required for First aiders, H&S reps, Fire Marshals (CR 221 Fire Equipment Inspectors) etc.

8.4 Hazards and Potential Hazardous Situations [OHSA 13]

The principal contractor is responsible to ensure that all contractors and any visitors are warned of any hazardous or potentially hazardous situations, which may affect them on site and shall put any additional measures in place to assist in mitigating the risk of these hazards.

8.5 Health and Safety Reps [OHSA 17 and 18]

The principal contractor shall be responsible to ensure compliance to this section of the OHSA as required and to ensure similar compliance of all contractors. If a rep is not required, the appointed Safety officer will be responsible for these functions.

8.6 Health and safety Committee [OHSA 19 & 20]

The principal contractor shall be responsible to ensure compliance to this section of the OHSA as required. If a committee is not convened, health and safety matters will need to be tabled and discussed at site meetings.

8.7 General Record Keeping

The principal contractor shall ensure that all Health and safety records, required by OHSA and Regulation are kept for reference purpose and auditing.

8.7.1 Inspections

The principal Contractor shall keep all records of inspections undertaken during the contract. An assessment will need to be made of what inspections are required and their frequency. The principal contractor is also responsible to ensure compliance to this requirement by all contractors

8.7.2 Audits [CR 5(o) and 5 (p)]

The client's agent shall carry out regular audits on the principal contractor at least once per month. Similarly, principal contractor shall be responsible for carrying out regular audits on their contractors at least once per month. The results shall be tabled for action and discussed at health and Safety Committee meetings or site meetings as appropriate.

8.8 Incident Management and Emergency Plans

The principal contractor shall create and Emergency Plan for the construction site. The plan shall be clearly laid out for all types of emergencies including responsibilities, evacuation routes, siren, emergency no's etc. The plan shall fully explain to all personnel during the induction training. All contractors will become completely familiar with the requirements of the plan and will participate in any evacuation drills that may take place.

8.8.1 First Aid [GSR 3]

The principal contractor shall be responsible to ensure compliance to this regulation as required. In particular, a first aid box with the minimum stock as specified in the regulation will be located at the site office and there will be signage to indicate the location of the box. Attention is drawn to GSR 3(4) for the requirement of trained first aiders. It is also suggested that a trained first aider be made responsible for the box in terms of the following:

- Security-the box should not be left open but it must be accessible in case of emergency(spare key availability)
- Injuries – a record of first aid box injuries treated and the stock issued.
- Stock- regular inspection to maintain stock levels and check expiry dates

In addition, the first aid requirement should be noted for high risk substances or hazardous chemical substances and if these are to be used, then it should be addressed in the HIRA and the need for eye wash facilities assessed.

NOTE: It is strongly recommended and good practice to comply with the Draft Health and Safety Regulation 7

8.8.2 Incidents and Injuries-Investigation and Reporting

The principal Contractor will ensure there is a management system to report and investigate all incidents. All incident including all near miss, first aid box treatment, and all other serious incidents involving any form of disabling injury or fatality are to be reported to the Client and the Clients H&S Agents telephonically immediately. This shall be confirmed in writing as soon as

possible after the incident. Failure to comply with these provisions will be considered as serious offence. Recording and Investigation of Near Miss.

Incidents

The principal Contractor shall provide evidence by means of a procedure or chart that he is fully aware of the hierarchy of incidents that can occur e.g. unsafe situations, near miss first aid box injuries, medical cases, disabling injuries etc. He shall keep an incident register of all such incidents, investigate and apply corrective action where required. The client also reserves the right to request incident statistics from the principal contractor such as Di's DIFR and DISR and it is advised that these are maintained.

Injuries

First aid box injuries have been addressed under 8.7.1 above. More serious injuries requiring transport of the injured person to the nearest hospital or doctor or the calling of an ambulance and paramedic personnel will be the responsibility of the principal contractor's appointed personnel such as the Construction Supervisor, First Aider, and Safety Officer. It is advised that all required emergency numbers be on hand and prominently displayed as all contractors are registered in Good Standing with the Compensation Commissioner, it will be the responsibility of the contractor whose employee has been injured; to make the necessary report and claims to the Commissioner.

8.8.3 Accident and Incident Reporting and Investigation [OHS 24, GAR 8, 9(1) & (2)]

Should an incident or accident investigation need to be conducted, a competent person shall be appointed to conduct the said investigation. The procedure to be followed will be in accordance with Annexure 1 of GAR 9- "Recording and Investigation of incidents". Particular attention is also drawn to OHS 24, reporting of certain incidents to an inspector of the department of labour. The principal contractor shall ensure that the investigations are kept for record purposes and he shall ensure that the outcome of the investigation is communicated to all affected parties as required i.e. the Client, Clients H& S Agent and contractors. The Client reserves the right to participate in all investigations into accidents or incidents and to conduct their own investigation if required.

8.9 Contractors and Suppliers

The client shall enter into an Agreement with Mandatory in terms of Section 37(2) of the OHS Act 85 of 1993, with all appointed principal contractors. Likewise all principal contractors shall enter in to a similar agreement with all contractors, sub-contracted to them for any period of the contract. Please note that if contractors hire any construction vehicle or mobile plant, the companies from which the equipment is hired must provide any maintenance and test certification as required. In addition, if operators are hired with the equipment, proof of competency and medical certification must be provided.

The principal Contractor shall ensure that all contractors are issued with this safety specification where *reasonable*. The principal contractor shall assist and ensure that contractors engaged comply with all of these requirements and adhere to the requirements set out OHS 24. Contractors will be stopped from working in the event of unsafe conditions and activities being observed. All contractors shall be subject to the requirements specified in the HSP and will be issued with a copy of the plan. If the contractor is not able to comply with the requirements set out in the plan, he shall not be appointed as contractor.

8.10 Personal Protective equipment, Intoxication, Signage and Access Control [GSR 2]

8.10.1 Personal Protective Equipment (PPE)[GSR 2]

The principal contractor shall through the Risk Assessment process identify the specific PPE needs per activity. Contractors, as employers, will be responsible for the issue of the required PPE. Should PPE be lost or stolen, then the employee will be issued with new PPE. Should PPE be worn out or damaged, the user shall return the worn or damaged PPE and will be issued with a replacement. Training in the use of this shall be provided. Visitors shall be informed of PPE requirements prior to their visit so that they may enter the site.

8.10.2 Intoxication [GSR 2A]

The principal contractor shall be responsible to ensure that no persons may enter or remain at the construction site if under or apparently under the influence of intoxicating liquor or drugs.

8.10.3 Display of signs [GSR 2B]

The principal contractor should make use of signage to assist in enforcing compliance to any requirement specified in this document or as required by law. Standard symbolic signs are acceptable for conveying these requirements where applicable.

8.10.4 Access control [GSR 2C]

The principal contractor shall be responsible to ensure control of access to all persons entering the construction site. The reason for this is as follows;

- The principal contractor is the employer on the site and all intents and purposes is responsible for section 8 of OHSWA of employees and contractors and section 9 for any other person on site such as visitors and inspectors
- All persons entering the site must undergo induction training to inform them of the hazards present on site. This includes contractors, visitors, inspectors etc.
- The construction supervisor will be aware of who is on site and their function
- The construction supervisor will be able to control tasks that may impact on other work being carried out on the site by a permit to work system.
- The number of people and their purpose on the site must be known in case of emergency and evacuation
- Security reasons

8.11 Ladders [GSR 13A]

The following requirements shall be complied with regarding Ladders and Ladder Works:

- A competent person shall be identified and appointed as ladder inspector
- Where aluminium ladders cannot be used, then wooden ladders shall be straight grained, unpainted to allow for proper inspection of the grain for cracking
- Ladders shall be secured at the top and choked at the base to prevent slipping.
- Where choking of the base is not possible, then the user shall ensure that the ladder is held in position by another employee when ascending the ladder.
- Ladders shall be inspected a minimum once per month by the person appointed as the ladder inspector.
- Proper storage shall be provided for all ladders when not in use.

8.12 Pressure Equipment Regulations, 2009(Gas Bottles) [PER 2009]

If gas bottle sets (Oxy-Acetylene for heating, cutting, welding) are used, these regulations, as required, shall be adhered to. Regular inspection of the sets shall be carried out. In particular;

- Only trained personnel shall operate such equipment.
- The construction Supervisor shall ensure operation of the equipment is in accordance with the HIRA requirements and Safe working Procedure (SWP) and /or method statement.
- All users shall undergo regular awareness training (toolbox) to ensure compliance.
- The Construction supervisor shall ensure the required PPE is used.

8.13 Portable Electric Tools [EMR 9]

This regulation shall be complied with as a minimum requirement. Regular inspections of all Portable Electric Tools such as drill, angle grinder's etc. shall be carried out. In particular:

- Only trained personnel shall operate such equipment.
- The Construction Supervisor shall ensure operation of the equipment is in accordance with the HIRA requirements and Safe working Procedure (SWP).
- All users shall undergo regular awareness training (toolbox talks) to ensure compliance.
- The Construction Supervisor shall ensure the required PPE is used.

8.14 Permit to work [including hot work]

The principal contractor shall be responsible to ensure that:

- All work being carried out on site has been approved through the necessary project control system.
- Permit require from third parties such as vetting for security clearance
- A permit system is operational so that work consisting of many tasks related to the construction on site, can be carried out without endangering the health and safety of personnel on site, neighbours and the public surrounding the site and or causing damage to property.
- In particular, attention is drawn to GSR 9, which details the requirements for welding, flame cutting, soldering and similar operations.

8.15 Environmental Rules

The contractor shall give effect to maintain all safeguards and standards and take such measures as may be necessary for the protection of the environment.

8.15.1 Clearing

The contractor shall comply with the following conditions and requirements for clearing:

- Follow the Occupational health and Safety Act, the Environmental Regulations for workplaces and Project EMP.
- Areas to be cleared will have boundaries clearly marked by tape, pegs or other means and will conform to limits on design drawings.
- No clearing is to occur without a written permit from the Engineer.

- Clearing will not commence until drainage control works are in place.
- Cleared vegetation should be windrowed along the contour to assist with erosion control.
- Any area which is not to be disturbed under requirements of the Cultural Heritage management Plan will be clearly identified.
- Vegetation clearance will be restricted to that necessary for the works.
- The Engineer is to be notified immediately if contaminated soil is discovered.
- Traffic shall be confined to maintained tracks and roads.
- Particular care shall be taken to minimise disturbance to the bed and banks of watercourses.

8.15.2 Noise and Vibration

The contractor shall ensure that each of its mobile and fixed plant and that of its subcontractor' are fitted with appropriate noise suppression equipment to ensure that noise levels from such plant are contained within the relevant limits prescribed by relevant industrial safety and environmental legislation, regulations and site standards. If there is a noise problem with electrical power generating equipment, compressors, or other facilities under the control of the contractor, additional noise suppression shall be erected by the Contractor at the Contractor's cost around the offending unit(s). Any deviation from the above listed practices is to be rectified at the Contractor's cost.

8.15.3 Transport, Storage and Handling of Hazardous Substances and Dangerous Goods

The contractor shall comply with the following conditions and requirements for storing and handling hazardous and dangerous goods:

- Comply with HCS Regulations 14. The storage and handling of flammable and combustible liquids.
- Provide a list of hazardous substances and corresponding MSDS prior to bringing substances on Site.
- Substances register to be held at each storage facility.
- Corrosive materials to be stored and handled in accordance with HCS Regulation 14.
- Fuels, oils and substances in containers of 200 litres or more shall be stored in a bunded area with capacity of at least 110% of largest container/tank.
- Fuel, oils and substances in less than 200 litre drums shall be stored as above or in a fenced and roofed compound.
- All fuels, oils and substances must be clearly labelled.
- Transfer of bulk fuel and handling of hazardous substances shall be conducted only by appropriately trained personnel
- Spill clean-up kits including absorbent materials shall be kept at each storage facility.

8.15.4 Erosion and Oil Traps

The Contractor shall comply with the following conditions and requirement for erosion, sedimentation, silt and oil traps:

- Land disturbance will be restricted to that necessary for the works.
- Topsoil will be salvaged for use in rehabilitation
- Storm water from upstream catchments will be diverted away from construction areas.
- Drains will be protected to prevent scouring if necessary.

- Sediment traps, silts fences or hay bales will be installed to control sediment where necessary and where directed by Engineer.
- Sediment traps will be cleaned periodically.

8.15.5 Dust Prevention

The contractor shall comply with the following conditions and requirements for air quality and dust:

- Dust generated by construction activities will be suppressed by water spraying, to levels that are safe for Site personnel.
- Speed limits on unsealed roads will be limited to a maximum speed consistent with the minimisation of dust generation.
- Earthworks Supervisors must pay particular attention to the management of topsoil stripping such that dust does not become a safety hazard or severe nuisance.
- All dust complaints will be investigated promptly and appropriate action initiated to reduce nuisance.

8.15.6 Waste Management

- The contractor shall provide suitable rubbish receptacles at the Site and shall ensure that all litter is collected in them and properly disposed of off Site in accordance with the requirements of the relevant statutory requirements
- The contractor shall ensure proper collection and off-site disposal of all industrial wastes in accordance with relevant statutory requirements.
- The contractor shall apply the principles of Waste Minimisation by reducing the amount of waste generated on Site by their operations and activities as much as possible. The contractor shall provide for cycling of glass, metals, plastics and papers.

8.15.7 Weed management

The contractor shall comply with the following conditions and requirements for weed management:

- Contractors shall ensure that all machinery, equipment and vehicles are washed down at a wash facility before the Site and again when leaving the site.
- Plants and soil shall not be removed from Site without authorisation.
- Soil or other material shall not be brought onto Site if it has originated from an area known to contain environmental weeds or declared weeds under the Rural land Protection act 1995.
- Areas disturbed or rehabilitated as part of a Contract will be inspected upon completion of the works. The Contractor shall eradicate any declared weeds found.
- Seeds used in rehabilitation shall be free of declared weeds
- Control measures (including use of herbicides) must be consistent with manufacture's recommendations, safe practice and recommendations in the Department of natural Resources Pest Fact series.
- Include information on the importance of weed control inductions.

Any deviation from the above listed practices is to be rectified at Contractor's cost

8.15.8 Found Object

All fossils, coins, articles, minerals of commercial value and objects of antiquity and structures and other remains and things of archaeological interest discovered at the Project site shall be deemed to be the absolute property of the Company. The Contractor shall take reasonable precautions to prevent the Contractor's employees, subcontractors and the employees of subcontractors and any other persons from removing and damaging any such article and thing and shall immediately upon discovery thereof acquaint the Engineer of such discovery and carry out, at the expense of the company and at the engineer's direction, the protection and or disposal of same,.

8.16 Monitoring, Audit and Review

- The Client's Agent/DPW Safety Manager shall have the right to conduct audits/inspections of the Contractor's operations, equipment and procedures at any time, and the Contractor shall fully co-operate with the client's agent during such audits/inspections.
- The client's agent rights under this clause shall not relieve the contractor of its obligations to conduct audits and reviews of its own safety and health performance.
- Where such Client's Agent/DPW Safety Manager audits reveal deficiency in the Contractor's procedure equipment, training, drills, etc. the contractor shall rectify such deficiencies as soon as practicable, and provide to the Client's agent a status report on all outstanding corrective actions. Where such deficiencies include an unsafe practice or breach of the Statutory or the Contract's requirements, the Client's Agents/DPW Safety Manager may in accordance with the general Conditions of Contract suspend the work associated with the unsafe practice or breach until the deficiency is rectified.

8.17 Penalties and Fines

Any contractor employees who is found not adhering to the ESH specification, Site Ground Rules ,ESH Plan or any other statutory requirement, or who is observed committing unsafe acts or contributing to unsafe conditions will be issued with a Non-Conformance Report and the relevant Contract will be issued a fine according to the scale of fines nominated below.

Contractor employees will also be reprimanded as per the relevant company HR procedures:

- First transgression constitutes a **verbal warning**.
- Second transgression constitutes a **written warning**.
- Third transgression constitutes a **full disciplinary hearing** according to the company' HR procedures
- Any life-threatening unsafe act or unsafe condition must be treated as a Gross Neglect of Company Environmental, safety and Health Rules and Procedures and Disciplinary hearing shall be conducted to determine the root cause of the incident and the appropriate action which must be taken to prevent the similar unsafe situation from occurring in the future.

Copies of Non-Conformance Reports (NCR) and disciplinary hearings must be kept on record on the OHS File.

8.17.1 Offences and Penalties

All offences and penalties will be dealt according to CR (33)

9 Applications of the Construction Regulations [CR]

[Please note; this is the complete list. Item 9.1 is compulsory and the rest are applicable if relevant to the work being carried out]

9.1 Hazard Identification, Risk assessment and Risk Control (HIRA) [CR 9]

The contractor shall prior to the commencement of any construction work perform a HIRA exercise which will form part of the HSP and file for the project. A copy of HIRA shall be made available for viewing to the client's OHS agent and shall be kept in the Health and Safety File.

NB: The contractor shall ensure that the outcome of all HIRA exercises will be conveyed to all relevant employees with respect to the hazards and the related control measures before any work commences.

Below is the list of activities, which may be considered for HIRA if the activity is to be carried out on site. The list is not exhaustive but gives examples of activities for a construction site:

- Site security and access.
- Traffic management-restrictions etc.
- Activities that affect adjacent sites.
- Lifting operations such as offloading and moving equipment.
- Lifting equipment such as offloading and moving equipment
- Stacking, storage of equipment and materials, and good housekeeping.
- Use of hand tools
- Use of portable electric equipment(power tools)
- Use and storage of flammable and hazardous chemicals such as paint, adhesives, solvents, thinners, cement etc.
- Painting.
- Welding.
- Electric installations.
- Mechanical installation.
- Waste management including removal of hazardous waste.
- Environmental restraints such as boundary noise and dust.
- Temporary site accommodation.
- General hazards to site personnel such as cleaning noise and dust.

The control of several of these risks may be specified in the OHSA or the CR but this does not mean that the HIRA exercise does not have to be carried out.

9.6 Construction vehicle and mobile plant [CR 23]

It will be the responsibility of each contractor on site to ensure compliance of their construction vehicles and mobile plant to these regulations.

This includes vehicles to be used for transporting personnel to and from site, which will be subject to relevant requirements such as licensing and roadworthiness checks. In addition the following will apply:

- Safe transport for personnel working on the project to and from the workplace, which shall include proper seating, side restraints and cover.
- Road safety principles shall be adhered to on and off site.

If a mobile crane or other mobile plant is hired, only approved hire companies shall be contracted to provide such equipment. The Construction Supervisor shall ensure

compliance of the provider to these regulations. In particular attention is drawn to the competence and fitness of the operator [section 1(d)] and the inspection of the equipment [section 1(j)].

9.7 Electrical Works [CR 24], including [EIR] and [EMR]

The requirement of these regulations shall be met as required by the appointed electrical contractor. Competent person will be appointed for inspection and control of all temporary electrical installations as per CR 24(d) and (e) respectively.

The person /Contractor who does electrical installation work as an electrical contractor shall be registered as an electrical contractor in terms of electrical Installations Regulations.

9.8 Use and storage of flammable liquids [CR 25], and hazardous chemical substances [HCSR]

All the requirements of CR 16 shall be met.

In terms of HCSR, contractors shall ensure that all hazardous chemicals brought to site have Material Safety Data Sheet (MSDS) and the users are made aware of the important sections of the MSDS such as:

- Hazards
- First aid measures
- Fire fighting measures
- Accidental release measure
- Handling storage
- Exposure control especially PPE
- Disposal

First aider shall be made aware of the MSDS and how to treat HCS incidents appropriately. Copies of MSDS's will be available on site and in the HSF.

9.9 Housekeeping [CR 27] including [ERW (6)]

All contractors shall ensure that housekeeping standards as per these regulations shall be maintained at all times.

9.10 Stacking and Storage of Materials [CR 28] including [GSR (8)]

All contractors shall ensure that materials are only stored in defined and allocated storage areas and that materials being stored are stacked in accordance with sound stacking principle as per these regulations.

9.11 Fire precautions [CR 29]

All contractors on site will comply fully with the requirements of this regulation. In particular, the principal contractor will be responsible for the evacuation plan (section (l) the details of which will be imparted to contractors, visitors etc. through the site induction.

9.12 Construction employee welfare facilities [CR 30]

The principal contractor shall be responsible for implementing this regulation and shall ensure that adequate facilities are provided for the personnel on site in terms of the following:

- Change room facilities
- Adequate toilets
- Hand wash facilities
- Drinkable water

No food preparation shall be conducted on site. Eating and drinking will only be permitted in the designated eating areas, which must be provided with adequate seating. Waste bins shall be strategically placed and cleared regularly.

10. Site Specific and Design Risks

[Please note; this is not a complete or exhaustive list. The principal contractor is expected to assess all risks to which his employees may be exposed during the construction process, as well as the hazards identified and listed below].

10.1 Hazard Identification and Risk Assessment Methodology

Once on site, every contractor shall perform task risk assessment, using the baseline risk assessment as a guide.

The Risk assessment should be reviewed once on site and thereafter after any incident, change in design or every one-year period, whichever occurs first. Additional hazards highlighted or change in the risk factor should have a separate risk assessment carried out and filed.

The risk assessment is based on the combination of the CONSEQUENCE and PROBABILITY associated with each hazards.

10.1.1 Definitions

Term	Meaning
HAZARDS	Anything that can cause harm
RISK	The chance, great or small, that someone will be harmed by hazard
CONSEQUENCE	The possible outcome of an incident/ accident, e.g. broken leg, explosion.
PROBABILITY	The possibility of the accident/incident occurring

10.1.2 Risk Assessment

The following evaluation must be used to determine risk:

Probability X Consequence= RISK

Risk Matrix

Calculating the risk

1. Take the consequences rating(1-5) and select the correct column
2. Take the likelihood rating(A-E) and select the correct row
3. Select the risk rating where the two ratings cross on the matrix below.

VH=Very, High=High, M= Medium, L=Low

		CONSEQUENCES				
		1	2	3	4	5
Likelihood	A	M	H	H	VH	VH
	B	M	M	H	H	VH
	C	L	M	H	H	VH
	D	L	L	M	M	H
	E	L	L	M	M	M

10.2 Site Specific risks

The following site-specific risks have been identified for this project. These must be catered for in the contractor's health and safety plan (that which is applicable to their scope of work), and included in the site-specific risk assessment.

10.2.1 Traffic-restrictions, existing system, site traffic

Traffic accommodation must be arranged with the principal agent.

10.2.3 Site security and access-this is controlled by principal contractor.

10.3 Design risks

The following design risks have been identified by the designer for this project. These must be catered for in the contractor's health and safety plan (that which is applicable to their scope of work), and included in the site-specific risk assessment.

10.3.1 Electrical

10.3.2 Mechanical.

10.3.3 Civil Work

11. Compliance to COVID Directives

The contractor should comply with Directives of Dept. of Health and Dept. Of Labour and Employment.

10.1 Induction wrt COVID-19 is mandatory.

10.2 Specific COVID-19 PPE is mandatory.