

PART 2

PG-01.1 (EC) SCOPE OF WORKS – GCC 3rd Edition (2015)

Project title:	<i>Kimberley Correctional Centre: Replacement of hot water system</i>		
Tender no:	<i>Klm 12/2023</i>	Reference no:	<i>19/2/4/2/2/2327/503</i>

C3. Scope of Works

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NOTE: This is an example only. Compiler / Designer to provide the applicable contents.

B: AMENDMENTS TO THE PARTICULAR SPECIFICATIONS

Insert amendments to particular specifications

C3.3 PARTICULAR SPECIFICATIONS

List particular specifications

C3.4 STANDARD SPECIFICATIONS:

The standard specifications on which this contract is based are the **South African Bureau of Standards Standardized Specifications for Civil Engineering Construction SABS 1200**. (Note to compiler. "SABS" has been changed to "SANS"; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 2100)

Although not bound in nor issued with this Document, the following Sections of the Standardized Specifications of SABS 1200 shall form part of this Contract:

A - 1986 - GENERAL / D – (etc, to be provide by compiler)

3.5 PROJECT SPECIFICATIONS:

Status

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part1 A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standardized Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standardised of Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

3.5.1 GENERAL

PS-1 PROJECT DESCRIPTION:

Kimberley Correctional Centre: Replacement of hot water system

3.5.2 AMENDMENTS TO THE STANDARD AND PARTICULAR SPECIFICATION:

Insert amendments

3.5.3 PARTICULAR SPECIFICATIONS:

Insert particular specification

C3.6 STANDARD MINIMUM REQUIREMENTS

In terms of section 5(2) of the Construction Industry Development Board Act, 2000 (Act no. 38 of 2000) (the Act), the Construction Industry Development Board is empowered to establish and promote best practice standards, Standard Requirements and Guidelines which includes the following but not limited to:

- C3.6.1 cidb Best Practice: Green Building Certification, No. 34158 Government Gazette, 1 April 2011
- C3.6.2 cidb Standard for Developing Skills through Infrastructure Contracts, No. 36760 Government Gazette, 23 August 2013
- C3.6.3 cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013
- C3.6.4 Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017, No. 40553 Government Gazette, 20 January 2017
- C3.6.5 cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.6 cidb Standard for Minimum Requirements for Engaging Contractors and Sub-Contractors on Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.7 cidb Standard for Minimum Requirements for Engaging Contractors and Sub- Contractors on Construction Works Contracts, No. 42021 Government Gazette, 9 November 2018
- C3.6.8 cidb Standard for Developing Skills through Infrastructure Contracts, No 48491 Government Gazette, 23 April 2023

C3.7 CONTRACT PARTICIPATION GOALS AND CIDB BUILD PROGRAMME

Provision has been made within the Contract Participation Goal section in the Bill of Quantities for the respective CPGs. Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

Monthly progressive reports to be submitted to the Employer's representative indicating the percentage targets achieved which must be reconciled upon completion of the project and to form part of the final account.

The contractor shall achieve in the performance of this contract the following Contract Participation Goals (CPGs) as indicated below:

C3.7.1 Minimum Targeted Local Material Manufacturer Contract Participation Goal

The Minimum Targeted Local Building Material Manufacturers CPG is *not applicable* to this project.

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Manufacturers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The 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.

A Targeted Local Material Manufacturer is a targeted enterprise that operates or maintains a factory or establishment that produces on its premises materials or goods required by the principal contractor for the performance of the contract.

Note: Adapted from SANS 10845-7:2015, definition 2.13

Preference shall be given to the Targeted Local Material Manufacturer where feasible in **insert applicable Ward/s, Municipal District, Town, City, Province**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,
- (b) The non-availability of such materials shall not adversely affect the desired progress of the specific works,
- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least **insert applicable percentage, both in words and figures** of the total value of materials purchased excluding VAT to be sourced from within **insert applicable kilometers** radius of the project site,
- (e) Material of at least **insert applicable percentage, both in words and figures** of the total value of materials purchased excluding VAT to be sourced from within **insert applicable kilometers** radius of the project site.

Failure to achieve the minimum specified value as indicated in the CPG Bill of Quantity Section for Targeted Local Material Manufacturer participation will result in a **thirty percent (30%)** penalty of the prorate targeted value of materials not complied with unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The contractor shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

C3.7.2 Minimum Targeted-Local Building Material Suppliers Contract Participation Goal

The Minimum Targeted Local Building Material Suppliers CPG is *not applicable* to this project.

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Suppliers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The Minimum Targeted Local Manufacturers of Material Contract Participation Goal shall be achieved 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..

A targeted supplier is a targeted enterprise that

- a) owns, operates or maintains a store, warehouse or other establishment in which goods are bought, kept in stock and regularly sold to wholesalers, retailers or the public in the usual course of business; and
- b) engages, as its principal business and in its own name, in the purchase and sale of goods.

Note: Adapted from SANS 10845-7:2015, definition 2.14

Preference shall be given to the local material suppliers where feasible in the **insert applicable Ward/s, Municipal District, Town, City, Province**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,
- (b) The none availability of such materials shall not adversely affect the desired progress of the specific works,
- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least **insert applicable percentage, both in words and figures** of the total value of materials purchased excluding VAT to be sourced from within **insert applicable kilometerskm** of the project site,
- (e) Material of at least **insert applicable percentage, both in words and figures** of the total value of materials purchased excluding VAT to be sourced from within **insert applicable kilometerskm** of the project site.

Failure to achieve the minimum specified value as indicated in the CPG Bill of Quantity Section for Targeted Local Material Manufacturer participation will result in a **thirty percent (30%)** penalty of the prorate targeted value of materials not complied with, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

C3.7.3 Minimum Targeted Local Labour Skills Development Contract Participation Goal

The Minimum Targeted Local Labour Skills Development CPG is *not applicable* to this project.

It is the requirement of the employer that the contractor enhances the use of local labour in executing this contract. This is required to be done through the use of both traditional building techniques and labour-intensive construction techniques careful and considered construction planning and implemented in the project irrespective whether a minimum percentage Participation Goal is applicable or not.

The Minimum Targeted Local Skills Development Contract Participation Goal shall be achieved 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.

No. 48491 of 28 April 2023 and the cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract..

Targeted labour: individuals who:

- a) are employed by the principal contractor, sub-contractor or targeted enterprises in the performance of the contract;
- b) are defined as the target group in the targeting data; and
- c) permanently reside in the target area or who are recognized as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area.

Adapted from SANS 10845-7:2015, definition 2.12

Targeting of labour by skills categories is only permissible within categories of semi-skilled and unskilled labour.

Contract participation goals for semi-skilled and unskilled labour shall be limited to on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract and in a manner that does not compromise worker health and safety. In the case of targeted labour, the certification of records shall be in accordance with SANS 10845-8.

Beneficiaries will be sourced from the **insert applicable Ward/s, Municipal District, Town, City, Province** for the full duration of the Construction Period, employed by either the principal contractor, sub-contractors or targeted enterprises. The total number of working days to complete the Works amount to **insert number of working days as determined by the Construction Period** working days. The minimum CPG participation for Targeted Local Labour Skills Development is **insert applicable percentage, both in words and figures**, expressed as a percentage of the total number of working days required to complete the Works. The contractor shall attain or exceed the CPG in the performance of the contract. Failure to achieve the minimum Targeted Local Labour Skills Development CPG will result in a payment reduction of **R5 000** (Excluding VAT), per working day which training has not been provided to the workforce in attendance, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

C3.7.4 CIDB BUILD PROGRAMME: Minimum Targeted Enterprise Development Contract Participation Goal

The Minimum Targeted Enterprise Development CPG is *not applicable* to this project.

The aim of this best practice standard for indirect targeting for enterprise development in accordance with the Standard for Indirect Targeting for Enterprise Development (published in Government Gazette 36190 of 25 February 2013), as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract. is to promote enterprise development by providing for a minimum Contract Participation Goal (CPG) of **insert percentage Min 5% and Max 30%** of the contract amount as defined in the Standard (Tender amount, excluding allowances and VAT) on selected contracts to be undertaken by joint-venture partners or to be sub-contracted to developing contractors that are also to be beneficiaries of enterprise development support from the main contractor.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

The lead partner or main contractor shall dedicate a **minimum insert percentage Min 5% and Max 30%** of the tender value at the time of award, excluding allowances and VAT, to provide developmental support to targeted subcontractor or joint venture partner applicable to contracts in Grades 7 to 9, General Building and Civil Engineering contracts. Preference will be given to insert type of enterprises, e.g. General Building, Electrical, Mechanical, Plumbing, etc. .It could be either or any combination of all Enterprises.

Failing to achieve the targeted Contract Skills Development Goal will result in A) a thirty percent (30%) penalty of the value of the portion not achieved, excluding VAT, and B) the issuing of completion certificates only after the completion certificate of achieving the skills development goal, countersigned by the relevant individuals has been submitted, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

C3.7.4.1 Criteria

The main or lead partner of the successful bidder shall:

- (a) There must be a needs analysis for indirect targeting and development or skill standard and should be development in at least any two developmental areas namely;
 - Administrative and cost control systems
 - construction management systems and plans
 - planning, tendering and programming
 - business; technical; procurement skills
 - legal compliance
 - credit rating/history; financial loan capacity/history
 - contractual knowledge
- (b) The above needs analysis shall be mutually agreed upon between contractor and targeted enterprise
- (c) The contractor shall appoint an enterprise development coordinator to:
 - perform needs analysis on the targeted enterprise to identify developmental goals
 - develop a project specific enterprise development plan to improve the targeted enterprise/s performance in the identified developmental areas
 - provide internal mentorship support to improve the targeted enterprise/s performance
 - monitor and submit to the employer's representative a monthly enterprise development report thereby reporting on the progress of the agreed development areas with the targeted enterprise/s
 - submit a project completion report to the Employer's representative for each targeted enterprise.

C3.7.4.2 Management

The contractor shall provide a competent person/s to provide internal mentorship to the Targeted Enterprise/s in the two agreed developmental areas.

C3.7.4.3 Competence Criteria for an Enterprise Development Co-ordinator

The enterprise development co-ordinator shall have the following competencies:

- Minimum experience of 5 years in the construction industry at Managerial level as a Site Agent, Contracts Manager, Site Manager, Construction Manager, Business Development Manager or Enterprise Development Manager.
- Minimum experience of 2 years in training and development in Building or Construction; and
- National Diploma or B Degree in the Built Environment or Business Management

C3.7.4.4 Format of Communications

The contractor shall submit to the Employer's Representative:

- *Project interim reports* in the specified format (**ED105P**) detailing interim values of the CPG that was achieved together with an assessment of the enterprise development support provided should be tabled and discussed at least monthly at progress meetings between employer's representative and the contractor;
- *Project completion report* in the specified format (**ED101P**) to the Employer's Representative for acceptance within 15 days of achieving practical completion. The report shall include the value of the CPG that was certified in accordance with the contract, cidb registration numbers of each and every targeted enterprise, and the value of the subcontracted works or of the joint venture entered into; and the participation parameter
- *Enterprise development declaration* (**ED104P**).

C3.7.4.5 The Key Personal

The contractor shall appoint an Enterprise Development Co-ordinator and a competent person/s to provide internal mentorship.

C3.7.4.6 Management Meetings

The contractor shall report to the Employer's Representative on the implementation and progress of the targeted enterprise development and CPG at monthly progress site meetings.

C3.7.4.7 Forms for contract administration

The contractor shall submit to the Employer's Representative the following proformas:

- Form ED 105P Project Interim Report
- Form ED 104P Enterprise Development Declaration
- Form ED 101P Project Completion Report

C3.7.4.8 Records

The contractor shall:

- keep records of the targeted enterprise development
- keep records of the payments made to the targeted enterprises in relation to the CPG.
- ensure all the documentation required in terms of the Standard is provided with each monthly progress payment certificate and according to a prescribed format where applicable.

C3.7.4.9 Payment Certificates

The contractor shall:

- achieve the measurable CPG and providing enterprise development support to the targeted enterprise/s as per the Standard.
- submit payment certificates to the Employer Representative at intervals determined in the Contract.

C3.7.4.10 Compliance requirements

Non-compliance with the Best Practice Project Assessment Scheme

The wording of regulation 27A of the cidb regulations makes provision for the Board to enforce the cidb code of conduct in the event of clients being found to be in breach of the best practice project assessment scheme.

- Not including the requirements of the cidb standards in the conditions of tender
- Not registering the award of contract on the cidb Register of Projects (RoP)
- Not reporting practical completion on the cidb Register of Projects (RoP)

3.7.5 CIBD BUILD PROGRAMME: Minimum Targeted Contract Skills Development Goal (CSDG)

The Minimum Targeted Contract Skills Development CPG is *not applicable* to this project.

The contractor shall achieve or exceed in the performance of the contract the Contract Skills Development Goal (CSDG) established in the Standard for Developing Skills through Infrastructure Contracts (published in Government Gazette No 48491 of 23 April 2023 and the cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.

Failing to achieve the targeted Contract Skills Development Goal will result in A) a **thirty percent (30%)** penalty of the value of the portion not achieved, excluding VAT, and B) the issuing of completion certificates only after the completion certificate of achieving the skills development goal, counter-signed by the relevant individuals has been submitted, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 3 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

C3.7.5.1 Methodology

The contractor shall achieve the measurable contract skills development goal by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the following in relation to work directly related to the contract or order:

Method 1: structured workplace learning opportunities for learners towards the attainment of a part or a full occupational qualification;

Method 2: structured workplace learning opportunities for apprentices or other artisan learners towards the attainment of a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012) subject to at least sixty percent (60%) of the artisan learners being holders of public TVET college qualifications;

Method 3: work integrated learning opportunities for University of Technology or Comprehensive University students completing their national diplomas;

Method 4: structured workplace learning opportunities for candidates towards registration in a professional category by a statutory council.

The contract skills participation goals, expressed in Rand, shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 1 in the Standard for the applicable class of construction works.

Table 1: Contracting skills development goals for different classes of engineering and construction works contracts

Class of construction works as identified in terms of Regulation 25 (3) of the Construction Industry Regulations 2004		Construction skills development goal (CSDG) (%)
Designation	Description	
CE	Civil Engineering	0.25
CE and GB	Civil engineering and General Building	0.375
EE	Electrical Engineering works (buildings)	0.25
EP	Electrical Engineering works (infrastructure)	0.25
GB	General Building	0.5
ME	Mechanical Engineering works	0.25
SB	Specialist	0.25

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 2 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

Table 2: Notional Cost of Training per Headcount

Source: cidb Standard for Skills Development

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
Method 1					
Occupational qualification	R7 000	R0	R9 000	R16 000	R9 000
Method 2					
TVET College graduates	R14 000	R0	R9 000	R23 000	N/A
Apprenticeship	R14 000	R0	R12 000	R26 000	R12 000
Method 3					
P1 and P2 learners	R24 000	R20 000	R4 500	R48 500	N/A
Method 4					
Candidates with a 3 year diploma	R37 000	R20 000	R4 500	R61 500	R20 000
Candidates with 4 year qualification	R47 000	R20 000	R4 500	R71 500	R20 000

Note: the required CPG will be recalculated based on the awarded tender amount and "Contract amount" once the beneficiaries have been appointed and actual costs are known. The notional cost of providing training opportunities will increase by CPI on an annual basis based on April CPI. Should the rates increase after bid award or during construction the rates will be adjusted as a remeasuarble item.

- (a) (a) The successful contractor may employ part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates directly or through a Skills Development Agency (SDA), (A1 - List of cidb accredited SDAs).
- (b) The successful contractor must employ at least sixty percent (60%) of the learners from an FET / TVET college should the contractor select to have part/full occupational qualification learners and trade qualification learners contributing to the CSDG.
- (c) The successful contractor shall employ at least **insert applicable percentage, both in words and figures** from eligible part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates in the employment of the employer.
- (d) The successful contractor shall ensure that no single method shall contribute more than seventy five percent (75%) of the CSDG for the contract.

- (e) The successful contractor may only place thirty three percent (33%) employed employees or that of his subcontractors contributing to the CSDG.
- (f) The contractor shall employ at least sixty percent (60%) of the learners from a Public FET / TVET college should the contractor select to have trade qualification learners (Method 2) contributing to the CSDG.
- (g) One of the objectives of the project is to train **insert applicable number, both in words and figures** Occupational qualifications, trade qualification, work integrated learners – P1 and P2 learners, professional candidates.

C3.7.5.2 Management

- (a) The successful contractor must keep site records regarding the part/full occupational qualification learners', trade qualification learners', work integrated learners' or candidates' (delete that which is not applicable) progress, site attendance, hours worked and other relevant information as required by the Standard.
- (b) The successful contractor shall provide the required number of appropriately qualified mentors to the maximum number of part/full occupational qualification learners, trade qualification learners, work integrated learners in the proportion as specified in the Standard.
- (c) The successful contractor shall provide a supervisor to manage the training of the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates.
- (d) The successful contractor shall submit to the employer's representative a baseline training plan in the specified format (Pro-forma A2) for the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates within 30 days of start of the contract.
- (e) The successful contractor shall submit to the employer's representative project interim report in the specified format (Pro-forma A3) on the progress of each of part/full occupational qualification learner, trade qualification learner, work integrated learner, candidate every three months.
- (f) The successful contractor shall submit to the employer's representative the names and particulars in the specified format (Pro-forma A4) of the supervisor, mentors for the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates within 30 days of start of the contract.
- (g) The successful contractor shall keep a daily record of all the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates on site and their daily activities and shall be made available to the employer's representative on request.
- (h) The successful contractor shall submit to the employer's representative the reports on the progress and status of the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates with the monthly invoice for the payment certificate.
- (i) The successful contractor shall have health and safety inductions for all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates .
- (j) The successful contractor shall conduct entry and exit medical tests of all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates.
- (k) The successful contractor shall provide personal protective equipment (PPE) to all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates at the start of their employment on site.
- (l) Based on the agreed skills methods the contractor may employ part/full Occupational Qualification Learners and /or Trade Qualification Learners and/or Work Integrated Learners and/or Candidates directly or through a Skills Development Agency (SDA), training provider or skills development facilitator (Form A1 - List of cidb accredited SDAs). The contractor shall ensure that

no more than one Method shall be applied to any individual concurrently in the calculation of the CSDG for the contract.

C3.7.6 NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME (NYS)

The National Youth Service Training and Development Programme is not applicable to this project.

The programme shall be implemented in terms of the Implementation of the National Youth Service Programme under the Expanded Public Works (EPWP) and shall be priced in the CPG section of the Bills of Quantities. Monthly reports are to be submitted to the Employer's Representative.

Failure by the contractors to achieve the specified number to be trained in the NYS section of the CPG section within the Bills of quantities will result in a payment reduction as per bill of quantities per person, excluding VAT unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

C3.7.7 LABOUR-INTENSIVE WORKS

Labour Intensive Works is *applicable* to this project.

Where labour intensive work is specified in the Bill of Qualities and indicated by "LI" the contractor must price for and include in rates. Contractors are expected to use their initiative to identify additional activities that can be done labour-intensively to comply with the set minimum labour intensity target. Allowance must be made for submitting monthly reports illustrating the value of the works executed under Labour Intensive Works.

Failure by the contractor to achieve the specified value of the Labour Intensive Participation Goal as stipulated within the Bills of Quantities will result in a **thirty percent (30%)** penalty of the value of the works not done by means of labour intensive methods, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

Employer's objectives:

The employer's objectives are to deliver public infrastructure using labour-intensive methods in accordance with EPWP Guidelines.

Labour-intensive works:

Labour-intensive works shall be constructed/maintained using local workers who are temporarily employed in terms of the scope of work.

Labour-intensive competencies of supervisory and management staff:

Contractors shall only engage supervisory and management staff in labour-intensive works that have completed the skills programme including Foremen/ Supervisors at NQF level 4 "National Certificate: Supervision of Civil Engineering Construction Processes" and Site Agent/ Manager at NQF level 5 "Manage Labour-Intensive Construction Processes" or equivalent QCTO qualifications (See Appendix C) at NQF outlined in Table 1

C3.7.7.1 GENERIC LABOUR-INTENSIVE SPECIFICATION

Contractors are referred to the Guidelines for the Implementation of Labour-intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP) for the generic labour-intensive specification applicable to the contract.

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- trenches having a depth of less than 1.5 metres
- stormwater drainage
- roads
- sidewalks and non-motorised transport infrastructure
- water and sanitation

Precedence

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail

Hand excavateable material

Hand excavateable material is:

a) granular materials:

- whose consistency when profiled may in terms of Table 3 be classified as very loose, loose, medium dense, or dense; or
- where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

b) cohesive materials:

- whose consistency when profiled may in terms of Table 3 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

Note

- 1) A boulder is material with a particle size greater than 200mm, a cobble and gravel is material between 60 and 200mm.
- 2) A dynamic cone penetrometer is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 3: Consistency of materials when profiled			
GRANULAR MATERIALS		COHESIVE MATERIALS	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.
Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of a geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by

			blow of a geological pick point.
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Trench excavation

All hand excavateable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stamper;

- a) to ninety percent (90%) Mod AASHTO;
- b) such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than ten (10%) gravel of size less than 10mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

Excavation

All excavateable material including topsoil classified as hand excavateable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand. Any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

Clearing and grubbing

Grass and bushes shall be cleared by hand.

Shaping

All shaping shall be undertaken by hand.

Loading

All loading shall be done by hand. Haulage equipment should be selected in a manner that allows loading by hand to the greatest extent possible.

Haul

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Offloading

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage.

Spreading

All material shall be spread by hand.

Compaction

Small areas may be compacted by hand provided that the specified compaction is achieved. Appropriate rollers should be used where higher (than can be achieved by hand) levels of compaction are required or for large areas.

Grassing

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

Stone pitching and rubble concrete masonry

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must to be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Grout shall be mixed and placed by hand.

Manufactured Elements

Elements manufactured or supplied by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. Where the mass of an element exceeds 55 kg, consideration should be given to the size

of the element relative to its total mass related to the number of workers who would be needed to lift such mass

C3.8 Submission of Accrual Reports

The Contractor shall submit accrual reports to the client representative at the end of March and September each year for the duration of the Service Contract period from the date of appointment up to and including project closeout. This is to ensure that PMTE complies with the accounting framework GRAP, which requires that PMTE disclose all its accruals as at the end of each reporting date.

C.3.9 Submission of Monthly Local Material Utilisation Report (Local Content)

Submission of Monthly Local Material Utilisation Report (Local Content) is *not applicable* to this project.

The contractors shall be responsible for record keeping, documenting and submission of monthly local material utilization report with supporting documentation to the Employer's representative within 7 working days of the beginning of the successive month, in terms of DTI&C designated industry/sector/sub-sector schedule as per the PA36 and Annexures C attached to the tender document. The final percentage achievement to be reconciled upon completion of the project and form part of the final account.

Failure by the contractors to achieve the specified percentage of local content per designated industry/sector/sub-sector as listed will result in a thirty percent thirty percent (30%) penalty of the value not achieved, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control. Allowance must be made for submitting monthly reports illustrating the value of local material utilisation report.

PG-02.1 (EC) PRICING ASSUMPTIONS – GCC 3rd Edition (2015)

Project title:	<i>Kimberley Correctional Centre: Replacement of hot water system</i>		
Tender / Quotation no:	<i>KIM 12/2023</i>	Reference no:	<i>19/2/4/2/2/2327/503</i>

C2.1 Pricing Assumptions

C2.1.1 GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Project Specification) and the Drawings.

C2.1.2 DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standardized Specifications and the Particular Specifications, read together with the relevant clauses of the Project Specification and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

C2.1.3 QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are estimates only, and subject to remeasuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

C2.1.4 PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 45 of the General Conditions of Contract 2004. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the provisional percentages and sums in the Summary of the Bill of Quantities will lead to the disqualification of the Tenderer.

C2.1.5 PRICING OF THE BILL OF QUANTITIES

The **bills of quantities / lump sum document** forms part of and must be read and priced in conjunction with all the other documents forming part of the **contract documents**, the Standard Conditions of Tender, Conditions of Contract, Specifications, Drawings and all other relevant documentation.

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all cost and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

Each item shall be priced and extended to the "Total" column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Contractor omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

The Tenderer is required to check the Bills of Quantities and the numbers of the pages and should any be found to be missing or in duplicate, or should any of the typing be indistinct, or any doubt of obscurity arise as to the meaning of any description or particulars of any item, or if this Tender Enquiry contains any obvious errors, then the Tenderer must immediately inform the Principal Agent and have them rectified or explained in writing as the case may be. No liability whatsoever will be admitted by reason of the Contractor having failed to comply with the foregoing instruction.

No alterations, erasures, omissions or additions is to be made in the text and/or conditions of these Bills of Quantities. Should any such alterations, amendments, note/s or addition be made, the same will not be recognized, but reading of these Bills of Quantities as originally prepared by the Quantity Surveyor will be adhered to.

The contractor is cautioned that the use of any quantities appearing in these Bills of Quantities for the purpose of ordering material, it is done at own risk and no liability whatsoever will be admitted by the Employer or Quantity Surveyor for the correctness of such Quantities. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

The prices and rates to be inserted by the Tenderer in the Bills of Quantities shall be the full inclusive prices to be paid by the Employer for the work described. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Market related prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out. The Employer reserves the right to balance the Bill rates where deemed necessary within the Tendered Amount.

A price or rate is to be entered against each item in the Bills of Quantities, whether the quantities are stated or not. An item against which no rate is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word "included" or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item. The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonableness of such rates.

Should the full intent and meaning of any description not be clear, the bidder shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of National Best Practice.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words "rate only" appear in the "Total" column. "Rate Only" items have been included where:

- (a) variations of specified components in the make-up of a pay item may be expected; and
- (b) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For ‘Rate Only’ items no quantities are given in the “Quantity” column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the “PW 371” and the principles contained in the latest version of the SANS 1200 in South Africa. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the bidder shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of National Best Practice.

The price quoted against each item of this Bills of Quantities shall cover the full inclusive cost of the complete work to which it refers, as described in the Conditions of Contract and Specifications and as shown on the Drawings and shall allow for labour, material, transporting, loading, storage, supervision, commissioning, wastage, as well as the builders profit and attendance.

The Tenderer must ensure that he fully completes all columns of the Bill of Quantities including the Final Summary. The fully priced bill of quantities must be submitted with the tender or The Final Summary and the Section Summary pages MUST be returned with the tender document as indicated the PA-03 Notice and Invitation to Tender / PA-04 Notice and Invitation for quotation.

The tenderers are to ensure that they have read and understood the project specifications included in C3: Scope of Work. All the information provided in the Scope of Works form part of the work and must be included in the rates.

“The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his tender (as far as is practicable) as to:

- (a) the form and nature of the Site and its surroundings, including subsurface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of work and materials necessary for the execution and completion of the Works,
- (d) the means of access to the Site and the accommodation he may require

and, in general, shall be deemed to have obtained all information (as far as is practicable) as to risks, contingencies and all other circumstances which may influence or affect his Tender”

C2.1.6 VALUE ADDED TAX

The **contract sum** must include for Value Added Tax (VAT). All rates, provisional sums, etc. in the **bills of quantities / lump sum document** shall be in Rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities. The rates must however be net (exclusive of VAT) with VAT calculated and added to the total value thereof in the Final Summary. All rates and amounts quoted in the Bill of Quantities

C2.1.7 CORRECTION OF ENTRIES

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

C2.1.8 ARITHMETICAL ERRORS

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication of addition, will be corrected by the Engineer at the tender evaluation stage, as set out in the Tender Data.

C2.1.9 CONTRACT DOCUMENTS

The Tenderers are advised to examine the bills of quantities, drawings and specifications including all other contract documents and make themselves thoroughly acquainted with the nature and requirements of the work, as no claim for extra payment in this regard will be entertained. Should any parts of the drawings not be clearly intelligible to the Tender, he must, before submitting his tender, obtain clarification from the Principal Agent.

C2.1.10 UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Non-standard abbreviations which may appear in the Bill of Quantities are as follows:

No.	=	Number
%	=	Percent
Sum	=	Lump sum
PCsum	=	Prime cost sum
Prov sum	=	Provisional sum
m ³ .km	=	Cubic metre - kilometre
Km-pas	=	kilometre - pass
m ² .pass	=	square metre – pass

C2.1.11 TRADE NAMES

Tenderers attention is drawn to the fact that wherever trade names or references to any catalogue have been made in these Bills of Quantities, it is purely to establish a standard for the required material. If use is made of any other equally approved material in lieu of the prescribed trade name or catalogue, the necessary price adjustments will be made.

C2.1.12 CONTRACT DOCUMENTS

The Tenderers are advised to examine the bills of quantities, drawings and specifications including all other contract documents and make themselves thoroughly acquainted with the nature and requirements of the work, as no claim for extra payment in this regard will be entertained. Should any parts of the drawings not be clearly intelligible to the Tender, he must, before submitting his tender, obtain clarification from the Principal Agent.

C2.1.13 PAYMENTS

Interim valuations and payments will be prepared on a monthly basis, all in terms of the conditions of contract.

The contractor is to note that no payment will be made for materials stored off site and in the case of materials being stored on site, payment will only be made for such materials on condition that they have not been delivered to the site prematurely, a tax invoice and proof of payment (ownership) is submitted by the Contractor.

C2.1.14 ACCOMMODATION ON SITE

It is imperative to note that no living quarters for construction workers on site will not be permitted for the full duration of the contract unless otherwise stated in the contract data or permission be granted by the Employer.

C2.1.15 LOCAL MATERIAL UTILISATION REPORT (LOCAL CONTENT)

Submission of Local Material Utilisation Reports is *not applicable* to this project.

Bidders to note that materials procured for the works should be 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 NDPWI.

The contractor shall be responsible for record keeping, documenting and submission of monthly local material utilization report with supporting documentation to the Employer's representative within 7 working days of the beginning of the successive month, indicating the percentage targets achieved in terms of DTI&C designated industry/sector/sub-sector schedule as per the PA36 and Annexures C attached to the tender document. The final percentage achievement to be reconciled upon completion of the project and form part of the final account. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16 CONTRACT PARTICIPATION GOALS

The contractor shall achieve in the performance of this contract the following Contract Participation Goals (CPGs) as indicated below:

Provision for pricing of compliance with the achieving the CPGs is made in the Contract Participation Goal Section of the Bills of Quantities and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced thereunder and no additional claims in this regard shall be entertained

Monthly progressive reports to be submitted to the Employer's representative indicating the percentage targets achieved which must be reconciled upon completion of the project and to form part of the final account.

C2.1.16.1 MINIMUM TARGETED LOCAL BUILDING MATERIAL MANUFACTURERS CONTRACT PARTICIPATION GOAL

The Minimum Targeted Local Building Material Manufacturers CPG not applicable to this project.

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Building Material Manufacturers CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.1. Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16.2 MINIMUM TARGETED LOCAL BUILDING MATERIAL SUPPLIERS CONTRACT PARTICIPATION GOAL

The Minimum Targeted Local Building Material Suppliers CPG is *not applicable* to this project.

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Building Material Suppliers CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.2. Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16.3 MINIMUM TARGETED LOCAL LABOUR CONTRACT PARTICIPATION GOAL

The Minimum Targeted Local Labour Skills Development CPG is *not applicable* to this project.

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Labour CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.3. T Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16.4 MINIMUM TARGETED ENTERPRISE DEVELOPMENT: CONTRACT PARTICIPATION GOALS (CPG)

The Minimum Targeted Enterprise Development Contract Participation Goal is *not applicable* to this project.

A provisional amount has been allowed for within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Enterprise Development CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.4. The provisional amount allowed is for the appointment of training coordinator, mentor, training service providers and training of the beneficiary enterprises. The provisional amount will be adjusted in accordance with the actual Contract Amount (Awarded tender amount excluding allowance, provisional amounts and VAT) of the awarded bid.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

The contractor shall complete a separate bill of quantities upon the award of the project and identification of the respective beneficiaries and the appointment of the training coordinator, mentor, training service providers of which the cost will be offset against the provisional amount allowed in the Bills of Quantities.

C2.1.16.5 MINIMUM TARGETED TARGETED CONTRACT SKILLS DEVELOPMENT GOALS (CSDG)

The Minimum Targeted Contract Skills Development CPG is *not applicable* to this project.

A provisional amount has been allowed for within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Skills Development CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.5. The provisional amount allowed is for:

- stipends payable to the beneficiaries
- appointment of training coordinator
- appointment of mentor (where applicable)
- appointment of training service providers
- other additional costs as per Table 3 of the Standard

The provisional amount will be adjusted in accordance with the actual Contract Amount (Awarded tender amount excluding allowance, provisional amounts and VAT) of the awarded bid.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

The contractor shall complete a separate bill of quantities upon the award of the project and identification of the respective beneficiaries. The CPG value to be achieved will be based on the actual contract amount which will be offset against the provisional amount allowed for within the Contract Participation Goal section in the Bill of Quantities.

Payment

The contractor shall upon the appointment of beneficiaries, provide a breakdown of all the associated costs. The contractor shall provide a payment schedule as to how the CPG costs will be claimed against for inclusion in the monthly payment certificates.

(a) Payment to the contractor to accommodate Part/Full Occupational qualification and Trade qualifications:

Should the contractor select Part/Full Occupational qualification and Trade qualifications learners, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

The contract skills participation goal, expressed in Rand, shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 2 in the Standard for the applicable class of construction works. Should the contractor select Part/Full Occupational qualification and Trade qualifications learners, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

Table 1: Contracting skills development goals for different classes of engineering and construction works contracts

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No 48491 Government Gazette, 23 April 2023 (Table 2, Page 7)

Class of construction works as identified in terms of Regulation 25 (3) of the Construction Industry Regulations 2004		Construction skills development goal (CSDG) (%)
Designation	Description	
CE	Civil Engineering	0.25
CE and GB	Civil engineering and General Building	0.375
EE	Electrical Engineering works (buildings)	0.25
EP	Electrical Engineering works (infrastructure)	0.25
GB	General Building	0.5
ME	Mechanical Engineering works	0.25
SB	Specialist	0.25

No provision for an additional payment item for the payment of the supervisor and/or mentors for the provision of training as provided for in the Contract Participation Goal section in the Bill of Quantities for the training of part/full time occupational learners and/or trade qualification learners. The associated cost is deemed to be included in general supervision on site.

The contractor shall complete a separate bill of quantities upon award, indicating the type and number of beneficiaries as well as the associated Notional Cost of Training to be provided, on which payment will be based.

(b) Payment to the contractor to accommodate Work Integrated Learners and Candidates for professional registration:

Should the contractor select Work Integrated Learners and/or Candidates for professional registration, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

Provisional amounts have been included in the Contract Participation Goal section in the Bill of Quantities for the training of Work Integrated Learners and Candidates for professional registration. The contractor shall price his Profit and Attendance (all inclusive of associated costs to the contractor for implementation and reporting), based on the provisional amount in the Contract Participation Goal section in the Bill of Quantities.

The contractor shall complete a separate bill of quantities upon award, indicating the type and number of beneficiaries as well as the associated Notional Cost of Training to be provided, on which payment will be based.

The CPG value to be achieved will be based on the contract amount as defined by the Standard, which will be offset against the provisional amount allowed for within the Contract Participation Goal section in the Bill of Quantities.

The contractor shall apportion the cost of accommodating work integrated learners (P1 and P2 learners) and candidates for professional registration by using Table 3 in the Standard and this cost will be used to determine the Rand value and will be used in determining the contract participation goal in the Bills of Quantities.

Table 3: The notional cost of providing training opportunities per quarter

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No 48491 Government Gazette, 23 April 2023 (table 3, Page 9)

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
Method 1					
Occupational qualification	R7 000	R0	R9 000	R16 000	R9 000
Method 2					
TVET College graduates	R14 000	R0	R9 000	R23 000	N/A
Apprenticeship	R14 000	R0	R12 000	R26 000	R12 000
Method 3					
P1 and P2 learners	R24 000	R20 000	R4 500	R48 500	N/A
Method 4					
Candidates with a 3 year diploma	R37 000	R20 000	R4 500	R61 500	R20 000
Candidates with 4 year qualification	R47 000	R20 000	R4 500	R71 500	R20 000

Note: The notional cost of providing training opportunities will increase by CPI on an annual basis based on April CPI. Should the rates increase after bid award or during construction the rates will be adjusted as a provisional item.

Example: Training Target Calculation for a R65,7m GB contract

Contract amount	R65 700 000
Contract duration	12 Months
CSDG	0,50%
Minimum CSDG target	0,50% x R65 700 000 = R328 500 (Minimum requirement)

Skills Types	Number of learners	Notional Cost / Learner / Quarter	Notional cost/learner/year	Total Notional Cost over 12 months Contract
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Method 2: Workplace learning opportunities, with unemployed TVET graduates	1	R23 000	R92 000	R92 000
Method 3: Candidacy for an unemployed learner with a 3-year qualification	1	R61 500	R246 000	R246 000
Total	2			R338 000

C2.1.16.6 NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME

The National Youth Service Training and Development Programme is *not applicable* to this project.

The programme shall be implemented in terms of the Implementation of the National Youth Service Programme under the Expanded Public Works (EPWP) and shall be priced in the CPG section of the Bills of Quantities.

Provision has been made within the Contract Participation Goal section in the Bill of Quantities for the National Youth Service Training and Development Programme CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.6.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16.7 LABOUR-INTENSIVE WORKS

Labour Intensive Works is *applicable* to this project.

Where labour intensive work is specified in the Bill of Quantities and indicated by "LI" the contractor must price for and include in rates. Contractors are expected to use their initiative to identify additional activities that can be done labour-intensively to comply with the set minimum labour intensity target. Provision has been made within the Contract Participation Goal section in the Bill of Quantities for the monthly reporting illustrating the value of the works executed under Labour Intensive Works CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.7 and any other supplementary specifications.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.2 Submission of Accrual Reports

The Contractor shall submit accrual reports to the client representative at the end of March and September each year for the duration of the Service Contract period from the date of appointment up to and including project closeout. This is to ensure that PMTE complies with the accounting framework GRAP, which requires that PMTE disclose all its accruals as at the end of each reporting date. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE



**public works
& infrastructure**

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

BILLS OF QUANTITIES

Comprising of:

Schedule 1 - Preliminaries and General

Schedule 2 - Isolation, Disconnection, Removal and Disposal

Schedule 3 - Steam Distribution and Condensate Return Pipeline

Schedule 4 - Hotwater Generation

Schedule 5 - Summary



DCS: KIMBERLY CORRECTIONAL CENTRE: REPLACEMENT OF STEAMLINE & HOT WATER SYSTEMS
WCS: 056284

SCHEDULE 1: PRELIMINARIES AND GENERAL

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	PART 1A: PRELIMINARY AND GENERAL				
	The agreement is to be the General Conditions of Contract (GCC 2010) (Second Edition), Published by the SA Institution of Civil Engineering.				
	The preliminaries are to be the Construction and management requirements for works contracts - Part 1: General engineering and construction works (SANS 1921 -1: 2004 Edition 1) prepared by Standards South Africa and shall be deemed to be incorporated herein.				
	Tenderers are referred to the abovementioned documents for the full intent and meaning of each clause thereof (hereinafter referred to by heading and clause number only) for which such allowance must be made as may be considered necessary.				
	Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading.				
	Where any item is not relevant to this specific contract such items is marked N/A (signifying "not applicable").				
	Adjustment of the preliminaries: each item priced, is to be allocated to one or more of the three categories, where "F" denotes a fixed amount (amount not to be varied), "V" denotes an amount variable in proportion to value and "T" denotes an amount in proportion to time.				
	Time (T) related Preliminaries will only be adjusted for omissions or additions, issued by the Employer, or delays caused by the Employer, for which variation and extension of time has been granted.				
	SECTION A: GENERAL CONDITIONS OF CONTRACT				
A1	General (Clause 1)				
	F: V: T:	Item			
A2	Basis of Contract (Clause 2)				
	F: V: T:	Item			
A3	Engineer (Clause 3)				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
A4	Contractor's General Obligation (Clause 4)				
	F: V: T:	Item			
A5	Time and Related Matters (Clause 5)				
	F: V: T:	Item			
A6	Payment and Related Matters (Clause 6)				
	F: V: T:	Item			
A7	Quality and Related Matters (Clause 7)				
	F: V: T:	Item			
A8	Risk and Related Matters (Clause 8)				
	F: V: T:	Item			
A9	Termination of Contract (Clause 9)				
	F: V: T:	Item			
A10	Claims and Disputes (Clause 10)				
	F: V: T:	Item			
	SECTION B: SANS 1921-1:2004 (Edition 1):				
	CONSTRUCTION AND MANAGEMENT				
	REQUIREMENTS FOR WORKS CONTRACTS: PART 1				
B1	Scope				
	F: V: T:	Item			
B2	Normative references				
	F: V: T:	Item			
B3	Definitions				
	F: V: T:	Item			
B4	Requirements for construction and management				
	F: V: T:	Item			
B4.1	General				
	F: V: T:	Item			
B4.2	Responsibilities for design and construction				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
B4.3	Planning, programme and method statements				
	F: V: T:	Item			
B4.4	Quality assurance				
	F: V: T:	Item			
B4.5	Settling out				
	F: V: T:	Item			
B4.6	Management and disposal of water				
	F: V: T:	Item			
B4.7	Blasting				
	F: V: T:	Item			
B4.8	Works adjacent to services and structures				
	F: V: T:	Item			
B4.9	Management of the works and site				
	F: V: T:	Item			
B4.10	Earthworks				
	F: V: T:	Item			
B4.11	Testing				
	F: V: T:	Item			
B4.12	Materials, samples and fabrication drawings				
	F: V: T:	Item			
B4.13	Equipment				
	F: V: T:	Item			
B4.14	Site establishment				
	F: V: T:	Item			
B4.15	Survey control				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
B4.16	Temporary works				
	F: V: T:	Item			
B4.17	Existing services				
	F: V: T:	Item			
B4.18	Health and safety				
	F: V: T:	Item			
B4.19	Environmental requirements				
	F: V: T:	Item			
B4.20	Alterations, additions, extentions and modifications to existing works				
	F: V: T:	Item			
B4.21	Inspection of adjoining structures, services, buildings and property.				
	F: V: T:	Item			
B4.22	Attendance on nominated and selected subcontractors				
	F: V: T:	Item			
	SECTION C: SCOPE OF WORK IN ACCORDANCE WITH SANS 10403				
	(The reference to clauses refer to table B.1 of SANS 1921-1:2004)				
C1	Cerfication by recognised bodies - (Clause 4.4)				
	F: V: T:	Item			
C2	Agrèment - (Clause 4.5)				
	F: V: T:	Item			
C3	Other services and facilities - (Clause 4.8)				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
C4	Recording of weather - (Clause 5.2)				
	F: V: T:	Item			
C5	Management meetings - (Clause 5.3)				
	F: V: T:	Item			
C6	Daily records - (Clause 5.6)				
	F: V: T:	Item			
C7	Permits - (Clause 5.9)				
	F: V: T:	Item			
C8	Proof of compliance with the law - (Clause 5.10)				
	F: V: T:	Item			
	SECTION D: SPECIFICATION DATA ASSOCIATED WITH SANS 1921-1:2004 (Table A.1)				
D1	Requirements for drawings, information and calculations for which the contractor is responsible - (Clause 4.1.7)				
	F: V: T:	Item			
D2	The planning, programme and method statements- (Clause 4.3)				
	F: V: T:	Item			
D3	Samples of materials. Workmanships and finishes - (Clause 4.12.1)				
	F: V: T:	Item			
D4	Fabrication drawings that the contractor is to provide and deliver to the employer - (Clause 4.12.2)				
	F: V: T:	Item			
D5	Office for the foreman - (Clause 4.14.3)				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
D6	Telephone - (Clause 4.14.3)				
	F: V: T:	Item			
D7	Office for inspector of works - (Clause 4.14.3)				
	F: V: T:	Item			
D8	Telephone in office for inspector of works - (Clause 4.14.3)				
	F: V: T:	Item			
D9	Provision and erection of signboards - (Clause 4.14.6)				
	F: V: T:	Item			
D10	Termination, diversion or maintenance of existing services - (Clause 4.17.1)				
	F: V: T:	Item			
D11	Services which are known to exist - (Clause 4.17.3)				
	F: V: T:	Item			
D12	Detection apparatus - (Clause 4.17.4)				
	F: V: T:	Item			
D13	Additional health and safety requirements - (Clause 4.18)				
	F: V: T:	Item			
	SECTION E: SPECIFIC PRELIMINARIES				
	(Section E contains specific preliminaries items which apply to this contract except where "N/A" (Not applicable) appears against the item.				
E1	WORKING OVER THE WEEKEND				
	Contractor to make allowance to work over the weekend in order to allow for the disconnection of utilities and the connection of the generator. The weekend to be used for disconnection and connection and must be communicated to the Department two weeks in advance.				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E2	SITE INSTRUCTIONS Site instructions issued on site are to be recorded in triplicate in a Site Instruction book which is to be maintained on site by the Contractor				
	F: V: T:	Item			
E3	PLANT RECORD At every site meeting, the Contractor shall provide the Engineer/Principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works.				
	F: V: T:	Item			
E4	SITE OFFICE The Contractor is to allow for the provision and removal of a site office in accordance with the Principal Agent's requirements. To accommodate 6 persons.				
	F: V: T:	Item			
E5	TRADE NAMES Wherever a Trade Name for any product has been described in the Bill of Quantities, the Bidder's attention is drawn to the fact that any other product of equal quality may be used, subject to the written approval of the Principal Agent being obtained prior to the closing date for the submission of the Bids.				
	F: V: T:	Item			
E6	INACCURATE AND DEFECTIVE WORK EXECUTED UNDER PREVIOUS CONTRACT The contractor shall, after taking possession of the site and before commencing the work, check all levels, liners, profiles and the like and satisfy himself as to the dimensional accuracy of all work executed under the previous contract which may affect his work. Should any inaccurate or defective work be found, the contractor shall immediately notify the principal agent in writing requesting his instructions with regard thereto and afford every facility to those rectifying such inaccurate or defective work.				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E7	VIEWING THE SITE IN SECURITY AREAS If the site is situated in a security area and the bidder must arrange with the Authorities to obtain permission to enter the site for Bidding purposes.				
	F: V: T:	Item			
E8	COMMENCEMENT OF WORKS IN SECURITY AREAS If the works falls within a security area, the contractor must arrange with the Authorities and give the necessary notices before commencement of the works. Should the contractor fail to make such arrangements, admission to the site may be refused and any additional costs will be for the contractor's account.				
	F: V: T:	Item			
E9	ENTRANCE PERMITS TO SECURITY AREAS If the works falls within a security area, the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which be issued from the time to time regarding the protection of persons and property under the control of the Authority.				
	F: V: T:	Item			
E10	PROHIBITION ON TAKING PHOTOGRAPHS In terms of article 119 of the Defence Act, 44 of 1957, it is prohibited to sketch or to take photographs of any military site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking photographs, except when authorised thereto by or on behalf of the Minister The same prohibition is also applicable to all Correctional Institutions in terms of article 44.1 of the Correctional Services Act 8 of 1959.				
	F: V: T:	Item			
E11	TOILET FACILITIES Allow for the supply and removal of portable toilet facilities. The contractor is to maintain the cleanliness of the facilities throughout the contract period. The contractor must provide enough toilets for his/her entire workforce.				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E12	MANAGEMENT OF WATER				
	Water for Construction puposes must be obtained from alternative water sources (i.e. supply other than water that is produced and distributed by a regulated water service authority from a licensed water treatment works for human consumption), e.g. dams, rivers, boreholes, springs, rainwater harvesting, recycled sewerage water, etc. The alternative water source shall not be of an inferior quality/ standard than that required for construction purposes. The client reserves the right through his agents to test such supplies or request certificates confirming the grade and nature of the water supply. Relevant knowledge of the respective area will be an advantage.				
	F: V: T:	Item			
E13	OCCUPATIONAL HEALTH AND SAFETY ACT & CONSTRUCTION REGULATIONS				
	It is required of the Contractor to thoroughly study the Health and Safety specification that must be read together with and is deemed to be incorporated under this section of the Bill of Quantities. Provision for pricing thereof is made under items E12.1 to E12.15 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained.				
	The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety specification is compulsory. In the event of partial or total non-compliance, the Principal Agent , notwithstanding the provisions of Clause 6 of Section 1: Preliminaries (Part A) or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the Contractor provides satisfactory proof of compliance. The Contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.				
	All references hereafter are to Regulations of the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993).				
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E13.4	HEALTH AND SAFETY FILE (Construction Regulation 5.7)				
	The contractor shall ensure that a health and safety file, which shall include all documentation required in terms of health and safety specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Principal Agent or inspector upon request. Upon completion of the works, the contractor shall hand over a consolidated health and safety file to the principal agent.				
	F: V: T:	Item			
E13.5	SUPERVISION OF CONSTRUCTION WORK (Safety officer) (Construction Regulation 6)				
	The Contractor shall appoint a full-time competent employee in writing as the construction supervisor, with the duty of supervising the construction work.				
	The Contractor shall appoint a full-time or part-time construction safety officer in writing to assist in the control of all safety related aspects on the site. Such appointments are required to ensure that at all times the requirements of the Act and Construction Regulations are adhered to. Refer to Regulation 6.				
	F: V: T:	Item			
E13.6	RISK ASSESSMENT AND SAFETY POLICY (Construction Regulation 7)				
	Before commencing work the Contractor shall cause a risk assessment to be performed by a competent person appointed in writing and the risk assessment shall form part of the health and safety plan. A copy of the risk assessment shall be available on site at all times for inspection.				
	The Contractor shall at all time carry out the works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. He shall take all precautions regarding training of employees in any hazards and the related work procedures, health and safety induction training of employees, visitors or any other persons entering the site and provide personal protective equipment to all employees and visitors to site which are necessary and adequate to eliminate any conditions which contribute to the risk of injury to persons or damage to property in terms of Regulation 7.				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E15	HIV/AIDS AWARENESS				
	It is required of the contractor to thoroughly study the HIV/AIDS Specification (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities. Provision for pricing of HIV/AIDS awareness is made under items E14.1 to E14.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained				
	The contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of Clause A 31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment				
E15.1	AWARENESS CHAMPION				
	Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification				
	F: V: T:	Item			
E15.2	AWARENESS WORKSHOPS				
	Selection and appointment of a competent Service Provider approved by the principal agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multimedia techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification				
	F: V: T:	Item			
	CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E15.3	POSTERS, BOOKLETS, VIDEOS, ETC.				
	Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification				
	F: V: T:	Item			
E15.4	ACCESS TO CONDOMS				
	Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification				
	F: V: T:	Item			
E15.5	MONITORING				
	Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification				
	F: V: T:	Item			
E16	CONSTRUCTION VEHICLES FOR DELIVERY OF EQUIPMENT				
	Allow for vehicles such as truck cranes, forklifts, etc for the moving of the generator into place and delivery of other necessary equipment for the project.				
	F: V: T:	Item			
E17	ALTERNATE POWER SUPPLIES FOR CONSTRUCTION				
	Allow for the supply of portable generators and/or other alternate power supplies for construction equipment in the event of power failure on the premises.				
	F: V: T:	Item			
	CARRIED FORWARD TO SUMMARY				

DCS: KIMBERLY CORRECTIONAL CENTRE: REPLACEMENT OF STEAMLINE & HOT WATER SYSTEMS
WCS: 056284

SCHEDULE 2: ISOLATION, DISCONNECTION, REMOVAL AND DISPOSAL

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
201	<p style="text-align: center;">ISOLATION, DISCONNECTION, REMOVAL AND DISPOSAL</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Head: Works prior to tender closing</p> <p><u>Steam distribution and calorifiers removal and disposal</u> Complete isolation, disconnection, removal of the existing steamline and delapidated hot water generation system including all pipework, valves, gauges, panels, motors, pumps, feeders, electrical connections, water treatment units, etc and all other associated fittings, fixtures and accessories associated with the installation as noted on site.</p> <p>In taking down and removing existing work the utmost care must be taken to avoid any structural or other damage to the remaining portions of the building and the Contractor shall provide all shoring, needling, strutting, etc. to ensure the stability of all structures during the alteration/demolition work.</p> <p>The Contractor will be held solely responsible for the safety and stability of the buildings for the whole period of the contract and must make good any damage at his own expense.</p> <p>The Contractor shall provide and afterwards remove all necessary temporary tarpaulins, barricades, screens, fencing, temporary waterproofing, dustproofing, etc. required to isolate any sections of new or existing buildings for purposes of excluding users of the remainder of the building or any unauthorised persons all to the satisfaction of the Representative/Agent and remove when directed.</p> <p>Existing services must be maintained at all times to the existing buildings. If it is found necessary to disconnect any service than suitable temporary or alternate services must be provided to the existing buildings.</p> <p>Contractor to liaise with the Management of the facility with regards to the programming of the works (availability of rooms, etc) so as to not disrupt the functioning of the facility.</p> <p>The contractor shall make good to chased brickwork with internal cement plaster, paintwork to previously painted surfaces and make good paintwork to chasing of walls</p> <p>The contractor shall provide to the engineer prior to works commencement a methodology on the proposed procedure for comment</p>				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
202	<p>DECOMMISSIONING AND REMOVAL OF STEAMLINE AND HOT WATER SYSTEM</p> <p>Complete isolation, disconnection, removal of the existing steamline and delapidated hot water generation system including all pipework, valves, gauges, panels, motors, pumps, feeders, electrical connections, water treatment units, etc and all other associated fittings, fixtures and accessories associated with the installation as noted on site.</p>	item	1			
203	<p>DISPOSAL OF STEAMLINE AND HOT WATER SYSTEM AS WELL AS ASSOCIATED COMPONENTS</p> <p>The old material that have been removed must be disposed off in accordance with the Occupational Health and Safety Act and the National Environmental Management Act. The Contractor is to provide an authorised certificate by the authorised and certified disposal provider.</p> <p>(a) Scrap metal The material shall be removed and sold for scrap metal</p> <p>(b) Municipal dump sites</p> <p>(d) Transport Transportation of disposal/recycled material to appropriate site. Must be the closest dumping grounds to the construction site.</p>					
		kg	800,00			
		kg	800			
		km	260			
CARRIED FORWARD TO SUMMARY					R	-



public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

DCS: KIMBERLY CORRECTIONAL CENTRE: REPLACEMENT OF STEAMLINE & HOT WATER SYSTEMS
WCS: 056284

SCHEDULE 3: STEAM DISTRIBUTION PIPELINES AND CONDENSATE RETURN PIPELINES

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<u>GENERAL</u>					
301	Initial inspection and testing all installation and compiling detailed inventory and report on their status	Item	1,0		
302	Obtaining of all available information, compiling, reproducing (1) one set of hard copy as-built and operating & maintenance manuals. Documents to be handed over to the Departmental Representative / Engineer.	Item	1,0		
303	Submit (1) one set of as-built drawings and operating & maintenance manuals in electronic format. The copies shall be in PDF and AutoCAD 2014 format with no passwords protection.	Item	1,0		
304	Logging and recording of operating of conditions, services, maintenance visits, reports, breakdowns, samples, inspections, tests etc.	Item	1,0		
<u>TRAINING</u>					
305	Development of a syllabus for training of operators and client personnel	Item	1		
306	Presenting a training course for maintenance personnel and user client personnel	Item	1		
307	Presenting a training course for boiler operators	Item	1		
<u>INSTALLATION OF THE STEAM DISTRIBUTION PIPELINES AND CONDENSATE RETURN LINES</u>					
The supply and installation of a new steam distribution network, complete with associated equipment and accessories. All work must be done according to the drawings and design specifications.					
Identify major steam and condensate leaks and replace the steam/condensate line with the same material (ie. type of piping, insulation and cladding).					
308	For steam pipeline: Installation of schedule 40 seamless steam piping complete with 10mm threaded stainless steel hangers or wall mounted hot dipped galvanised brackets at 2m interval				
	(a) 200mm diameter	m	20		
	(b) 150mm diameter	m	20		
	(c) 125mm diameter	m	20		
	(d) 100mm diameter	m	20		
	(e) 80mm diameter	m	20		
	(f) 50mm diameter	m	20		
	(g) 40mm diameter	m	20		
	(h) 32mm diameter	m	20		
	(i) 25mm diameter	m	20		
	(j) 20mm diameter	m	20		
	(k) 15mm diameter	m	20		
309	All steam traps must be installed where necessary.	no.	10		
310	Removal of damaged insulation and cladding from existing steam distribution and condensate return piping. Cleaning and derusting and preparing pipe surface complete with new stainless steel hangers.	Item	1		
311	<u>Pipe fittings for steam pipeline</u>				
	90 degree elbows				
	(a) 150mm diameter	no.	3		
	(b) 80mm diameter	no.	3		
	(c) 75mm diameter	no.	3		
	(d) 65mm diameter	no.	3		
	(e) 50mm diameter	no.	3		
	(f) 40mm diameter	no.	3		
	(g) 32mm diameter	no.	3		
	(h) 25mm diameter	no.	3		
	(i) 20mm diameter	no.	3		
	(j) 15mm diameter	no.	3		
CARRIED FORWARD					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
312	45 degree bends				
	(a) 100mm diameter	no.	3		
	(b) 80mm diameter	no.	3		
	(c) 75mm diameter	no.	3		
	(d) 65mm diameter	no.	3		
	(e) 50mm diameter	no.	3		
	(f) 40mm diameter	no.	3		
	(g) 32mm diameter	no.	3		
	(h) 25mm diameter	no.	3		
	(i) 20mm diameter	no.	3		
313	Tees (straight)				
	(a) 150mm diameter	no.	3		
	(b) 100mm diameter	no.	3		
	(c) 80mm diameter	no.	3		
	(d) 75mm diameter	no.	3		
	(e) 65mm diameter	no.	3		
	(f) 50mm diameter	no.	3		
	(g) 40mm diameter	no.	3		
	(h) 32mm diameter	no.	3		
	(i) 25mm diameter	no.	3		
	(j) 20mm diameter	no.	3		
	(k) 15mm diameter	no.	3		
314	Eccentric Reducers (size of larger side indicated)				
	(a) 150mm diameter	no.	3		
	(b) 100mm diameter	no.	3		
	(c) 80mm diameter	no.	3		
	(d) 75mm diameter	no.	3		
	(e) 65mm diameter	no.	3		
	(f) 50mm diameter	no.	3		
	(g) 40mm diameter	no.	3		
	(h) 32mm diameter	no.	3		
	(i) 25mm diameter	no.	3		
	(j) 20mm diameter	no.	3		
	(k) 15mm diameter	no.	3		
315	Nipples				
	(a) 40mm diameter	no.	3		
	(b) 32mm diameter	no.	3		
	(c) 25mm diameter	no.	3		
	(d) 20mm diameter	no.	3		
	(e) 15mm diameter	no.	3		
316	Sockets				
	(a) 40mm diameter	no.	3		
	(b) 32mm diameter	no.	3		
	(c) 25mm diameter	no.	3		
	(d) 20mm diameter	no.	3		
	(e) 15mm diameter	no.	3		
317	Globe valves				
	(a) 150mm diameter	no.	3		
	(b) 100mm diameter	no.	3		
	(c) 80mm diameter	no.	3		
	(d) 75mm diameter	no.	3		
	(e) 65mm diameter	no.	3		
	(f) 50mm diameter	no.	3		
	(g) 40mm diameter	no.	3		
	(h) 32mm diameter	no.	3		
	(i) 25mm diameter	no.	3		
	(j) 20mm diameter	no.	3		
	(k) 15mm diameter	no.	3		
318	Gate valves				
	(a) 50mm diameter	no.	3		
	(b) 40mm diameter	no.	3		
	(c) 32mm diameter	no.	3		
	(d) 25mm diameter	no.	3		
	(e) 20mm diameter	no.	3		
	(f) 15mm diameter	no.	3		
	CARRIED FORWARD				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
319	Check valves				
	(a) 65mm diameter	no.	3		
	(b) 50mm diameter	no.	3		
	(c) 40mm diameter	no.	3		
	(d) 32mm diameter	no.	3		
	(e) 25mm diameter	no.	3		
	(f) 20mm diameter	no.	3		
	(g) 15mm diameter	no.	3		
320	Strainers				
	(a) 50mm diameter	no.	3		
	(b) 40mm diameter	no.	3		
321	Safety relief valves for steam				
	(a) 50mm diameter	no.	3		
	(b) 40mm diameter	no.	3		
	(c) 32mm diameter	no.	3		
	(d) 25mm diameter	no.	3		
	(e) 20mm diameter	no.	3		
	(f) 15mm diameter	no.	3		
322	Steam seperator				
	(a) 50mm diameter	no.	3		
	(b) 40mm diameter	no.	3		
323	Steam pressure reducing valve				
	(a) 80mm diameter	no.	3		
	(b) 65mm diameter	no.	3		
	(c) 50mm diameter	no.	3		
324	Expansion bellows				
	(a) 150mm diameter	no.	3		
	(b) 100mm diameter	no.	3		
	(c) 80mm diameter	no.	3		
325	Self acting steam control valve complete with probe sensor and 2 port valve				
	(a) DN 32	no.	3		
	(b) DN 25	no.	3		
	(c) DN 20	no.	3		
326	Stainless steel steam pipe hangers for two pipe arrangement (100mm diameter/50mm diameter)	no.	10		
327	Installation of class 2 copper condensate piping complete with 10mm threaded stainless steel hangers with rubber inserts or wall mounted hot dipped galvanised brackets with rubber inserts.				
	(d) 76mm diameter	m	20		
	(e) 65mm diameter	m	20		
	(f) 54mm diameter	m	20		
	(g) 40mm diameter	m	20		
	(h) 32mm diameter	m	20		
	(i) 22mm diameter	m	20		
	(k) 15mm diameter	m	20		
328	Capillary fittings for condensate Vacuum breakers for condensate				
	(a) 15mm diameter	no.	3		
329	Strainers for condensate				
	(a) 50mm diameter	no.	3		
	(b) 40mm diameter	no.	3		
	(c) 25mm diameter	no.	3		
330	Tees for condensate (Y type)				
	(a) 50mm diameter	no.	3		
	(b) 40mm diameter	no.	3		
	(c) 32mm diameter	no.	3		
	(d) 25mm diameter	no.	3		
	(e) 20mm diameter	no.	3		
	(f) 15mm diameter	no.	3		
	CARRIED FORWARD				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
331	Insulation of steam piping with preformed canvas covered resin bonded mineral wool sections with stainless steel strapping. Mineral wool must be within 160-185kg/m3 density (excluding sheet metal cladding) Pipe size - preformed section thickness 15-25mm diameter - 40mm 32-50mm diameter - 50mm 65-150mm - 60mm (a) 300mm diameter (b) 200mm diameter (c) 150mm diameter (d) 100mm diameter (e) 80mm diameter (f) 75mm diameter (g) 65mm diameter (h) 50mm diameter (i) 40mm diameter (j) 32mm diameter (k) 25mm diameter (l) 20mm diameter	m	20		
332	Insulation of condensate piping with preformed resin bonded canvas covered mineral wool sections with stainless steel strapping. Mineral wool must be within 160-185kg/m3 density (excluding sheet metal cladding) Pipe size - preformed section thickness 15-54mm diameter - 30mm 65-100mm diameter - 40mm (a) 80mm diameter (b) 75mm diameter (c) 65mm diameter (d) 50mm diameter (e) 40mm diameter (f) 32mm diameter (g) 25mm diameter (h) 20mm diameter (i) 15mm diameter	m	20		
333	Cladding of steam and condensate piping with 0.6mm thickness steel pre-rolled sheet metal (rate shall include over fittings and valves) (a) 200mm diameter (b) 150mm diameter (c) 100mm diameter (d) 80mm diameter (e) 75mm diameter (f) 65mm diameter (g) 50mm diameter (h) 40mm diameter (i) 32mm diameter (j) 25mm diameter (k) 20mm diameter (l) 15mm diameter	m	30		
334	The contractor must inspect and test the Ogden pumps. The pumps must be repaired or replaced.	Item	1		
335	The terminal points must be repaired and made good before installing new piping.	sum	1		
336	All bolts and gaskets must be replaced on all terminal connections.	sum	1		
337	All cut off valves towards the main steam supply must be replaced for all boilers steam supply lines.	sum	1		
	<u>Boiler chemicals and softner plant</u>				
338	Remove, supply and install new pressure pump and electric motor, to suit existing. Including commissioning.	no	1		
339	Remove, supply and install new pressure pump pressure vessel and bladder, to suit existing. Including commissioning.	no	1		
340	Remove, supply and install new pressure pump gauge, non return valve and pressure switch, to suit existing. Including commissioning.	no	1		
341	Water softener : Remove and replace "resin" with new in dual vessels.	Lt	350		
	CARRIED FORWARD TO SUMMARY				



public works
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Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

DCS: KIMBERLY CORRECTIONAL CENTRE: REPLACEMENT OF STEAMLINE & HOT WATER SYSTEMS
WCS: 056284

SCHEDULE 4: HOTWATER SYSTEMS INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>HOTWATER GENERATION INSTALLATIONS</u>				
	<u>CALORIFIERS REPLACEMENT</u>				
	Replacement of calorifiers shall include all required accessories and commissioning				
401	Supply and install steam calorifiers for hot water generation with 3000L hot water generation capacity at steam consumption rate of 140kg/hr	No.	9,0		
	<u>Supply and installation of hot and cold water isolating valves.</u>				
402	15 mm dia.	No.	1,0		
403	22 mm dia.	No.	1,0		
404	28 mm dia.	No.	1,0		
405	35 mm dia.	No.	2,0		
	<u>Replacement of cold water inlet strainer</u>				
406	35 mm dia.	No.	1,0		
	<u>Replacement of non return valve</u>				
407	35 mm dia.	No.	1,0		
408	Replacement of cold water inlet expansion relief valve.	No.	1,0		
409	Replacement of combination air release and vacuum breaker valve.	No.	1,0		
410	Replacement of temperature and pressure operated safety valve.	No.	1,0		
411	Replacement of rock wool insulation and galvanized cladding..	m ²	400,0		
412	Replacement of hot water circulating pump - split casing type separate drive 1450 rpm bronze impeller	no	9,0		
	<u>Replacement of new class 2 (two) copper pipe sections. This shall include cutting, preparing, welding, cleaning, testing and all required fittings for the following pipe sizes:</u>				
413	15 mm dia. Pipe	m	10,0		
414	22 mm dia. pipe	m	10,0		
415	28 mm dia. pipe	m	10,0		
416	35 mm dia. pipe	m	10,0		
417	42 mm dia. pipe	m	10,0		
418	54 mm dia. pipe	m	10,0		
	CARRIED FORWARD				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
<u>THERMOMETRES AND PRESSURE GAUGES</u>					
419	Replacement of dial type thermometer brass pocket. 100 mm dial diameter.	no	6,0		
420	Replacement of calorifier water side glycerine filled 100 mm diameter pressure gauge c/w stop and blow off cock and copper pig tail.	no	6,0		
421	Replacement of 32 dia x 500 long magnesium sacrificial anodes with stainless steel core.	no	6,0		
422	Decommissioning and Testing prior to repair work	sum	1,0		
<u>ELECTRICAL WIRING AND ELECTRICAL CONNECTIONS</u>					
423	The control panel must be located in a clean air conditioned environment. (a) Removing all unwanted items from the Motor Control Centre room	Item	1,0		
424	Replacement of the distribution board with the relevant circuit breakers for the control panels, the HMI, Motor Control Centre, the Programmable Logic Controller, the Human Machine Interface, etc.	Item	1,0		
425	All electrical wiring associated with the installation must be replaced.	Item	1,0		
<u>OPERATING ROOM</u>					
426	All items must be removed from the operating room and the operating room must be cleaned. Items required for disposal must be disposed of according to the Occupational Health and Safety Act (85 of 93) a disposal certificate must be provided to the responsible department official. Items not to be disposed of must be stored in a suitable location by the Client.	Item	1,0		
427	Preparation to paint and painting of the operating room including the windows.	Item	1,0		
<u>BUILDING WORKS</u>					
428	Allowance for building work associated with the installation	Item	1		
<u>TESTING & COMMISSIONING</u>					
429	Allow for Commissioning, testing and issuing of Certificate of Installation and Commissioning for the complete installation	no.	3,0		
430	Allow for three sets of maintenance, operation manuals and handover files as specified.	no.	3,0		
431	Allow for twelve months free servicing maintenance and guarantee.	no.	3,0		
432	Allow for preparation of three (3) sets workshop drawings and printing.	no.	3,0		
433	Allow for instructing the clients staff in the correct operation of the installation as per special project specification requirements	no.	3,0		
434	Allow for preparation of three (3) sets "as installed drawings" in AutoCad Format	no.	3,0		
435	Allow for supply and delivery of maintenance tools and equipment applicable to the installation.	no.	3,0		
CARRIED FORWARD TO SUMMARY					



DCS: KIMBERLY CORRECTIONAL CENTRE: REPLACEMENT OF STEAMLINE & HOT WATER SYSTEMS
WCS: 056284

SUMMARY

ITEM	DESCRIPTION	AMOUNT
01.	SCHEDULE 1: PRELIMINARIES AND GENERAL	
02.	SCHEDULE 2: ISOLATION, DISCONNECTION, REMOVAL AND DISPOSAL	
03.	SCHEDULE 3: STEAMLINE AND HOTWATER SYSTEMS INSTALLATIONS	
04.	SCHEDULE 4: HOTWATER SYSTEMS INSTALLATIONS	
	SUBTOTAL	
	VAUE ADDED TAX (VAT)	
	(The tenderer shall add 15% of the subtotal for VAT)	
	GRAND TOTAL	



EPWP IMPLEMENTATION FRAMEWORK ON NDPWI PROJECTS

Kimberley Correctional Centre: Replacement of hot water system

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



EXPANDED PUBLIC WORKS PROGRAMME
CONTRIBUTING TO A NATION AT WORK

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. Contract Data

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

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.

4. 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
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:
NYS Beneficiaries = N/A
Local Labour = 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. EPWP Branding

9.1. 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

9.2. 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.

10. 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
- 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 contractor's invoice shall not be paid until all pending labour information has been submitted.

12.02 **PROVISION OF EPWP PPE.**



public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

OCCUPATIONAL HEALTH AND SAFETY SAFETY, HEALTH AND ENVIRONMENTAL SPECIFICATION

FOR

REPLACEMENT OF HOT WATER SYSTEM

AT

KIMBERLEY CORRECTIONAL CENTRE

MANAGED BY

**THE DEPARTMENT OF
PUBLIC WORKS AND INFRASTRUCTURE**

Project Manager: Lerato Sebofetja

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 7 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 woks.

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.
- Brig 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 an 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 an in

Good Standing with the Compensation Commissioner, it will be the responsibility of the contractor whose employee has been injured; too make the necessary report and claims to the Commissioner.

8.8.3 Accident and Incident Reporting and Investigation [OHSA 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 OHSA 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 OHSA .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 OSHA 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 he 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.

- Scaffolding.
- 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 (I) 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.

10.2.2 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