public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTHAFRICA

BID DOCUMENT

PROJECT DESCRIPTION: MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS

BID NO:	**GQET-2026/2027-012**
Closing Date:	**Tuesday, 24 November 2026**
Closing Time:	**11H00**
Bid Briefing Meeting Date:	**Friday, 13 November 2026**
Bid Briefing Meeting time:	**10H00**

***Tenderers CSD No*:** ……

Name of the Tenderer: ……

Bid Box Address
Department of Public Works & Infrastructure
Eben Donges Building
Corner Robert & Hancock Street
Gqeberha
6001

SCM SPECIFIC ENQUIRIES:	**TECHNICAL / PROJECT SPECIFIC ENQUIRIES**
Enquires: Nwabisa Nkangana	Enquires: Portia U Mvana
Tel No: 041 408 2055 during office hours	Tel No: 041 408 2181 during office hours
Cell No: NONE	Cell No: 082 327 4062
Email Address: Nwabisa.Nkangana@dpw.gov.za	Email Address: Portia.Mvana@dpw.gov.za

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Public

SUMMARY OF BID INFORMATION

Bid Number	GQET-2026/2027-012	
Bid/ Project Description	**MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS**	
Bid Closing date & Time	Tuesday, 24 November 2026	**11H00**
Bid Briefing Date & Time (If applicable)	Friday, 13 November 2026	**10H00**
Venue	MDANTSANE PRISON	
SCM SPECIFIC ENQUIRIES:	Nwabisa Nkangana	Nwabisa.Nkangana@dpw.gov.za
	041 408 2055	NONE
TECHNICAL / PROJECT SPECIFIC ENQUIRIES	Portia U Mvana	Portia.Mvana@dpw.gov.za
	041 408 2181	082 327 4062
Bid Document Price	R 700.00	
Procurement Plan Reference Number	748	
Points to be allocated for an area for work to be done or services to be done in that area	Eastern Cape Province	

Public

PA-04 (EC): NOTICE AND INVITATION TO TENDER

THE DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE INVITES TENDERS FOR:

Project title:	**MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS**		
Bid no:	**GQET-2026/2027-012**	**Procurement Plan Reference no:**	**748**
Advertising date:	**Friday, 30 October 2026**	**Closing date:**	**Tuesday, 24 November 2026**
Closing time:	**11H00**	**Validity period:**	**84 calendar days**

1. REQUIRED CIDB GRADING

It is estimated that tenderers should have a CIDB contractor grading designation of ***5 ME** ** or higher.
** Delete "or select tender value range select class of construction works" where only one class of construction works is applicable*

It is estimated that potentially emerging enterprises should have a CIDB contractor grading designation of ***select tender value range*** *or* ***select tender value range select class of construction works*** **PE*** or higher.
** Delete "or select tender value range select class of construction works PE" where only one class of construction works is applicable*

2. FUNCTIONALITY CRITERIA APPLICABLE

2.1 The Bid will be evaluated on Functionality and the following Functionality evaluation criteria will apply and failure to meet minimum functionality score will result in the tenderer being disqualified. From further evaluation:

MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS

Functionality Criteria No	Criteria	Evaluation Indicators	Applicable Value
1	**BIDDERS RELEVANT EXPERIENCE IN MAINTENANCE OR REPAIR OR NEW INSTALLATION IN COMPLETED CONTRACTS OF A SIMILAR NATURE, SCOPE AND/ OR COMPLEXITY**		**25**
	Conditions a) Provide a reference letter(s) of a **completed** project of a similar nature, scope and/ or complexity using the Departmental testimonial/ reference template provided in the bid document. . b) Bidders **must** use the testimonial/ reference letter template provided in the bid document. Only a reference on the testimonial/ reference letter template provided in the bid document will be accepted. If a reference is not on the testimonial/ reference letter template provided in the bid document, it will not be considered. c) The contract/ project reference must comply with the following minimum requirements: i. The project must be for a relevant maintenance or repair or service or installation of Boilers and ii. The project must be in the last **five (5)** years calculated back from the closing date of this bid and iii. Has a value of greater than **R 900 000** d) The reference letters submitted must comply with the following minimum requirements: i. The reference letter(s) must be dated and signed.	**Evaluation indicator No 1** **Three (3)** x reference letters/ testominials of a **completed** maintenance or repair or new installation for Boiler projects in the last five years with a contract value greater than **R 900 000.**	**5 (1)** Minimum points for Functionality Criteria No. 1
		Evaluation indicator No 2 **Four (4)** x reference letters/ testominials of a **completed** maintenance or repair or new installation for Boiler projects in the last five years with a contract value greater than **R 900 000.**	10 **(2)**
		Evaluation indicator No 3 **Five (5)** x reference letters/ testominials of a **completed** maintenance or repair or new installation for Boiler projects in the last five years with a contract value greater than **R 900 000.**	15 **(3)**
		Evaluation indicator No 4 **Six (6)** x reference letters/ testominials of a **completed** maintenance or repair or new installation for Boiler projects in the last five years with a contract value greater than **R 900 000.**	20 **(4)**

	ii. The project must be within the period specified in the bid. iii. The reference letter(s) contract period and R- value must be for a single contract and not the sum of various contracts. iv. The reference letter(s) must clearly indicate the contract start date and contract end date/ or at least practical completion date. v. The reference letter(s) must indicate the client's name, contact particulars and Email address. vi. If the bidder's performance is not indicated in the reference letter(s), the Department will deem that the bidder's performance was unsatisfactory and will not verify the contrary. vii. An appointment letter/ award letter and or signed contract are not accepted as a reference letter.	**Evaluation indicator No 5** **More than six (6)** x reference letters/ testominials of a **completed** maintenance or repair or new installation for Boiler projects in the last five years with a contract value greater than **R 900 000.**	25 **(5)**

Please note: *Experience of the bidder will be based on the reference letters submitted. If a project is listed in the table below, but a supporting reference letter is not submitted, the project or the experience of the bidder will not be considered valid. If a reference letter is not listed in the table below, but the reference letter is submitted with the bid and it is valid, it will be considered. The submitted reference letter(s) will be used in Functionality Criteria No. 1 to validate the experience of the bidder only. Bidders may also submit a single reference letter(s)/ testimonial(s) that covers both the requirements (experience and satisfactory performance) as required for Functionality Criteria No. 1 and Functionality Criteria No. 2*

	Short Description of project	Client	Project Start date	Project End Date	Value of Project (Final account)
1.					
2.					
3.					
4.					
5.					

Functionality Criteria No	Criteria	Evaluation Indicators	Applicable Value
2.	**REFERENCES FROM PROJECT MANAGERS/CLIENTS/CONSULTANTS FOR PROJECTS OF SIMILAR IN NATURE, SCOPE AND VALUE WHICH INDICATES THE <u>BIDDERS PERFORMANCE.</u>**		**25**
	a) Please provide: (i) Signed reference letters/ testimonial from Consultant / Clients confirming your company's performance using the Departmental reference template provided in the bid document.. (ii) Bidders **must** use the testimonial/ reference letter template provided in the bid document. Only a reference on the testimonial/ reference letter template provided in the bid document will be accepted. If a reference is not on the testimonial/ reference letter template provided in the bid document, it will not be considered. (iii) All the requirements for contracts or projects or reference letters as precribed in Functionality Criteria 1 applies. (iv) Additionally, for a reference letter to be considered for this evaluation indicator, the bidders' performance **must** be rated in the letter as at least "satisfactory". (v) If the bidder's performance rating is not in indicated in the reference letter/ testimonial, it will be deemed a "poor or non-satisfactory performance"	**<u>Evaluation indicator No 1</u>** **Thee (3)** x reference letters/ testominials which **indicate** atleast a **satisfactory performance** in a **completed** maintenance or repair or new installation for Boiler projects with a contract value greater than **R 900 000.**	5 **(1)** Minimum points for Functionality Criteria No. 2
		<u>Evaluation indicator No 2</u> **Four (4)** x reference letters/ testominials which **indicate** atleast a **satisfactory performance** in a **completed** maintenance or repair or new installation for Boiler projects with a contract value greater than **R 900 000.**	10 **(2)**
		<u>Evaluation indicator No 3</u> **Five (5)** x reference letters/ testominials which **indicate** atleast a **satisfactory performance** in a **completed** maintenance or repair or new installation for Boiler projects with a contract value greater than **R 900 000.**	15 **(3)**
		<u>Evaluation indicator No 4</u> **Six (6)** x reference letters/ testominials which **indicate** atleast a **satisfactory performance** in a **completed** maintenance or repair or new installation for Boiler projects with a contract value greater than **R 900 000.**	20 **(4)**
		<u>Evaluation indicator No 5</u> **More than six (6)** x reference letters/ testominials which **indicate** atleast a **satisfactory performance** in a **completed** maintenance or repair or new installation for Boiler projects with a contract value greater than **R 900 000.**	25 **(5)**

If a project is listed in the table below or the table above, but the reference letter is not submitted, the project will not be considered. If a project is not listed, but the reference letter is submitted with the bid and it is valid, it will be considered. For a reference letter to be considered valid for Functionality Criteria No. 2, the performance of the bidder **must** be indicated in the reference letter, and the performance of the bidder **must be rated at least satisfactory**. Bidders may also submit a single reference letter(s)/ testimonial(s) that covers both the requirements (experience and satisfactory performance) as required for Functionality Criteria No. 1 and Criteria No. 2

	Name of Company	**Value of Project as measured for final account**	**Letter attached**	
			YES	**NO**
1				
2				
3				
4				
5				

Functionality Criteria No	Criteria	Evaluation Indicators	Applicable Value
3.	**FINANCIAL CAPACITY**		**20**
	3.1 a) Provide a valid Bank rating letter or a bank rating certificate from your Banking Institution which clearly states a bank rating code of **A or B or C or D**. b) The bank rating letter must be: For an amount greater than **R 2 million** over a twelve (12) months period and be dated no earlier than three (3) months prior to the closing date of bid. **3.2** In the case that a bidder submit a bank rating letter with more than one bank rating code: a) The Department will consider the lowest bank rating code, which is on the bank rating letter, provided it complies with the acceptable bank rating codes as specified in the bid **and** b) If one of the bank rating codes on the submitted bank rating letter is less than the acceptable bank rating code(s) as specified in the bid document, it will be deemed non-compliant and will not be accepted.	Bank rating code of D	8 (2) Minimum points for Functionality Criteria No. 3
		Bank rating code of C	12 (3)
		Bank rating code of B	16 (4)
		Bank rating code of A	20 (5)

No	Name of Bank	Contact Person	Contact Number	Date of letter
1				
2				

Functionality Criteria No	Criteria	Evaluation Indicators	Applicable Value
4.	**COMPETENCE OF KEY PERSON(S), PROFESSIONAL AND TECHNICAL PERSONNEL**		**30**
	CONDITONS APPLICABLE TO KEY STAFF AND QUALIFICATIONS **4.1 MINIMUM REQUIRED KEY STAFF** The minimum key staff/ technical personnel required on this project is: I. 1 x Milwright/Fitter Technicians II. 1 x Boiler Operators and III. 1 x Electrician **4.2 ACCREDITATIONS/ REGISTRATIONS** The submission of copies of accreditations/ registrations of the following key staff/ technical personnel is mandatory: I. A copy of the Trade Test Certificate for the Millwright or the Mechanical Fitter. II. A copy of the Training certificate/confirmation letter of the training as a Boiler operator for each Boiler operator. III. A copy of the Electrician's Wireman's license card **4.3 CV's** Please note that No CV's will be required for this bid.	**Evaluation indicator No 1** **Minimum Key Staff x three (3) made up as follows:** a) One (1) x Milwright/Fitter Technicians **and** b) One (1) x Boiler Operators **and** c) One (1) x Electrician	6 **(1)** Minimum points for Functionality Criteria No. 4
		Evaluation indicator No 2 **Key Staff x four (4) made up as follows:** a) One (1) x Milwright/Fitter Technicians **and** b) Two (2) x Boiler Operators **and** c) One (1) x Electrician	12 **(2)**
		Evaluation indicator No 3 **Key Staff x five (5) made up as follows:** a) Two (2) x Milwright/Fitter Technicians **and** b) Two (2) x Boiler Operators **and** c) One (1) x Electrician	18 **(3)**
		Evaluation indicator No 4 **Key Staff x six (6) made up as follows:** a) Two (2) x Milwright/Fitter Technicians **and** b) Three (3) x Boiler Operators **and** c) One (1) x Electrician	24 **(4)**
		Evaluation indicator No 5 **Atleast x seven (7) key staff made up as follows:** a) Two (2) x Milwright/Fitter Technicians **and** b) Four (4) x Boiler Operators **and** c) One (1) x Electrician	30 **(5)**

No	Name of the Key Person	Name of the Qualification(s)	Portfolio/Position	CVs and Qualifications attached	
				YES	NO
1					
2					
3					
4					

5					
Minimum Qualifying Score for Functionality				**50**	

TOTAL SCORE **100**

NB:

i. If a bid fails to achieve the minimum qualifying score for functionality of **Fifty percent (50%)**, it will automatically be regarded as non-compliant, and shall be not considered any further in the evaluation process **and**

ii. In addition to the above, bidders' must score the minimum points for each Functionality Criteria, (i.e. Functionality Criteria No 1, Functionality Criteria No 2, Functionality Criteria No 3 and Functionality Criteria No 4.) If a bidder fails to score the minimum points for each Functionality Criteria, the bidder's offer will be regarded as non-compliant, even if the bidder scored the required minimum qualifying score for functionality.

3. EVALUATION METHOD FOR RESPONSIVE BIDS

3.1 The following Evaluation Method for responsive bids will be applicable:

☐ Method 1 (Financial offer)	☒ Method 2 (Financial and Preference offer)

3.2. Indicate which preference points scoring system is applicable for this bid:

☒ **80/20** Preference points scoring system	☐ **90/10** Preference points scoring system	☐ **Either 80/20 or 90/10** Preference points scoring system

4. RESPONSIVENESS CRITERIA

Indicate SUBSTANTIVE RESPONSIVENESS criteria applicable for this tender. Failure to comply with the criteria stated hereunder shall result in the tender offer being disqualified from further consideration:

1.	☒	Only those tenderers who satisfy the eligibility criteria stated in the Tender Data may submit tenders.
2.	☒	Tender offer must be properly received on the tender closing date and time specified on the invitation, completed either electronically (if issued in electronic format), or by writing legibly in non-erasable ink. (All as per Standard Conditions of Tender).
3.	☒	Use of correction fluid is prohibited. Corrections to be crossed out and initialled.
4.	☒	Submission of a bid offer
5.	☒	There will be a compulsory site/ bid briefing meeting and all potential bidders must attend. The proof of attendance of the meeting shall include any of the following documents: A signed DPW-16 certificate or a signed briefing meeting attendance register.
6.	☒	Bidders must fully price the Bill of Quantities (BOQ) or Pricing Schedule in the document. If any item or element of the BOQ or pricing schedule is not priced, the bidder will be disqualified.
7.	☒	Bidders must indicate their percentage mark-up on the provisional amounts and failure to comply will lead to elimination
8.	☒	Bidders must comply with DPW-21 (EC): Record of Addenda to tender documents, if any. Bids will be evaluated in accordance with published addendum or Erratum
9.	☒	Any addendums or erratums to the bid will be published in the original advertising media, at least 10 working days before the bid closing date. Bids will be evaluated in accordance with the published addendums or erratums.
10.	☒	Offers from the following bidders' will be eligible to have their submissions evaluated: a) Only bidders' who are registered with the Construction Industry Development Board (CIDB), or who are capable of being so registered with the CIDB within twenty-one (21) working days from the closing date for submission of tenders, in the specified contractor designation (class of works) and or specified contractor grading (or higher) or b) Bidders who submitted proof with their bids that they already applied to CIDB, on or before the closing date: i. For the correction of their overall CIDB non-compliance status or ii. For an upgrade of their specified contractor CIDB grading or iii. For a registration in a specified contractor designation.

11.	☒	Bidders will be disqualified in the following circumstances: a) If they submit, more than one bid or an alternative offer. b) If they submit an additional bid(s) for the same bid, whilst they are in agreements with other bidders in the form of joint ventures or consortiums. c) If there are factual evidence of communication with any other bidder, which are competing for the same bid (example a signature of the bidder is found in a competing bidder or the bidder is a director of in a competing bid offer).
12.	☒	A copy of a previously certified copy of a document is invalid and will not be considered by the Department. The Department will not provide any bidder an opportunity to correct such a non-compliance.
13.	☒	Bidders must include VAT in their bid prices, if their final bid price before VAT, exceeds R 1 million
14.	☒	14.1 Where a provisional sum/ amount and a provision for a R-value on the mark-up on the provisional sum/ amount is provided in the pricing schedule, the following applies: 14.1.1 The bidder's final offer must be inclusive of the R-value of the provisional sum/amount. 14.1.2 The bidder's final offer must be inclusive of the R-value of the mark-up on the provisional sum/amount. 14.2 Failure to comply will lead to disqualification of the bidder's offer.

ADMINISTRATIVE CRITERIA
Indicate administrative requirements applicable for this tender. Tenderers may be required to submit the below documents where applicable.

The Employer reserves the right to request further information regarding the undermentioned criteria. Failing to submit further clarification and/or documentation within seven (7) calendar days from request or as specifically indicated, will disqualify the tender offer from further consideration.

1.	☒	Any correction to be initialled by the person authorised to sign the tender documentation as per PA 15.1 or PA 15.2 resolution of board/s of directors / or PA15.3 Special Resolution of Consortia or JV's.
2.	☒	Submission of applicable (PA-15.1, PA-15.2, PA-15.3): Resolution by the legal entity, or consortium / joint venture, authorising a dedicated person(s) to sign documents on behalf of the firm / consortium / joint venture.
3.	☒	Submission of (PA-11): Bidder's disclosure
4.	☒	Submission of proof of Registration on National Treasury's Central Supplier Database (CSD). Insert the Supplier Registration Number on the form of offer, including proposed sub-contractors if any.
5.	☒	All parts of tender documents submitted must be fully completed in ink and signed where required.
6.	☒	Upon request, submission of fingerprints obtainable from local SAPS including any other additional documentation and information required for vetting purposes.
7.	☐	Upon request, submission of a fully completed security clearance application form with supporting documentation and information as required. The security clearance form will be provided by the Employer for projects requiring a security clearance.
8.	☒	Submission of (PA 40): Declaration of Designated Groups for Preferential Procurement
9.	☒	Bidders will be evaluated as per the Special Conditions of Bid (SCB-01)
10.	☒	Submission of DPW-09 (EC): Particulars of Tenderer's Projects: Bidders may use 'own form' – the details of all the tenderer's current and previous projects must however be the same as the details of the DPW-09 (EC) form. Bidders are required to sign and date the DPW-09 / 'own form' and cross-reference the documents if 'own form' is used.
11.	☒	Submision of DPW-21 (EC): Record of addenda to tender documents: Bidder maybe requested to confirm receipt and or compliance with the "Record of Addenda" if the record of Addenda" was not submitted with the bid at the closing date.

12.	☒	**CIDB non-compliance at the time of tender** If a bidder submitted with their bid proof that they had already applied to CIDB for an upgrade or for correction of their non-compliance with CIDB, such a contractor will be deemed to be capable of being so registered in that particular grading and will be evaluated as such, within the 21 workings days period after the closing date. **Note:** A CIDB non-compliance status is define as a CIDB status which is inactive and or expired, and or suspended, and or deregistered and or not registered in the specified contractor designation (class of works) and or not registered on the CIDB in the specified (or higher) contractor grading.
13.	☒	PA 10: FM GENERAL CONDITIONS OF CONTRACT
14.	☒	**CIDB non-compliance after tender closing date** Upon request, a bidder will be given twenty one (21) working days to correct its CIDB compliance status, if the bidder becomes CIDB non-compliant, after the bid closing date.
15.	☒	A bidder may nominate the same key resources for more than one bid in the Department. During evaluation, the bidder's offer will be "deemed responsive" (if it complies with the substantive criteria). Should **a bidder**, subsequently be awarded more than one bid, but the key staff is already allocated to another awarded bid or another recommended bid, the Department may request a bidder to provide new key staff, which are accompanied by the minimum required qualifications and CV's (if applicable).
16.	☒	Upon request, a non-VAT vendor who included VAT in their prices, must within 21 days, submit proof that they have registered as VAT-vendor with SARS.
17.	☒	Submission of a fully completed Form of Offer and Acceptance. (DPW-07)
18.	☒	Upon request, a bidder's reference(s) must respond to any communication(s) or reference check(s) received from the Department. If a bidder's reference(s) received the Department's correspondence or acknowledged receipt or the Department's correspondence or the Department received a "read receipt" of the correspondence(s) send to a bidder's reference, but the bidder's reference(s) do(es) not respond to the Departments enquiry/ or reference check, the relevant reference (who did not respond) will not be considered
19.	☒	Bidder's labour rates per hour in the Pricing Schedule/ Bill of Quantities, are not allowed to be less than the minimum Gazetted labour rate of the relevant Bargaining Council of that trade in South Africa. Where there is no Bargaining Council Gazetted labour rates for a specific trade or sector, the labour rates quoted cannot be less than the gazetted National minimum labour rates of South Africa as at the closing date of the bid
20.	☒	If a referee is not contactable, the bidder will be provided one opportunity to provide: (a) Alternative contact detail(s) for the relevant referee, or Contact details of an alternative referee on the same project.
21.	☒	Upon request bidders must respond in writing to any enquiry received from the Department on any matter, which may have an impact on the evaluation of a bidder's submitted bid.

Indicate administrative requirements applicable for specific goals, Tenderers will not be required to submit the below document if not provided in the original tender proposals, Failure to comply with the criteria stated hereunder shall result in the tenderer not allocated points for specific goals.

1	☒	Submission of (PA-16): Preference Points Claim Form in terms of the Preferential Procurement Regulations 2022
2	☒	A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Certificate issued by a SANAS accredited service provider

5. METHOD TO BE USED TO CALCULATE POINTS FOR SPECIFIC GOALS

☒

5.1. For procurement transactions with rand value greater than R1 Million and up to R50 Million (Inclusive of all applicable taxes) the specific goals listed below are applicable.

Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted by bidders to validate their claim
1.	An EME or QSE or any entity **which** is at least 51% owned by black people	10	• SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
2.	Located in **Eastern Cape Province** for work to be done or services to be rendered in the **Eastern Cape Province**	2	• Official Municipal Rates Statement which is in the name of the bidder. Or • Any account or statement which is in the name of the bidder. Or • Permission To Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder. Or • Lease Agreement which is in the name of the bidder.
3.	An EME or QSE or any entity which is at least 51% owned by black women	4	• SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
4.	An EME or QSE or any entity which is at least 51% owned by black people with disability.	2	• SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable. and • Medical Certificate indicating that the disability is permanent. Or • South African Social Security Agency (SASSA) Registration indicating that the disability is permanent. Or National Council for Persons with Physical Disability in South Africa registration (NCPPDSA).
5.	An EME or QSE or any entity which is at least 51% owned by black youth.	2	• ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.

Black people mean Africans, Coloureds and Indians, who - (a) are citizens of the Republic of South Africa by birth or descent; or (b) became citizens of the Republic of South Africa by naturalization - (i) before 27 April 1994; or (ii) on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date. (BROAD-BASED BLACK ECONOMIC EMPOWERMENT ACT No 25899, 2003 of 9 JANUARY 2004).

6. OBJECTIVE CRITERIA APPLICABLE: YES

6.1 The Department is procuring services per the bids listed below at the same time and the required services is of similar nature and scope:

a) **GQET-26/27-011:** *FORT GLAMORGAN PRISON: MAINTENANCE AND REPAIRS OF BOILERS AT FORT GLAMORGAN PRISON. 36 MONTHS.*

b) **GQET-26/27-012:** *MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS AT MDANTSANE PRISON. 36 MONTHS.*

c) **GQET-26/27-014:** *ST ALBANS PRISON: MAINTENANCE AND REPAIRS OF BOILERS AT ST ALBANS PRISON. 36 MONTHS*

d) **GQET-26/27-013:** *KIRKWOOD PRISON: MAINTENANCE AND REPAIRS OF BOILERS AT KIRKWOOD PRISON. 36 MONTHS.*

6.2 The department included in the bids identified above, an “Objective Criteria” which are empowering the Department to award these bids to more than one service provider.

6.3 The Department’s objective with this “Objective Criteria” is to award the above listed bids to more than one contractor and it is aimed at:

a) Promoting broader social, economic and market participation
b) Preventing industry monopolies and sustain future competitiveness in the industry
c) The equitable and diverse distribution of work and empowerment opportunities
d) Managing of various risks which are associated in appointing one contractor for example under performance, over commitment, “multiple project hostages”, etc.

6.4 Based on the “Objective Criteria” above, the Department may therefore pass over the highest or higher point scoring bidder(s), if they are positioned to be awarded more than one of these bids.

6.5 If a bidder is in a position to win more than one of these bids, the Department will afford the relevant bidder(s) the opportunity to select its preferred bid.

6.6 After a bidder selected its preferred area, the Department reserves the right to negotiate with the other remaining bidders from the next highest positioned point scorer downwards.

6.7 During the Negotiation process (if required), the following conditions will apply:

a) The Department will not give any bidder a counter offer, which is higher than the initial submitted financial offer of the bidder.
b) If the tendered price of the next highest scoring bidder in R-value is less or equal to the highest scoring bidder’s price, the next highest scoring bidder will be awarded, at its tendered price.
c) If the financial offer of the next highest scoring bidder in R-value is more than the highest scoring bidder’s financial offer and it is not market related, the next highest scoring bidder will be given a counter offer. The counter offer which will be given to the next highest scoring bidder, will be the R-value of the financial offer of the highest scoring bidder, provided that the highest scoring bidder’s financial offer is reasonable and market related or
d) If the highest point scorer’s financial offer is not market related and the next highest scoring bidder’s financial offer is market related, the bidder will be appointed at its tendered price.
e) If the highest point scorer’s financial offer is not market related (i.e. too low) and the next highest scoring bidder’s financial offer is also not market related (i.e. too high), it will be given a market related counter offer.
f) If the bidder during the negotiation declines the counter offer (if any), and makes a market related counter offer, the Department may consider the counter offer received by the bidder and or negotiate further. If the Department does not accept the bidders counter offer and the bidder declines the final offer from the Department, the Department reserves the right to negotiate with the next highest bidder up to the last bidder and the same methodology will be followed.
g) The Department may only award more than one of these bids to a bidder, once all responsive bidders has been afforded an opportunity to select. The process above will repeat, for any remaining items, and will start again from the highest scoring bidder in price and specific goals downwards.
h) The Department may also award the same service provider(s) more than one bid if there is (are) no other responsive(s) bidders for the particular bid/area.

6.8 The Department also reserves the right to withdraw before the closing or cancel any of the bids listed in the bids listed in the Objective Criteria after the closing date should the need arise.

6.9 Should the Department withdraw or cancel any bid(s) which are part of the Objective Criteria the following conditions will apply:

a. The bidding process will proceed as the need for the remaining goods or services still exist
b. The Objective Criteria will still be applicable on the remaining bids,
c. The withdrawn or cancelled bids will be omitted from the Objective Criteria,
d. The remaining bids will be evaluated and finalized in accordance with the remaining bid rules and Objective Criteria.

A. Additional information that may be required during the tender evaluation:

Failing to submit further clarification and/or documentation within seven (7) calendar days from request will disqualify the tender offer from further consideration.

Legal Status of Tendering Entity: **If the Tendering Entity is:**	**Documentation to be submitted with the tender, or which may be required during the bid evaluation:**
a. A close corporation, incorporated prior to 1 May 2011 under the Close Corporations Act, 1984 (Act 69 of 1984, as amended)	Copies of the Founding Statement – CK1
b. A profit company duly registered as a private company. [including a profit company that meets the criteria for a private company, whose Memorandum of Incorporation states that the company is a personal liability company in terms of Section 8(2)(c) of the Companies Act, 2008 (Act 71 of 2008, as amended)].	Copies of: i. Certificate of Incorporation – CM1; ii. Shareholding Certificates of all Shareholders of the company, plus a signed statement of the company's Auditor, certifying each Shareholder's ownership / shareholding percentage relative to the total; and/or iii. Memorandum of Incorporation in the case of a personal liaility company.
c. A profit company duly registered as a private company in which any, or all, shares are held by one or more other close corporation(s) or company(ies) duly registered as profit or non-profit company(ies).	Copies of documents referred to in a. and/or b. above in respect of all such close corporation(s) and/or company(ies).
d. A profit company duly registered as a public company.	Copy of Certificate of Incorporation – CM1, and a signed statement of the company's Secretary or Auditor confirming that the company is a public company.
e. A non-profit company, incorporated in terms of Section 10 and Schedule 1 of the Companies Act, 2008 (Act 71 of 2008, as amended).	Copies of: i the Founding Statement – CK1; and ii the Memorandum of Incorporation setting out the object of the company, indicating the public benefit, cultural or social activity, or communal or group interest.
f. A natural person, sole proprietor or a Partnership	Copy(ies) of the Identity Document(s) of: i. such natural person/ sole proprietor, or each of the Partners to the Partnership.
g. A Trust	Deed of Trust duly indicating names of the Trustee(s) and Beneficiary(ies) as well as the purpose of the Trust and the mandate of the Trustees.

B. Additional returnable documents that may be required during the tender evaluation:

Tender document name
Priced Bills of Quantities.
Any additional information required to complete the risk assessment referred to in 15 below.

7. ELIGIBILITY IN RESPECT OF RISK TO THE EMPLOYER:

a. Standard risk management assessment criteria in respect of tenders received for routine projects in the engineering and construction works environments:

Tender offers will be evaluated by an Evaluation Committee based on the technical and commercial risk criteria listed hereunder. Each criterion carries the same weight / importance and will be evaluated individually based on reports presented to the Bid Evaluation Committee by the Professional Team appointed on the project. A tender offer will be declared non-responsive and removed from any further evaluation if any one criterion is found to present an unacceptable risk to the Employer.

In order for the evaluation reports to be prepared by the Professional Team, the Tenderer is obliged to provide comprehensive information on form DPW-09 (EC). Failure to complete the said form will cause the tender to be declared non-responsive and removed from any further consideration. The Employer reserves the right to request additional information over and above that which is provided by the Tenderer on said form. The information must be provided by the Tenderer within the stipulated time as determined by the Bid Evaluation Committee, failing which the tender offer will *mutatis mutandis* be declared non-responsive..

b. Technical risks:

Criterion 1: Experience on comparable projects during the past 5 years.
The tendering Service Provider's experience on comparable projects during the past 5 years. The number of current and previous comparable projects performed by the Tenderer as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC) or any alternative accepted format. Failing to provide contactable references will result in the tender offer will be *mutatis mutandis* declared non-responsive. A bidder will not be afforded to provide alternative references, if the bidder's initial reference is contactable, or don't respond to the Department. If a reference letter is not listed in on form DPW-09 (EC) or any alternative accepted format, but the reference letter is submitted with the bid and it is valid, it will be considered

Aspects to be regarded as "comparable" includes (but may be extended according to circumstances): size of projects (measured against monetary value or other project quantifying parameters), nature of projects (building, engineering, high/low rise, etc.), locality/area of execution (site-specific influences, knowledge of local conditions, etc.), complexity of project, projects for similar client department irrespective of end purpose of buildings/facilities created or in progress of being created and time scales of projects (normal, fast track, etc.) and stage of its/their development.

Criterion 2: Contractual commitment and quality of performance on comparable projects during the past 5 years.

Adherence to contractual commitments and quality of performance of comparable current and previous projects performed by the Tenderer on comparable projects during the past 5 years as per the evaluation report, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references after an opportunity was provided, the reference/ testimonial will not be considered. Failure by bidder to provide the minimum of **three (3)** contactable referees who will provide references and recommendations on comparable projects will result in the tender offer being *mutatis mutandis* declared non-responsive. Failure by bidder to provide the minimum of **three (3)** contactable referees who will confirm at least a **satisfactory performance** in comparable projects will result in the tender offer being *mutatis mutandis* declared non-responsive. If a bidder's referee(s) remains "not contactable", after it was provided an opportunity to submit alternative contact particulars, the reference letter/ testimonial will not be considered. If a bidder's referee(s) fail(s) to respond, the reference/ testimonial will not be considered.
Bidder's reference(s) must respond to any communication(s) or reference check(s) received from the Department. If a bidder's reference(s) received the Department's correspondence or acknowledge receipt or the Department's correspondence or the Department received a "read receipt" of the correspondence(s) sent to a bidder's reference, but the bidder's reference(s) do(es) not respond to the Department's enquiry / or reference check, the relevant reference (who did not respond) will not be considered.

Aspects to be considered include, but are not limited to the following:

1. The level of progress on current projects in relation to the project programme or, if such is not available/applicable, to the contractual construction period in general;
2. The degree to which previous projects have been completed within the contractual completion periods and/or extensions thereto, and the extend of penalties imposed;
3. Project performance: time management & programming of works, timeous ordering of materials and appointment of subcontractors;
4. Financial management: payment to suppliers and cash flow problems;
5. Quality of workmanship: extent of reworks and timeous attention to remedial works;
6. Personnel resources: suitably qualified and experienced, turnover in site staff and labour force, specifically site manager and foreman;
7. Personnel management: extent of labour disputes and ability to resolving labour disputes amicably;
8. Sub-contractors: extent of turnover in subcontractors, general liaison and payment problems experienced;
9. Contract administration: contractual aspects such as complying to laws and regulations, insurances, security, submission of required documentation timeously, reaction to written contract instructions, appointments of subcontractors, etc. as can generally be expected in standard/normal conditions of contract.
10. Health & Safety: adherence to regulations and compliance, and number of transgressions & serious incidents.
11. Plant & equipment: sufficient resources on site and in time.
12. Delays: extent of causing delays, submission of claims timeously, and abuse of or exaggerated delay claims.
13. Final account: extent to which the contractor assisted in finalising the final account.

Criterion 3: Suitably qualified and appropriately experienced human resources

Allocation of suitably qualified and appropriately experienced human resources, both in respect of principals and/or other staff (contract manager, site agent, site foreman including other professional, technical and/or administrative) of the tendering Service Provider to the project, as proof that the tendering Service Provider will be able to react/respond appropriately to the Services required herein. The Company Organogram with CV's and certified ID's of all principals and employed workforce as well as proof of Professional Registration will be verified. Current and future workload of the tenderer in relation to capacity and capability will also be considered. The tenderer should demonstrate that he or she possesses the necessary professional and technical qualifications and -competence in relation to the scope of work and work to be undertaken.

Criterion 4: Attendance of compulsory bid clarification meeting, if applicable

When a bid briefing/ clarification meeting is compulsory, the bidder (an authorised representative of the bidder) must attend a compulsory bid briefing meeting, if applicable.

c. Commercial risks:

The financial viability assessment evaluates the risk over the life of the construction period, as to whether the tenderer will be able to deliver the goods and services which are specified in the contract and / or be able to fulfil guarantees or warranties provided for in the contract in order to complete the project successfully for the amount tendered.

Aspects to be considered include but are not limited to, the respective rates tendered, bank rating, financial capability and capacity whether the tenderer has or has access to sufficient financial resources to deliver the goods or services described in the tender documentation (including fulfilling any guarantees or warranty claims), whether the tenderer is not subject to any current or impending legal action (either formal proceedings or notification of legal action) which could impact on the financial standing of the tenderer or the delivery of the goods or services, financial report from auditors as proof of current liquidity, and company or any parent company or investor guarantee/s and financial statements.

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

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

Does the project fall within any of the CPG value ranges? ***No, CPGs not applicable to this project***
If **"Yes",** was a CPG Feasibility Study done? **Not applicable**
If "**Yes**", is the CPG Feasibility Study attached to the PA-01? **Not applicable**
If **"No",** attach separate report providing reasons as to why a feasibility study was not done and / or not attached.
(Feasibility study is only required if the project falls within the CPG value range and construction period)

(a)	Minimum Targeted Local Manufacturers of Material Contract Participation Goal, in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract. (Applicable to projects which require 7GB or 7CE cidb grading, i.e. R20 000 001 and above with minimum 6 month construction period)	***Not applicable***
(b)	Minimum Targeted Local Building Material Suppliers Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract. (Applicable to projects which require 7GB or 7CE cidb grading, i.e. R20 000 001 and above with minimum 6 month construction period)	***Not applicable***
(c)	Minimum Targeted Local Labour Skills Development Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract. (Applicable to projects which require Grade 7 to 9 cidb grading, i.e. R20 000 001 and above with minimum 12 month construction period)	***Not applicable***
(d)	cidb BUILD Programme: Minimum Targeted Enterprise Development Contract Participation Goal in accordance with the cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract. (Applicable to projects which require 7GB or 7CE cidb grading, i.e. R20 000 001 and above with minimum 6 month construction period)	***Not applicable***
(e)	cidb BUILD Programme: Minimum Targeted Contract Skills Development Goal in accordance with the cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract. (Applicable to projects which require cidb Grade 7 and above for all class of works categories, i.e. R20 000 001 and above with minimum 12 month construction period)	***Not applicable***
(f)	DPWI National Youth Service training and development programme (NYS) – Condition of Contract. (Applicable to projects with a minimum contract value R2 Mil and minimum 12 month construction period.	***Applicable***
(g)	Labour Intensive Works – Condition of Contract. (Applicable to all CE projects and all GB projects ≥ R30 million where feasible)	***Not applicable***

9. FORM OF CONTRACT

☒ **GCC 2015 (General Conditions of Contract for Construction Works)**

☐ **JBCC 2000 Principal Building Agreement (Edition 6.2 of 2018)**

☒ **Facilities Management Conditions of the Contract (PA-10 FM)**

☒ **Other N/A**

10. COLLECTION OF TENDER DOCUMENTS

☒ Bid documents are available for free download on e-Tender portal www.etenders.gov.za

☒ Alternatively; Bid documents may be collected during working hours at the following address NDPWI, Eben Donges Building, Cnr Robert and Hancock street, Gqeberha, 6056. A non-refundable bid deposit of R 700.00 is payable (cash only) on collection of the bid documents.

11. COMPULSORY BID BRIEFING/ CLARIFICATION/ SITE INSPECTION MEETING

Details of Compulsory Bid Briefing/ Clarification / Site Inspection Meeting (if any):

Venue:	MDANTSANE PRISON		
Virtual meeting link:	(Type link here or indicate "N/A")		
Date:	Friday, 13 November 2026	**Starting time:**	10H00

12. ENQUIRIES

a. Technical enquiries may be addressed to:

DPWI Project Manager	Portia U Mvana	**Telephone no:**	041 408 2181
Cellular phone no	082 327 4062	**Fax no:**	**Indicate**
E-mail	Portia.Mvana@dpw.gov.za		

b. SCM enquiries may be addressed to:

SCM Official	Nwabisa Nkangana	**Telephone no:**	041 408 2055
Cellular phone no	NONE	**Fax no:**	**None**
E-mail	Nwabisa.Nkangana@dpw.gov.za		

13. DEPOSIT / RETURN OF TENDER DOCUMENTS

Telegraphic, telephonic, telex, facsimile, electronic and / or late tenders will not be accepted.
Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.
All tenders must be completed in non-erasable ink and submitted on the official forms – (forms not to be re-typed).

Closing Date: **Tuesday, 24 November 2026**
Closing Time: **11H00**

Tender documents may be posted to: The Director-General Department of Public Works and Infrastructure Private Bag X 3193 Gqeberha 6001 Documents must be deposited in The Bid Box before the closing date of the bid	**OR**	**Deposited in the tender box at:** The Bid Box Department of Public Works & Infrastructure Eben Donges Building Corner Robert & Hancock Street

DPW-07: FORM OF OFFER AND ACCEPTANCE

The Employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

Bid no: GQET-2026/2027-012

Bid/ Project Description: MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS

The Tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the Tenderer offers to perform all of the obligations and responsibilities of the Service Provider under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX (All applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies) IS:

Rand (in words):	
Rand in figures:	**R**

The award of the tender may be subjected to price negotiation with the preferred tender(s). The negotiated and agreed price will be considered for acceptance as ***a firm and final offer***.

This offer may be accepted by the Employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the tender data, whereupon the Tenderer becomes the party named as the Service Provider in the conditions of contract identified in the contract data.

THIS OFFER IS MADE BY THE FOLLOWING LEGAL ENTITY: (cross out block which is not applicable)

Company or Close Corporation: …… …… And: Whose Registration Number is: …… And: Whose Income Tax Reference Number is: …….. CSD supplier number: ……	**OR**	Natural Person or Partnership: …… ……... Whose Identity Number(s) is/are: …….. Whose Income Tax Reference Number is/are: …… CSD supplier number: ……

AND WHO IS (if applicable)**:**

Trading under the name and style of: ……

AND WHO IS:

Represented herein, and who is duly authorised to do so, by: Mr/Mrs/Ms: …… In his/her capacity as: ……	**Note:** **A Resolution / Power of Attorney, signed by all the Directors / Member / Partners of the Legal Entity must accompany this Offer, authorising the Representative to make this offer.**

Bid No: GQET-2026/2027-012

Bid/ Project Description: MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS

SIGNED FOR THE TENDERER:

Name of representative	Signature	Date

WITNESSED BY:

Name of witness	Signature	Date

This Offer is in respect of: (Please indicate with an "X" in the appropriate block) ☐
The official documents …… ☐
The official alternative …….…….. ☐
Own alternative (only if documentation makes provision therefore)

SECURITY OFFERED: (Not required for this quotation/ bid)

The Service Provider will provide one of the following forms of security:

(1) Cash deposit of 2.5% of the Contract Sum (excl. VAT)	Yes ☐	No ☒
(2) Variable guarantee of 2.5% of the Contract Sum (excl. VAT) (DPW-10.5: FM)	Yes ☐	No ☒
(3) Retention of 2.5% of the Contract Sum (excl. VAT)	Yes ☐	No ☒
(4) 1.25% cash deposit and 1.25% retention of the Contract Sum (excl. VAT)	Yes ☐	No ☒

NB. Guarantees submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 35 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

The Tenderer elects as its *domicilium citandi et executandi* in the Republic of South Africa, where any and all legal notices may be served, as (physical address):

……

Other Contact Details of the Tenderer are:

Telephone No…….. Cellular Phone No. ……

Fax No. ……..

Postal address……

Banker …… Branch……..

Bank Account No. …… Branch Code ……..

Registration No of Tenderer at Department of Labour……

ACCEPTANCE

By signing this part of this form of offer and acceptance, the Employer identified below accepts the Tenderer's offer. In consideration thereof, the Employer shall pay the Service Provider the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the Tenderer's offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

Bid No: GQET-2026/2027-012

Bid/ Project Description: MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS

The terms of the contract, are contained in:

Part 1 Agreements and contract data, (which includes this agreement)
Part 2 Pricing data
Part 3 Scope of work.
Part 4 Site information

and drawings (where applicable) and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the tender schedules as well as any changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from said documents are valid unless contained in this schedule.

The Tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the Employer's agent (whose details are given in the contract data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect, if delivered by hand on the day of delivery, or if delivered by courier within two working days after submission by the Employer to the courier services for a door-to door delivery to the tenderer, provided that the Employer notifies the tenderer of the tracking number within 24 hours of such submission. Unless the tenderer (now Service Provider) within seven working days of the date of such submission notifies the Employer in writing of any reason why he cannot accept the contents of the schedule of deviation to this agreement if applicable), this agreement shall constitute a binding contract between the parties.

For the Employer:

Name of signatory	Signature	Date

Name of Organisation:	Department of Public Works
Address of Organisation:	

WITNESSED BY:

Name of witness	Signature	Date

SCHEDULE OF DEVIATIONS

Bid no: GQET-2026/2027-012

Bid/ Project Description: MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS

1.1.1. Subject:
Detail:

1.1.2. Subject:
Detail:

1.1.3. Subject:
Detail:

1.1.4. Subject:
Detail:

1.1.5. Subject:
Detail:

1.1.6. Subject:
Detail:

By the duly authorised representatives signing this agreement, the Employer and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

PA-11: BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. BIDDER'S DECLARATION

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest[3] in the enterprise, employed by the state?

☐ YES ☐ NO

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

([3]) the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".
For External Use

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution?

☐ YES ☐ NO

2.2.1 If so, furnish particulars:

……

……

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract?

☐ YES ☐ NO

2.3.1 If so, furnish particulars:

……

……

3. DECLARATION

I, the undersigned, (name)…… in submitting the accompanying bid, do hereby make the following statements that I declare to be true and complete in every respect:

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium[4] will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

3.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

3.6 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

[4] Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

Any reference to words “Bid” or Bidder” herein and/or in any other documentation shall be construed to have the same meaning as the words “Tender” or “Tenderer”.
For External Use

3.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59

of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I DECLARE THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT. I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

Name of Bidder	Signature	Date	Position

This form is aligned to SBD 4.

PA-15.1: RESOLUTION OF BOARD OF DIRECTORS

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

_____

_____
(*legally correct full name and registration number, if applicable, of the Enterprise)*

Held at _____ (*place)*

on _____ *(date)*

RESOLVED that:

1 The Enterprise submits a Tender to the Department of Public Works in respect of the following project:
_____

_____
(*project description as per Tender Document)*

Tender Number: _____*(Tender Number as per Tender Document)*

2 *Mr/Mrs/Ms: _____

in *his/her Capacity as: _____(*Position in the Enterprise)*

and who will sign as follows:

_____

be, and is hereby, authorised to sign the Tender, and any and all other documents and/or correspondence in connection with and relating to the Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Tender to the Enterprise mentioned above.

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Note:

1. ** Delete which is not applicable.*
2. ***NB:** This resolution must, where possible, be signed by <u>all</u> the Directors / Members / Partners of the Tendering Enterprise.*
3. *In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Tendering Enterprise (attach proof of shareholding / ownership hereto).*
4. *Directors / Members / Partners of the Tendering Enterprise may alternatively appoint a person to sign this document on behalf of the Tendering Enterprise, which person must be so authorized by way of a duly completed power of attorney, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Tendering Enterprise (proof of shareholding / ownership and power of attorney are to be attached hereto).*
5. *Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.*

ENTERPRISE STAMP

PA-15.2: RESOLUTION OF BOARD OF DIRECTORS TO ENTER INTO CONSORTIA OR JOINT VENTURES

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

_____

_____
(*legally correct full name and registration number, if applicable, of the Enterprise)*

Held at _____ (*place)*

on _____ *(date)*

RESOLVED that:

1. The Enterprise submits a Tender, in consortium/joint venture with the following Enterprises:

   _____

   _____
   (list all the legally correct full names and registration numbers, if applicable, of the Enterprises forming the consortium/joint venture)

   to the Department of Public Works in respect of the following project:

   _____

   _____
   (*project description as per Tender Document)*

   Tender Number: _____(*Tender Number as per Tender Document)*

1 *Mr/Mrs/Ms: _____

   in *his/her Capacity as: _____*(Position in the Enterprise)*

   and who will sign as follows:

   _____

   be, and is hereby, authorised to sign a consortium/joint venture agreement with the parties listed under item 1 above, and any and all other documents and/or correspondence in connection with and relating to the consortium/joint venture, in respect of the project described under item 1 above.

2 The Enterprise accept joint and several liability with the parties listed under item 1 above for the due fulfilment of the obligations of the joint venture deriving from, and in any way connected with, the Contract to be entered into with the Department in respect of the project described under item 1 above.

3 The Enterprise chooses as its *domicilium citandi et executandi* for all purposes arising from this joint venture agreement and the Contract with the Department in respect of the project under item 1 above:

   Physical address: _____

   _____Postal Code _____

   Postal Address: _____

Public

_____Postal Code_____

Telephone number: _____ Fax number: _____

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

The tendering enterprise hereby absolves the Department of Public Works from any liability whatsoever that may arise as a result of this document being signed.

Note:

1. ** Delete which is not applicable.*
2. ***NB:** This resolution must, where possible, be signed by all the Directors / Members / Partners of the Tendering Enterprise.*
3. *In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Tendering Enterprise (attach proof of shareholding / ownership hereto).*
4. *Directors / Members / Partners of the Tendering Enterprise may alternatively appoint a person to sign this document on behalf of the Tendering Enterprise, which person must be so authorized by way of a duly completed power of attorney, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Tendering Enterprise (proof of shareholding / ownership and power of attorney are to be attached hereto).*
5. *Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.*

ENTERPRISE STAMP

PA-15.3: SPECIAL RESOLUTION OF CONSORTIA OR JOINT VENTURES

RESOLUTION of a meeting of the duly authorised representatives of the following legal entities who have entered into a consortium/joint venture to jointly tender for the project mentioned below: *(legally correct full names and registration numbers, if applicable, of the Enterprises forming a consortium/joint venture)*

1 _____

_____

2 _____

_____

3 _____

_____

4 _____

_____

5 _____

_____

6 _____

_____

7 _____

_____

8 _____

_____

Held at _____ *(place)*

on _____*(date)*

RESOLVED that:

A. The above-mentioned Enterprises submit a tender in consortium/joint venture to the Department of Public Works & Infrastructure in respect of the following project:

_____

_____
(project description as per Tender Document)

Tender Number: _____ *(tender number as per Tender Document)*

B. Mr/Mrs/Ms:_____

in *his/her Capacity as: _____ *(position in theEnterprise)*

and who will sign as follows: _____

be, and is hereby, authorised to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the tender to the Enterprises in consortium/joint venture mentioned above.

C. The Enterprises constituting the consortium/joint venture, notwithstanding its composition, shall conduct all business under the name and style of:

_____

D. The Enterprises to the consortium/joint venture accept joint and several liability for the due fulfilment of the obligations of the consortium/joint venture deriving from, and in any way connected with, the Contract entered into with the Department in respect of the project described under item A above.

E. Any of the Enterprises to the consortium/joint venture intending to terminate the consortium/joint venture agreement, for whatever reason, shall give the Department 30 days' written notice of such intention. Notwithstanding such decision to terminate, the Enterprises shall remain jointly and severally liable to the Department for the due fulfilment of the obligations of the consortium/joint venture as mentioned under item D above.

F. No Enterprise to the consortium/joint venture shall, without the prior written consent of the other Enterprises to the consortium/joint venture and of the Department, cede any of its rights or assign any of its obligations under the consortium/joint venture agreement in relation to the Contract with the Department referred to herein.

G. The Enterprises choose as the *domicilium citandi et executandi* of the consortium/joint venture for all purposes arising from the consortium/joint venture agreement and the Contract with the Department in respect of the project under item A above:

Physical address: _____

_____

_____Postal Code _____

Postal Address: _____

_____

_____Postal Code _____

Telephone number _____ Fax number: _____

E-mail address: _____

	Name	Capacity	Signature
1			
2			

	Name	Capacity	Signature
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

The tendering enterprise hereby absolves the Department of Public Works & Infrastructure from any liability whatsoever that may arise as a result of this document being signed.

Note:

*1. * Delete which is not applicable.*
*2. **NB:** This resolution must be signed by all the Duly Authorised Representatives of the Legal Entities to the consortium/joint venture submitting this tender, as named in item 2 of Resolution PA-15.2.*
3. Should the number of the Duly Authorised Representatives of the Legal Entities joining forces in this tender exceed the space available above, additional names, capacity and signatures must be supplied on a separate page.
4. Resolution PA-15.2, duly completed and signed, from the separate Enterprises who participate in this consortium/joint venture, must be attached to this Special Resolution (PA-15.3).

DPW-16. TENDER BRIEFING MEETING CERTIFICATE

Project title:	**MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS**		
Tender / Quotation no:	**GQET-2026/2027-012**	**Reference no:**	748

Date Bid Briefing Meeting: Friday, 13 November 2026

Time of Bid Briefing Meeting: 10H00

Venue: MDANTSANE PRISON

This is to certify that I,_____

representing _____

attended the tender clarification meeting on: _____

I further certify that I am satisfied with the description of the work and explanations given at the tender clarification meeting and that I understand the work to be done, as specified and implied, in the execution of this contract.

Name of Tenderer	Signature	Date

Name of DPW Representative	Signature	Date

DPW-21: RECORD OF ADDENDA TO TENDER DOCUMENTS

Project title:	**MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS**		
Tender / Quotation no:	**GQET-2026/2027-012**	**Reference no:**	748

1. I / We confirm that the following communications received from the Department of Public Works before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer: *(Attach additional pages if more space is required)*

	Date	**Title or Details**

Name of Tenderer	Signature	Date

2. I / We confirm that no communications were received from the Department of Public Works before the submission of this tender offer, amending the tender documents.

Name of Tenderer	Signature	Date

PA- 40: DECLARATION OF DESIGNATED GROUPS FOR PREFERENTIAL PROCUREMENT

Tender Number: GQET-2026/2027-012
Name of Tenderer …… ☐ **EME**[1] ☐ **QSE**[2] ☐ **Non EME/QSE (tick applicable box)**

1. **LIST ALL PROPRIETORS, MEMBERS OR SHAREHOLDERS BY NAME, IDENTITY NUMBER, CITIZENSHIP AND DESIGNATED GROUPS.**

Name and Surname #	Identity/ Passport number and Citizenship##	Percentage owned	Black	Indicate if youth	Indicate if woman	Indicate if person with disability	Indicate if living in rural / under developed area/township	Indicate if military veteran
1.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
2.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
3.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
4.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
5.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
6.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
7.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
8.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
9.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
10.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

Where Owners are themselves a Company, Close Corporation, Partnership etc., identify the ownership of the Holding Company, together with Registration number
State date of South African citizenship obtained (not applicable to persons born in South Africa)

[1] EME: Exempted Micro Enterprise
[2] QSE: Qualifying Small Business Enterprise

1. DECLARATION:

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the Tenderer, hereby confirms that:

1 The information and particulars contained in this Affidavit are true and correct in all respects;

2 The Broad-based Black Economic Empowerment Act, 2003 (Act 53 of 2003), Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000), the Preferential Procurement Regulations, 2022, National Small Business Act 102 of 1996 as amended and all documents pertaining to this Tender were studied and understood and that the above form was completed according to the definitions and information contained in said documents;

3 The Tenderer understands that any intentional misrepresentation or fraudulent information provided herein shall disqualify the Tenderer's offer herein, as well as any other tender offer(s) of the Tenderer simultaneously being evaluated, or will entitle the Employer to cancel any Contract resulting from the Tenderer's offer herein;

4 The Tenderer accepts that the Employer may exercise any other remedy it may have in law and in the Contract, including a claim for damages for having to accept a less favourable tender as a result of any such disqualification due to misrepresentation or fraudulent information provided herein;

5 Any further documentary proof required by the Employer regarding the information provided herein, will be submitted to the Employer within the time period as may be set by the latter;

Signed by the Tenderer

Name of representative	**Signature**	**Date**

Public

DPW-09 PARTICULARS OF TENDERER'S PROJECTS

Project title:	**MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS**		
Tender / Quotation no:	**GQET-2026/2027-012**	**Closing date: Tuesday, 24 November 2026**	**Time: 11H00**

Note: The Tenderer is required to furnish the following particulars and to attach additional pages if more space is required.

1. PARTICULARS OF THE TENDERER'S CURRENT AND PREVIOUS COMMITMENTS

1.1. Current projects

	Projects currently engaged in	**Name of Employer or Representative of Employer**	**Contact tel. no.**	**Contract sum of Project**	**Scope of Services (Work stages appointed for – eg 1 to 6)**	**Work stages completed**	**Work stages in progress**
1.							
2.							
3.							
4.							
5.							
6.							
7.							

Public

1.2. Completed projects

Projects completed in the last 5 (five) years		Name of Employer or Representative of Employer	Contact tel. no.	Contract sum of Project	Scope of Services (Work stages appointed for – eg 1 to 6)	Date of appointment	Date of completion
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							

Name of Tenderer	Signature	Date

Public

PA-16: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

---

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and

1.2 Preference Points System to be applied

☒ The applicable preference point system for this tender is the **80/20** preference point system.

1.3 Points for this tender shall be awarded for:

1.3.1 Price: Maximum 80 points

1.3.2 Specific Goals: Maximum 20 points

1.4 The maximum points for this tender are allocated as follows:

Preference Points System to be applied	**80/20**
PRICE	**80**
SPECIFIC GOALS	**20**
Total points for Price and Specific Goals	**100**

1.5 Breakdown Allocation of Specific Goals Points

1.5.1 **For procurement transactions with rand value greater than R1 Million and up to R50 Million (Inclusive of all applicable taxes) the specific goals as listed in the table below are applicable:**

Serial No	Specific Goals	Preference Points allocated out of 20	Documentation to be submitted by bidders to validate their claim for points
1.	An EME or QSE or any entity which is at least 51% owned by black people	10	• SANAS Accredited BBBEE Certificate or sworn affidavit where applicable.
2.	Located in Eastern Cape Province for work to be done or services to be rendered in the Eastern Cape Province	2	• Official Municipal Rates Statement which is in the name of the bidder. Or • Any Account or statement which is in the name of the Bidder. Or • Permission To Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder. Or • Lease Agreement which is in the name of the bidder.

Serial No	Specific Goals	Preference Points allocated out of 20	Documentation to be submitted by bidders to validate their claim for points
3.	An EME or QSE or any entity which is at least 51% owned by black women	4	• SANAS Accredited BBBEE Certificate or sworn affidavit where applicable.
4.	An EME or QSE or any entity which is at least 51% owned by black people with disability	2	• SANAS Accredited BBBEE Certificate or sworn affidavit where applicable. and • Medical Certificate indicating that the disability is permanent or • South African Social Security Agency (SASSA) registration indicating that the disability is permanent Or • National Council for Persons with Physical Disability in South Africa registration (NCPPDSA)
5.	An EME or QSE or any entity which is at least 51% owned by black youth	2	• ID Copy and SANAS Accredited BBBEE Certificate or sworn affidavit where applicable.

1.6 Failure on the part of the tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals, if the service provider/ tenderer did not submit proof or documentation required to claim for specific goals will be interpreted to mean that preference points for specific goals are not claimed.

1.7 The organ of state reserves the right to require of a service provider/tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

(a) **"tender"** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;

(c) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and

(e) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1. THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20 **or** **90/10**

$$Ps = 80\left(1 - \frac{Pt - P\,min}{P\,min}\right) \quad \text{or} \quad Ps = 90\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

Where

Ps = Points scored for price of tender under consideration
Pt = Price of tender under consideration
Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20 **or** **90/10**

$$Ps = 80\left(1 + \frac{Pt - P\,max}{P\,max}\right) \quad \text{or} \quad Ps = 90\left(1 + \frac{Pt - P\,max}{Pmax}\right)$$

Where

Ps = Points scored for price of tender under consideration
Pt = Price of tender under consideration
Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1,2 and 3 above as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20

Public

preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
1. An EME or QSE or any entity which is at least 51% owned by black people	10	
(5) Located in Eastern Cape Province for work to be done or services to be rendered in the Eastern Cape Province	2	
2. An EME or QSE or any entity which is at least 51% owned by black women	4	
3. An EME or QSE or any entity which is at least 51% owned by black people with disability	2	
4. An EME or QSE or any entity which is at least 51% owned by black youth	2	

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm…….

4.4. Company registration number: ……...

4.5. TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One-person business/sole propriety
- ☐ Close corporation
- ☐ Public Company
- ☐ Personal Liability Company
- ☐ (Pty) Limited
- ☐ Non-Profit Company
- ☐ State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs

1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

(a) disqualify the person from the tendering process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution, if deemed necessary.

.....**SIGNATURE(S) OF TENDERER(S)**
SURNAME AND NAME: .....
DATE: .....
ADDRESS: .....
.....
.....
.....

Public

B-BBEE EXEMPTED AFFIDAVIT FOR EXEMPTED MICRO ENTERPRISES

(ISSUED IN TERMS OF THE AMENDED CONSTRUCTION SECTOR CODE)

(Gazette Vol. 630 No. 41287)
Issued in terms of paragraph 3.6.2.4.1 (B)

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1) The contents of this statement are to the best of my knowledge a true reflection of the facts.
2) I am a Member☐ / Director ☐ / Owner ☐ **(Select one)** of the following enterprise and am duly authorised to act on its behalf:

Enterprise Name:			
Trading Name (If Applicable):			
Registration Number:			
Enterprise Physical Address:			
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):			
Nature of Construction Business:	**BEP** (Built Environment Professional)	**Contractor**	**Supplier**
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – who are citizens of the Republic of South Africa by birth or descent; or who became citizens of the Republic of South Africa by naturalization before 27 April 1994; or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date;"		
Definition of "Black Designated Groups"	"Black Designated Groups" means: (a) unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed areas; (e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;"		

3) I hereby declare under Oath that as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

· The Enterprise is _____% Black Owned

· The Enterprise is _____% Black Female Owned

· The Enterprise is _____% Owned by Black Designated Group (provide Black Designated Group Breakdown below as per the definition in the table above)

o Black Youth % _____%

o Black Disabled % _____%

o Black Unemployed % _____%

o Black People living in Rural areas % _____%

o Black Military Veterans % _____%

Public

Select applicable

4) Based on the Financial Statements ☐ /Management Accounts and other information available ☐ on the latest financial year-end of _____/_____/_____, (format: day/month/year) the annual Total Revenue was less than the applicable amount confirmed by ticking the applicable box below.

day/ month /year

BEP	R1.8 million	
Contractor	R3.0 million	
Supplier	R3.0 million	

If the turnover exceeds the applicable amount in the table above then this affidavit is no longer applicable and an EME certificate must be obtained from a rating agency accredited by SANAS or when applicable a B-BBEE Verification Professional Regulator appointed by the Minister of Trade and Industry.

· Please Confirm on the below table the B-BBEE Level Contributor, **by ticking the applicable box below.**

100% Black Owned	**Level One** (135% B-BBEE procurement recognition level)	
At least 51% Black Owned	**Level Two** (125% B-BBEE procurement recognition level)	
At least 30% Black Owned	**Level Four** (100% B-BBEE procurement recognition level)	
Less than 30% Black Owned	**Level Five** (80% B-BBEE procurement recognition level)	

5) I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the Owners of the Enterprise which I represent in this matter.

6) The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature_____

Date: _____

_____
Commissioner of Oaths
Signature & stamp

Stamp Commissioner of Oath

SPECIAL CONDITIONS OF BID (SCB-1)

SPECIAL CONDITIONS OF BID FOR INFRASTRUCTURE (SCB-01 - Infrastructure)

1 INTERPRETATION

1.1 The word “Bidder” in these conditions shall mean and include any firm of Contractors, Services Providers or any company or body incorporated or unincorporated or any other legal entities.
1.2 The word “Department” in these conditions shall mean the DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE
1.3 Any reference to words “Bid” or “bidder” herein and or any other documentation shall be construed to have the meaning as the words “Tender” or Tenderer”.

2 PRECEDENCE

2.1. If any other condition (bid rule) in the bid document is in contradiction with the “Special Conditions of Bid” the “Special Conditions of Bid” will take preference.
2.2. The “Special Conditions of Bid” can only be amended by an official addendum before the closing date of the bid.

3 GENERAL BID RULES

3.1. “Written” or “in writing” means hand-written in non-erasable ink or any form of electronic or digital writing and or a combination thereof.
3.2. The digital and or electronic completion and signing of documents is permitted.
3.3. A bidder participates in this bid process entirely at its own risk and cost.
3.4. The Department may accept or reject any bid offer or may cancel the bid process (or reject all bid offers at any time) prior to award, due to the following:
3.4.1. due to changed circumstances, there is no longer a need for the goods or services specified in the invitation;
3.4.2. funds are no longer available to cover the total envisaged expenditure;
3.4.3. no acceptable tender is received;
3.4.4. there is a material irregularity in the tender process; or
3.4.5. there is material change in the scope of works.
3.5. The Department shall not accept or incur any liability for such cancellation or rejection or acceptance, but will give written reasons for such action upon receiving a written request to do so.
3.6. Completed bid documents in a sealed envelope, endorsed with the relevant bid number, bid description and the closing, must be deposited in the bid box as indicated in the bid document.
3.7. Bidders must ensure that bids submitted via courier services are deposited by the courier service in the Departmental Bid box, prior to the closing date and time. The Department will not accept responsibility for any bids, which are not timeously deposited in the Bid Box.
3.8. A Bid will be treated as a late bid, if it is not received in the bid box. The Department will not accept responsibility for any late depositing of bids or for the non-depositing of bids in the bid box, which are as a result from an act committed or omitted by an official. This is not limited to the following cases:
3.8.1. A Bidder handed over its bid to a departmental official or to the security services personnel timeously, but they omits to deposit the bid in the bid box on or before the closing date and time.
3.8.2. If a courier service delivers the bid to a departmental official or to the security services personnel timeously and it is not deposited in the bid box timeously.
3.8.3. The bid documents were send through mail / Post Office and it is not timely collected and or timely deposited in the Departmental Bid Box.
3.9. Bids received after the closing date and time will not be accepted for consideration and where practical, be returned unopened to the Bidder(s).
3.10. Bidders who are not registered on the CSD, must register on the CSD within 7 working days, if requested to do so. No award letters or purchase orders or contracts will be signed, with a bidder not registered on the CSD.
3.11. The Department will download the following documents, if not submitted by bidders:

3.11.1. CSD registration certificate (if the bidder is registered in the CSD)
3.11.2. CIPC registration
3.11.3. CIDB registration

3.12. Bidders are not allowed to recruit or shall not attempt to recruit an employee of the Department for purposes of preparation of the bid or for the duration of the execution of this contract or any part thereof.

4 AMBIGUITIES/ CONTRADICTIONS / OMISSIONS

4.1. If a bidder becomes aware of any ambiguities or contradictions or omissions in the bid document or the specifications, drawings or descriptions or functionality or quality, or any part of the bid document, this should be clarified with the Department, at least five (5) working days before the closing time stated in the tender data.

4.2. If the Department found, after the closing date of the bid, that there is an ambiguity/ contradiction or omission in the bid document , the Department reserves the right to:

4.2.1. If the ambiguity or contradiction or omission in the bid document is of an administrative nature, request bidders to correct any non-compliances caused by the ambiguity or contradiction or omission or

4.2.2. If the ambiguity or contradiction or omission is immaterial, proceed to finalise the procurement process and notify the delegated authority in the submission of the ambiguity or contradiction or omission for the consideration of the approving authority or

4.2.3. Cancel the bid and process

5 PERIOD OF VALIDITY FOR BIDS AFTER CLOSING DATE

5.1 All Bids must remain valid from the closing date for a period as stipulated in the bid document.

5.2 The Department reserves the right to request for the validity extensions of bids, should it deemed necessary. The following conditions will apply when the Department request for a validity extension of a bid:

5.2.1 The request for a validity extension will be done while the validity period of the bids are still valid.

5.2.2 Bidders have the right to refuse the extension of the validity period of their bids.

5.2.3 If a request for validity extensions are send to bidders while the validity period of the bids are still valid, non-replying to the request for validity extension before the expiry date will be deemed a tacit agreement to the extension of the validity period. The Department will communicate with the affected bidders to confirm such tacit agreement.

5.2.4 Should the bidder not agree with the tacit agreement, the bidder shall be deemed to be non-responsive and not considered for further evaluation.

5.2.5 If a bidder(s) refused a validity extension, it will be deemed that the bidder(s) had withdrawn their bids from the bidding process. The Department reserves the right to continue with its bid evaluation and adjudication of the remaining bids and finalise the process.

6 BRAND NAMES

6.1 Wherever a brand name is specified in this bid document (i.e. in the specifications, pricing schedule or bill of quantities or anywhere in this document), the department's requirement is not limited to the specified brand name, but requires an item similar/equivalent or better than specified.

7 CONTRACTUAL PRICE ADJUSTMENTS

7.1 The Bid will not be subjected to any price escalation, unless specified otherwise in the bid documents.

8 AUTHORITY TO SIGN BID DOCUMENTS

8.1 No authority to sign (PA 15.1: Resolution of Board of Directors) is required from an enterprise which has only one director or is a sole ownership.

8.2 In the case of a bid being submitted on behalf of a company, close corporation or partnership, evidence should be submitted with the bid at the closing time, that the Bid has been signed by a person properly authorised by resolution of the directors or under the articles of the entity. For that purpose, forms PA-15.1-15.3 (Resolution of Board of Directors) are included in the bid document for completion by the relevant Board(s) of Directors

8.3 The department further accepts that, in the absence of a PA 15.1: Resolution of Board of Directors, any director or any member of the enterprise may have the authority to bind the enterprise. Therefore the following will apply when only one director or one member of the enterprise signed the bid documents:

8.3.1 The signature of any one of the directors or any one of the members of the enterprise will bind the enterprise and all the directors/ members of the enterprise. This condition will therefore render the bid valid; and

8.3.2 The Department will verify the authority to sign (if deemed necessary) and where possible, may request proof of such authority of the relevant director or relevant member to act on behalf of the enterprise in the form of a " Resolution of the Board of Directors", if such ", (PA 15.1: Resolution of Board of Directors)," was not submitted with the bid or was not completed or was incorrectly completed,

8.4 In the case of a sub-contractor agreement, a joint venture or consortia, the signing of the sub-contractor agreement, or Joint Venture or Consortia agreement by any director or member of each of the parties to the agreement, will render the sub-contractor agreement or Joint Venture or Consortia agreement valid. Therefore:

8.4.1 The Department reserves the right to request from each party to the sub-contractor agreement or Joint Venture or Consortia" agreement, proof of such authority of the relevant director or relevant member to act on behalf of the enterprise(s), in the form of a " Resolution of the Board of Directors", if it was not submitted with the bid or was not completed or was incorrectly completed,

8.5 In the event that a non-member or non-director to the enterprise(s) sign the bid documents and or sign a joint venture or consortia agreement, an "Authority to sign" issued by a director of the enterprise(s) or by the Board of Directors of the enterprise(s) must be submitted with the bid at the closing date. Failure to comply with this requirement at the closing date of the bid, will invalidate the bid submitted.

9 CONTRACT PERIOD

9.1 The contract period is stipulated in the Contract Data or the specifications.

9.2 The construction period for Infrastructure works, will commence from the date of site handover.

10 NEGOTIATION WITH THE IDENTIFIED PREFERRED BIDDER

10.1 The Bid will be awarded to the bidder who scores the highest PPPFA number of points:

10.1.1 However, should an offer not be market related, the Department reserves the right to negotiate with bidders a reasonable market price /offer?

11 AWARD OF CONTRACTS TO TENDERERS NOT SCORING HIGHEST POINTS

11.1 The Department reserves the right to award the bid to a tenderer not scoring the highest points, after having applied an objective criteria or a risk assessment criteria, if such (i.e. the objective criteria/ risk assessment) is specified in the bid document.

12 TAX COMPLIANCE

12.1 No tender shall be awarded to a bidder who is non tax -compliant.

12.2 All bidders' tax matters must be in order prior to award.

12.3 Bidders' tax matters will be verified through CSD.

12.4 If the recommended bidder's tax status is non-compliant, the recommended bidder must submit written proof from SARS of their tax compliant status or submit written proof that they have made an arrangement with SARS to meet their outstanding tax obligations.

12.5 The recommended bidder will be given a maximum of seven (7) working days to correct their tax compliance status.

12.6 Failure to comply within seven (7) working days, from the date of the request, the Department will reject the bid submitted by the bidder.

13 REGISTRATION AS A VAT-VENDOR

13.1 Non-VAT vendors do not have to include VAT in their bid prices.

13.2 Non-VAT vendors who submit bids for contracts that would, if successful, take their annual turnover above the threshold of R1 million, must include VAT in the prices quoted and must therefore immediately upon award of the contract, register with the South African Revenue Service (SARS) as VAT vendors.

13.3 The award of contract would be conditional (for Non-VAT vendors who included VAT in their prices) conditional pending the successful bidder submitting proof of registration as VAT vendor with SARS within 21 days of award.

13.4 Failure to comply within 21 days after being notified to do so will lead to the automatic withdrawal of the "provisional letter of award" and elimination of the bidder's offer.
13.5 VAT vendors must include VAT in their bid prices and failure to comply will lead to an automatic elimination of the bidder's offer.
13.6 In all other instances, where bidders have excluded VAT from the prices quoted, if the bidder is successful, the letter of award will clearly state that the price at which the contract is awarded is exclusive of VAT and that VAT will not be added on at any stage after the contract has been signed.
13.7 If a Non-VAT vendor/ bidder is contracted with the Department with a price which is Excluded Vat, and it becomes a VAT vendor after award or alternatively becomes a VAT vendor due to a cumulative number of awards, the bidder will have to absorb the adverse financial implications of not including VAT in their price quoted. VAT cannot be claimed from the Department for any payments already made or from any future payments.

14 CERTIFICATION OF DOCUMENTS

14.1 Where so required in the bid documents, bidders are required to submit copies, which are certified as a "true copy of the original".
14.2 If a bidder submitted an uncertified copy of an original document, or an original copy which is not correctly certified, the bidder will be afforded an opportunity to correct such non-compliance within a minimum period of 48 hour.
14.3 All bidders' whose copies complies with the minimum requirements above, will be "deemed in order" and will be subjected for consideration in further evaluation processes, even if the Department did not request any corrections.
14.4 No submissions of new or alternative documents or certified copies of new or alternative documents will be allowed after the bid closing date.

15 AWARDING OF POINTS FOR SPECIFIC GOALS (PA-16)

15.1 In accordance with the PPPFA regulations 2022, bidders will not be eliminated if they do not submit a BBBEE – certificate or a "valid sworn affidavits". The bidder will not be scored for points, but will be evaluated further.
15.2 For a bidder to be awarded points for specific goals as per the bid, the bidder must submit proof as specified in the bid document with the bid at the closing date and time.
15.3 The requirements of a valid BBBEE-Certificate and or "Sworn Affidavit" as specified in the Special Conditions of Tender applies.
15.4 Parties in an unincorporated joint venture must submit its own consolidated B-BBEE certificate, which has not expired at the closing date of the bid.
15.5 If a bidder submit with the bid at the closing date the required proof for specific goals, as specified in the bid document, but the proof is not certified or is certified incorrectly, the bidder will be given a minimum of 48 hours to submit a copy which is correctly certified. The copy maybe certified after the closing date of the bid. The copies maybe certified after the closing date of the bid.
15.6 Non-submission of the PA-16 form or non-completion the PA-16 form or an incomplete PA-16 form, is not an elimination criteria.
15.7 If a bidder submit at the closing date of the bid a valid proof as specified in the bid document, but the bidder's PA 16 is not signed or dated or witnessed or it is not properly completed, or its not completed or submitted or did not claim points, the bidder will be given a minimum of 48 hours to submit or correctly complete its PA 16.
15.8 All bidders' whose submitted proof as specified in the bid document and it complies with the minimum requirements above, will be "deemed in order" and will be subjected for consideration in further evaluation, even if the Department did not request any corrections/ certifications.
15.9 No submissions of alternative proof for specific goals as specified in the bid document will be allowed after the bid closing date.
15.10 Bidders who failed to submit the required proof for points for specific goals, will not be scored for the relevant specific goal(s), but there offers will still be evaluated further.

16 BIDDER'S DISCLOSURE/ BIDDER'S DECLARATION (PA - 11)

16.1 The Department will afford a bidder an opportunity to correct its PA-11 form, if the bidder omitted to sign or to complete or to properly complete this form.

16.2 A bidder's offer maybe eliminated if the bidder's declaration is proven false during the bid evaluation process.

17 CORRECTION OF ERRORS

17.1 Only the authorised signatory to the tender should initial corrections in the tender document.

17.2 All corrections must be in non-erasable ink and the use of correcting fluid (tippex) is prohibited.

17.3 In the event that a correction is not initialled or the correction is initialled by a person not having the prescribed authority, the Department will:

17.3.1 Seek the necessary clarification from the tenderer and;

17.3.2 If accepting the response from the tenderer, evaluate the bid further and or;

17.3.3 Allow the tenderer to correct/ ratify any noncompliance, where necessary.

18 CONDITIONS WITHDRAWN FROM THE GENERAL CONDITIONS OF CONTRACT

18.1 N/A

19 INCOMPLETE SECTIONS OR SCHEDULES IN BID DOCUMENTS

19.1 Bidders' who omitted or incorrectly completed a section(s) or a schedule(s) in the bid document, but have submitted with the bid the required/ specified proof or supportive documents for that particular sections of the document, maybe allowed to correct such non-compliance.

20 POINTS FOR SPECIFIC GOALS

20.1 To qualify for points for Specific goals, as specified in the "Invitation to Bid" and the "PA-16", bidders must comply with the requirements at the closing date of the bid.

20.2 It is the bidder's responsibility to ensure that it submit the correct evidence at the closing date of the bid, for the validation of the points the bidder is claiming.

20.3 Bidder's will not be given an opportunity to submit evidence after closing date, if the evidence is not submitted or if incorrect evidence was submitted.

21 THE OTHER ADDITIONAL INFORMATION WHICH MAY BE REQUIRED FOR EVALUATION

CRITERIA	SPECIAL CONDITIONS OF BID
a) A close corporation, incorporated prior to 1 May 2011 under the Close Corporations Act, 1984 (Act 69 of 1984, as amended)	Copies of the Founding Statement - CK1
b) A profit company duly registered as a private company. [including a profit company that meets the criteria for a private company, whose Memorandum of Incorporation states that the company is a personal liability company in terms of Section 8(2)(c) of the Companies Act, 2008 (Act 71 of 2008, as amended)].	Copies of: Certificate of Incorporation - CM1; Shareholding Certificates of all Shareholders of the company, plus a signed statement of the company's Auditor, certifying each Shareholder's ownership / shareholding percentage relative to the total; and/or Memorandum of Incorporation in the case of a personal liability company.
c) A profit company duly registered as a private company in which any, or all, shares are held by one or more other close corporation(s) or company(ies) duly registered as profit or non-profit company(ies).	Copies of documents referred to in a. and/or b. above in respect of all such close corporation(s) and/or company(ies).
d) A profit company duly registered as a public company.	Copy of Certificate of Incorporation - CM1, and a signed statement of the company's Secretary or Auditor confirming that the company is a public company.
e) A non-profit company, incorporated in terms of Section 10 and Schedule 1 of the Companies Act, 2008 (Act 71 of 2008, as amended).	Copies of: i. The Founding Statement - CK1; and ii. The Memorandum of Incorporation setting out the object of the company, indicating the public benefit, cultural or social activity, or communal or group interest.
f) A natural person, sole proprietor or a Partnership	Copy(ies) of the Identity Document(s) of: i. such natural person/ sole proprietor, or each of the Partners to the Partnership.
g) A Trust	Deed of Trust duly indicating names of the Trustee(s) and Beneficiary (ies) as well as the purpose of the Trust and the mandate of the Trustees.

22 DISCLAIMER

22.1 It is impractical and cumbersome for the Department to communicate with all qualifying bidders to correct/ ratify all eligible matters as articulated in this "Special Conditions of Bid". The Department therefore reserves the right and discretion, during its evaluation and other administrative processes to:

22.1.1 Limit its correspondences for corrections/ ratifications/ clarities to potential higher point scoring bidders only and to

22.1.2 Further evaluate any potential qualifying lower scoring bidder(s) as "deemed responsive" or giving points, etc., without requesting the corrections/ ratifications of a matter which is eligible as per the "Special Conditions of Bid".

– End Special Conditions of Bid –
(Version: Approved 29 May 2026)

FACILITIES MANAGEMENT CONDITIONS OF CONTRACT (DPW)

SEPT. 2005 VERSION 1

PA-10 (FM): CONDITIONS OF CONTRACT

1. *DEFINITIONS*

1.1. *The following words and expressions shall have the meanings hereby assigned to them except where the context otherwise requires:*

1.1.1. *"Additional Services" are increases in the quantity of the routine Services detailed in the Scope of Works.*

1.1.2. *"Bill of Quantities" means the document so designated in the Pricing Data that describes the Services and indicates the quantities and rates associated with each item which the Employer agrees to pay the Service Provider for the Services completed;*

1.1.3. *"Certificate of Completion" means the certificate issued by the Service Manager signifying that the Contract has expired;*

1.1.4. *"Commencement Date" means the date on when the Service Provider is notified of the Employer's acceptance of its offer;*

1.1.5. *"Contract" means the Contract signed by the Parties and of which these Conditions of Contract form part of, and such amendments and additions to the Contract as may be agreed in writing between the Parties;*

1.1.6. *"Contract Data" means the specific data, which together with these Conditions of Contract, Scope of Works and Pricing Data collectively describe the risks, liabilities and obligations of the contracting Parties and the procedures for the administration of the Contract;*

1.1.7. *"Contract Period" is from Commencement Date for the period stated in the Contract Data;*

1.1.8. *"Contract Price" means the price to be paid for the Services in accordance with the Pricing Data, subject to such additions thereto or deductions there from as may be made from time to time under the provisions of the Contract;*

1.1.9. *"Contract Sum" refers to the amount stated by the Service Provider in the Form of Offer and Acceptance;*

1.1.10. *"CPAP" means contract price adjustment provisions used for the adjustment of fluctuations in the cost of labour, plant and materials and goods as stated in the Contract Data;*

1.1.11. *"Day" means a calendar day;*

1.1.12. *"Drawings" means all drawings, calculations and technical information which are made available to the Service Provider for inspection at a venue and time to be announced by the Service Manager and any modifications thereof or additions thereto from time to time approved in writing by the Employer or delivered to the Service Provider by the Employer;*

1.1.13. *"Employer" means the contracting Party named in the Contract Data who appoints the Service Provider;*

1.1.14. *"Equipment" includes all appliances, tools implements, machinery, articles and things of whatsoever nature required in or for the rendering, completion or defects correction of the Services but does not include materials;*

1.1.15. *"Facilities" means the land and buildings, detailed in the Scope of Works, and any additions, or omission thereto, made available by the Employer for the purposes of the Contract, on, under, over, in or through which the Services are to be rendered or carried out;*

1.1.16. *"Form of Offer and Acceptance" means the written communication by the Employer to the Service Provider recording the acceptance of the Service Provider's offer;*

1.1.17. *"Identified Projects" means any projects, other than routine Services, identified and agreed to by the Parties during the Contract period or any extensions thereto, to be completed in terms of the Contract.*

1.1.18. *"Materials" includes all materials, commodities, articles and things required to be furnished under the Contract for the execution of the Services;*

1.1.19. *"Month" refers to the period commencing on a certain day of a month to the day preceding the corresponding day of the next month;*

1.1.20. *"Parties" means the Employer and the Service Provider;*

1.1.21. *"Pricing Data" means the document that contains the Bill of Quantities and provides the criteria and assumptions, which it will be assumed in the Contract were taken into account by the Service Provider when developing his prices;*

1.1.22. *"Services" means all the work to be performed by the Service Provider during the Contract Period in accordance with the Contract, as more fully set out in the Scope of Works, as amended from time to time by written agreement between the Parties;*

1.1.23. *"Service Provider" means the Tenderer, as named in the Contract Data, whose offer has been accepted by or on behalf of the Employer and, where applicable, includes the Service Provider's heirs, executors, administrators, trustees, judicial managers or liquidators, as the case may be, but not, except with the written consent of the Employer, any assignee of the Service Provider;*

1.1.24. *"Service Manager" means the representative of the Employer named as the Service Manager in the Contract Data. The Employer reserves the right to replace the said Service Manager, by written notice to the Service Provider, without the need to furnish reasons therefor;*

1.1.25. *"Scope of Work" refers to the document which defines the Employer's objectives and requirements and specifications and any other requirements and constraints relating to the manner in which the Services must, or may, be provided or performed;*

1.1.26. *"Service Period" refers to the period indicated in the Contract Data during which the Service Provider shall render the Services required in terms of the Contract;*

1.1.27. *"Transitional Stage" refers to the period indicated in the Contract Data, which commences immediately on the expiry of the Service Period, and during which the Services to be provided by the Service Provider shall include, inter alia, the provision and transfer to the incoming service provider of managerial support and information, as detailed in the Scope of Works.*

2. *INTERPRETATION*

2.1. *In this Contract, except where the context otherwise requires:*

2.1.1 *The masculine includes the feminine and the neuter, vice versa;*

2.1.2 *The singular includes the plural; and vice versa*

2.1.3 *Any reference to a natural person includes a body corporate, firm, association or consortium/joint venture/partnership, vice versa.*

2.2. *The headings to the clauses of this Contract are included for reference purposes only and shall not affect the interpretation of the provisions to which they relate.*

2.3. *Words and phrases defined in any clause shall bear the meanings assigned thereto.*

Public

2.4. *The various parts of the Contract are severable and may be interpreted as such.*

2.5. *The expressions listed in clause 1 bear the meanings as assigned thereto and cognate expressions bear corresponding meanings.*

2.6. *If any provision in a definition clause is a substantive provision conferring rights or imposing obligations on any Party, effect shall be given to it as if it were a substantive clause in the body of the Contract, notwithstanding that it is only contained in the interpretation clause.*

3. *DURATION*

3.1. *The rights and obligations of the Parties to this Contract shall commence on the Commencement Date.*

3.2. *Subject to the terms of clauses 33 and 34 relating to breach and termination respectively, the Contract will commence on the Commencement Date and terminate on the expiry of the Contract Period, unless it is extended in terms of clause 3.3.*

3.3. *The terms or duration of the Contract may be extended as a result of bona fide negotiations between the Parties. No extension of term or duration of the Contract shall however be valid unless the terms and conditions of such extension has been reduced to writing and signed by the authorised representatives of both Parties.*

4. *RIGHTS AND OBLIGATIONS OF THE EMPLOYER*

4.1. *The Employer shall give access to or supply the Service Provider with:*

4.1.1 *All relevant, available data and information required and requested by the Service Provider for the proper execution of the Services; and*

4.1.2 *Such assistance as shall reasonably be required by the Service Provider for the execution of its duties under the Contract.*

5. *RIGHTS AND OBLIGATIONS OF THE SERVICE PROVIDER*

5.1. *The Service Provider shall, in executing his obligations, comply with the Service Manager's written instructions on any matter relating to the Services.*

5.2. *The Service Provider shall take instructions only from the Service Manager or other persons authorised by the Service Manager in terms of Clause 6.*

5.3. *The Service Provider shall not have the power of attorney or authority to enter into any contract or to otherwise bind or incur liability on behalf of the Employer, save where prior written authorisation has been obtained.*

5.4. *The Service Provider shall ensure that it, its employees, agents and representatives have the relevant experience and capacity necessary for rendering of the Services with the reasonable degree of skill, care and diligence that may be expected of professionals providing services similar to the Services.*

5.5. *Should any member of the Service Provider's team, in the opinion of the Service Manager or occupants of the Facilities, misconduct himself or is incompetent or negligent in the delivery of the Services, or whose presence on the Facilities is otherwise considered by the Service Manager, or occupants of the Facilities, on reasonable grounds, to be undesirable, the Employer may, in writing and together with reasons therefor, request that such person be removed. Such person shall not again be employed on the Services without the prior written consent of the Employer.*

5.6. *The Service Provider undertakes to effect such removal, as referred to in 5.5 above, within a day of receipt of the Employer's written request.*

5.7. *The Service Provider shall ensure that reasonable levels of care and responsibility are exercised when using items belonging to the Employer in the delivery of the Services.*

5.8. *During the ongoing provision of the Services the Service Provider shall at all times keep the Facilities clean and in a safe condition.*

5.9. *Notwithstanding anything herein contained to the contrary, it is specifically agreed that the appointment of the Service Provider shall not create an employment contract or relationship between the Parties and the Service Provider or his employees shall therefore not be entitled to any benefits to which the employees of the Employer may be entitled.*

6. *SERVICE MANAGER*

6.1. *The Service Manager shall administer the Contract on behalf of the Employer in accordance with the provisions of the Contract.*

6.2. *The Service Manager may delegate any of his powers and authority and may cancel such delegation, on the prior written notification thereof to the Service Provider.*

6.3. *Such delegation shall continue in force until the Service Manager notifies the Service Provider in writing that the delegation is terminated.*

6.4. *The Service Provider may at any time, prior to giving effect thereto, refer any written order or instruction of the Service Manager's delegatee to the Service Manager who shall confirm, reverse or vary such order or instruction.*

7. *SECURITY*

7.1. *The Service Provider shall provide to the Employer security in the amount and in the form set out in the Contract Data and any expenditure incurred in doing so shall be borne by the Service Provider.*

7.2. *Should the Service Provider fail to select the security to be provided or should the Service Provider fail to provide the Employer with the selected security within 21 days from Commencement Date, it shall be deemed that the Service Provider has selected a security in the form of a retention of 2.5 % of the Contract Sum (excl. VAT).*

8. *SECURITY CLEARANCE*

8.1. *In the event of security clearance becoming necessary, the Service Provider, any subcontractors and all human resources utilized by the Service Provider undertake to undergo security clearance, for which purpose the necessary forms will be made available to the Service Provider at the relevant time by the Employer. The Service Provider accepts that if he or any of his human resources refuses to undergo the required security clearance, they will not be allowed on the Facilities to render the Services.*

8.2. *It is required that all persons engaged in the rendering of the Services shall be easily identifiable and where required, security cleared.*

9. *CONFIDENTIALITY*

9.1. *The Service Provider undertakes to keep any and all information, of whatever nature, relating to the Contract or which he becomes privy to due to his presence at the Facilities, strictly confidential and such shall not be sold, traded, published or otherwise disclosed to anyone in any manner*

whatsoever, including by means of photocopy or other reproduction, without the Employer's prior written consent. As disclosure or improper use of the confidential information, without the Employer's prior written consent, will cause the Employer harm:

9.1.1 *the Service Provider shall be liable for any loss or damages suffered by the Employer and shall indemnify the Employer against any claims by third parties as a result of such unauthorised disclosure or use thereof , either in whole or in part; and/or*

9.2.1 *the Employer shall be entitled to cancel the Contract*

9.2. *The Service Provider shall be entitled to disclose such confidential information to the following persons, who have a clear need to know interest, in order to assist with the rendering of the Services on the Contract:*

9.2.1 *employees, officers and directors of the Service Provider; and*

9.2.2 *any professional consultant or agent retained by the Service Provider for the purpose of rendering the Services, provided that the identity of such consultant or agent is made known to the Employer in writing and the Employer acknowledges in writing that the confidential information may be disclosed to such person.*

9.3. *The Service Provider shall be responsible for ensuring that all persons to whom the confidential information is disclosed under this Contract shall keep such information confidential and shall not disclose or divulge the same to any unauthorised person.*

9.4. *The confidential information shall remain the property of the Employer and the Employer may demand the return or destruction thereof, at the cost of the Service Provider, at any time upon giving written notice to the Service Provider. Within ten (10) days of receipt of such notice, the Service Provider shall return all of the original confidential information and shall destroy all copies and reproductions (both written and electronic) in its possession or in the possession of persons to whom it was disclosed and furnish a certificate to the Employer stating as much.*

10. *AMBIGUITY IN DOCUMENTS*

10.1. *The several documents forming the Contract are to be taken as mutually explanatory of one another and any ambiguity in or discrepancy between them shall be explained and, if necessary, rectified by the Service Manager who shall thereupon issue to the Service Provider a written explanation giving details of the adjustments, if any, and a written instruction directing what Service, if any, is to be delivered.*

11. *INSURANCES*

11.1. *It is the responsibility of the Service Provider to assess his risks on this project and to ensure that he obtains and maintains the adequate insurances to cover such risks.*

12. *ACCESS TO THE FACILITIES AND COMMENCEMENT OF THE SERVICES*

12.1. *The Service Provider shall provide the Employer, within 21 days of the Commencement Date, with an acceptable health and safety plan and such other information required in terms of the Occupational Health and Safety Act (85 of 1993).*

12.2. *The Service Period shall commence 30 days from Commencement date, or on such other date as maybe specified in the Contract Data*

12.3. *Notwithstanding the provision of 12.2, the Service Provider shall be given access to the Facilities or portions thereof, only after the provision by the Service Provider of an acceptable health and safety plan and of security clearance being obtained in terms of Clauses 12.1 and 8.1 respectively.*

12.4. *The Service Provider shall be given access to the Facilities or portions thereof and shall render the Services in accordance with its programme, referred to in clause 13 or after the receipt by him of a written instruction to this effect.*

12.5. *If the Employer fails to give the Service Provider access to the facility or any portion thereof for any reason other than default by the Service Provider and the Service Provider suffers additional costs as a result thereof, the Service Provider shall be entitled to make a claim therefor provided that the Service Provider is able to prove his claim and that he has taken all reasonable steps to mitigate the additional costs.*

13. *PROGRAMME*

13.1. *The Service Provider shall deliver to the Service Manager within 14 days from Commencement Date, a realistic programme and a cash flow for the delivery of the Services. The programme shall describe and detail the order in which the Services are to be rendered and shall be subject to the approval of the Service Manager, which written approval shall not be unreasonably withheld.*

13.2. *The Service Provider shall, on receipt of a written request from the Service Manager, furnish the Employer with any documents or information, of whatever nature, in support of the programme and/or in relation to the manner in which the Services are to be rendered and/or the resources to be supplied and used in the rendering of the Services and/or progress of the various parts of the Contract; and/or a detailed cash flow forecast.*

13.3. *A programme and the cash flow forecast will be submitted in terms of 13.1 and reviewed quarterly or as circumstances may require.*

13.4. *Agreement to the programme by the Service Manager or any adjustment thereto will not alter the responsibilities of the Service Provider in terms of this Contract.*

14. *SUBCONTRACTING*

14.1. *The Service Provider may subcontract any part of the Services at its discretion. The subcontracts shall incorporate the applicable terms, conditions and requirements of this Contract.*

14.2. *Subcontracting by the Service Provider shall not be construed as relieving the Service Provider from any obligations under the Contract or imposing any liability on the Employer.*

15. *INTELLECTUAL PROPERTY RIGHTS INDEMNITY*

15.1. *The Service Provider undertakes to obtain the necessary consent from the proprietors or their licensees should the Service Provider make use of the intellectual property of any other person.*

15.2. *The Service Provider further indemnifies the Employer against any claim or action (including costs on an attorney and client scale) caused by or arising from the failure to obtain such consent.*

16. *COMPLIANCE WITH LEGISLATION*

16.1. *This clause applies to legislation emanating from national and provincial government as well as that of any local authorities in whose area of jurisdiction the Facilities fall and which have a bearing on the delivery of the Services and Facilities under this Contract.*

16.2. *All the applicable legislation, which does not specifically allow discretion in respect of compliance by the Employer, shall be followed exactly as intended by such legislation regardless of any instructions, verbal or in writing, to the contrary.*

16.3. *Should any applicable legislation allow discretion in respect of compliance by the Employer it shall be followed exactly as intended by the relevant legislation as if no discretion is allowed until such time as specific instructions in writing are issued to the Service Provider by the Service Manager.*

16.4. *The Service Provider shall in the provision of the Services comply with the provisions of, and give all notices and pay all fees, taxes, levies and other charges required to be given or paid in terms of any legislation or imposed by any other body or person. The Service Provider hereby indemnifies the Employer against any liability for any breach of the provision of this clause.*

16.5. *It is the responsibility of the Service Provider to obtain the consents, permissions and/or permits, referred to in Clause 16.4, in the provision of the Services.*

16.6. *The Service Provider shall not have a claim against the Employer, and the Employer shall not be liable to refund the Service Provider for any of the fees, taxes, levies and other charges referred to Clause 16.4.*

17. *REPORTING OF INCIDENTS*

17.1. *In addition to the above, the Service Provider shall, as soon as possible, notify the Employer in writing of any incidents at the Facilities, which resulted or could have resulted in damage to property or injury or death to persons.*

17.2. *The Service Provider shall verbally notify the Service Manager of any of the incidents referred to in 17.1 immediately after the occurrence thereof.*

17.3. *The Service Provider shall follow up the verbal notification referred to in 17.2 with a detailed written report on such incidents to the Service Manager within the time frame indicated by the Service Manager, but in any event within 48 hours of the incident.*

17.4. *The written report referred to in 17.3 shall provide for all incidents, which resulted in injury, death or damage to property.*

17.5. *The Service Provider shall notify the Employer immediately, on becoming aware of the Contract requiring him to undertake anything that is illegal or impossible*

18. *NUISANCE*

18.1. *The Service Provider shall deliver the Services in a manner that shall not cause unnecessary noise, nuisance, or hinder the normal activities in the Facilities.*

18.2. *The Service Provider hereby indemnifies the Employer against any liability arising out of the Service Provider's non-compliance with his obligations in terms of Clause 18.1.*

19. *MATERIALS, WORKMANSHIP AND EQUIPMENT*

19.1. *All Services delivered, and materials and workmanship shall comply with the requirements of this Contract, the manufacturer’s specification; good industry practice and the Service Manager's written instructions and shall be suitable for the purpose intended.*

19.2. *The Service Provider shall, in accordance with the Scope of Works or if instructed by the Service Manager, carry out tests demonstrating the acceptability of the relevant Services provided, or the suitability of materials or equipment to be used.*

19.3. *The Service Provider shall provide all necessary assistance, labour, materials, testing equipment and instruments for the purpose of such tests to be performed by himself or, if so instructed by the Service Manager, for the purposes of tests to be performed by any other person.*

19.4. *All costs for tests carried out shall be deemed to be included in the Service Provider’s prices*

19.5. *Copies of the reports on the tests referred to in Clause 19.2 shall be forwarded by the Service Provider to the Employer within 10 days of the tests being completed.*

20. *URGENT WORK*

20.1. *The Employer may, by itself or through another service provider, effect any remedial or other repair work which becomes necessary due to no act or omission on the part of the Service Provider.*

20.2. *If the remedial or repair work became necessary due to an act or omission on the part of the Service Provider, its employees, agents or representatives, the Service Provider shall effect such remedial or repair work at its own cost.*

20.3. *If the remedial or repair work is urgently necessary due to an act or omission on the part of the Service Provider, its employees, agents or representatives and the Service Provider refuses to or is not available or able to effect such remedial or repair work, the Employer may effect such remedial or repair work either by itself or through another service provider.*

20.4. *If the Employer effects the remedial or repair work in terms of 20.3, then the Employer may recover such costs, losses or damages from the Service Provider or by deducting the same from any amount still due under this Contract or under any other contract presently or hereafter existing between the Employer and the Service Provider and for this purpose all these contracts shall be considered one indivisible whole.*

21. *INDEMNIFICATIONS*

21.1. *The Service Provider shall be liable for and hereby indemnifies the Employer against any liability, claim, demand, loss, cost, damage, action, suits or legal proceedings whether arising in common law or by statute consequent upon:*

21.1.1 *personal injuries to or the death of any person arising out of, related to, occasioned by, attributed to, or in the cause of or caused by the rendering of the Services;*

21.1.2 *loss of or damage to any movable or immovable or personal property or property contiguous to the Facilities whether belonging to or under the control of the Employer or any other body or person arising out of, related to, occasioned by, attributed to, or in the cause of or caused by reason of the rendering of the Services;*

21.1.3 *any liens, attachments, charges or other encumbrances or claims upon or in respect of any materials parts, work-in-process or finished work furnished to, or in respect of which any payment has been made by the Employer.*

21.2. *The Employer accepts liability for all acts or omissions of its employees, agents or representatives.*

22. *VARIATIONS*

22.1. *The Employer may at any time during the Contract Period, vary the Services by way of additions, omissions, or substitutions.*

22.2. *No variation by the Employer of whatever nature shall vitiate the Contract.*

22.3. *Any Services required by the Employer outside of the Services as referred to in the Scope of Works will be regarded as being Identified Projects and shall be dealt with under clause 23 and shall be executed as a variation order.*

22.4. *The Service Provider shall inform the Employer of any instructions that are deemed to be Additional Services prior to such instructions being executed.*

22.5. *Additional Services will only be executed by the Service Provider after receipt by him of a written instruction from the Service Manager.*

22.6. *If no prior written authorisation, as required in 22.5 above, has been obtained, the Employer shall not reimburse the Service Provider for the Additional Services so executed, and the Service Provider agrees that it shall not have a claim for payment for such Additional Services.*

22.7. *The Additional Services will be valued at the rates in the Pricing Data.*

23. *IDENTIFIED PROJECTS*

23.1. *The Service Provider shall inform the Employer of any instructions that are deemed to be Identified Projects prior to such instructions being executed.*

23.2. *The Employer is not obliged to engage the services of the Service Provider on Identified Projects. The Employer may, by itself, through another service provider or through the Service Provider effect the services/works under Identified Projects.*

23.3. *Identified Projects will only be executed by the Service Provider after receipt by him of a written instruction from the Service Manager.*

23.4. *If no prior written authorisation, as required in 23.3 above, has been obtained, the Employer shall not reimburse the Service Provider for the Identified Projects so executed, and the Service Provider agrees that it shall not have a claim for payment for such Identified Projects.*

23.5 In respect of the Identified Projects, the written instruction referred to in 23.3 shall:

(a) describe the services/works required to be executed by the Service Provider under the Identified Project;

(b) state the due commencement and completion dates of the relevant Identified Project;

(c) state the total cost of the relevant Identified Project as agreed to between the Parties; and

(d) any additional requirements, conditions of contract and/or restrictions, other than those already stated in the Contract, that will be applicable.

23.6 Within 14 days of receipt of the written instruction referred to in 23.5, the Service Provider shall furnish the Employer with a realistic programme and a cash flow for the relevant Identified Project as required in 13.

23.7 Where an Identified Project comprises services/works that are of the same or similar character executed under the same or similar conditions as those to which the rates in the Pricing Data apply, it shall be valued at such rates.

23.8 Where an Identified Project comprises services/works that are not of the same or similar character executed under the same or similar conditions as those to which the rates in the Pricing Data apply, it shall be valued at market related rates to be agreed to in writing between the Employer and the Service Provider and in advance of executing the Identified Project. Failing agreement, the rates applicable shall be as determined by the Employer.

23.9 If the Service Provider fails to complete the Identified Project by the completion date specified in the written instruction referred to in 23.3, then the Service Provider will be liable for a penalty, at the rate stated in the Contract Data, for every day that lapses from the due completion date of the relevant Identified Project to the date of the actual completion of such Identified Project.

23.10 If the Identified Projects are delayed by variations, omissions, additions, substitutions or organised work stoppages by any workman not due to any action on the part of the Service Provider, exceptionally inclement weather, any substantial increase in provisional quantities or any other cause beyond the Service Provider's control, including delays caused by the Employer, then the

Service Provider shall be entitled to apply in writing within 21 days of the cause of delay arising to the Service Manager for extension of the due completion date of the relevant Identified Project stating the cause of delay and period of extension applied for.

23.11 *If during the period for completion of the Identified Project or any extension thereof abnormal rainfall or wet conditions occur, the formula below shall be used to calculate separately the delay for each calendar month or part thereof. It shall be calculated each month during the period referred to herein above, or until the issue date of the certificate of completion for the relevant Identified Project, whichever is the shorter period. The delay calculated for a given month shall be used to determine the interim extension of time granted for the month. At the end of the applicable period referred to above, the aggregate of the monthly delays will be taken into account for the final determination of the total extension of time for the Contract:*

$$V = (Nw - Nn) + \frac{(Rw - Rn)}{X}$$

V = Delays due to rain in calendar days in respect of the calendar month under consideration.

Nw = Actual number of days during the calendar month on which a rainfall of Y mm or more per day has been recorded

Rw = Actual rainfall in mm for the calendar month under consideration.

Nn = Average number of days in the relevant calendar month (as derived from existing rainfall records provided in the project specifications) on which a rainfall of Y mm or more per day has been recorded.

Rn = Average rainfall in mm for the calendar month, as derived from the rainfall records supplied in the project specifications.

X = 20, unless otherwise provided in the project specifications.

Y = 10, unless otherwise provided in the project specifications.

The total delay that will be taken into account for the determination of the total extension of time for the Contract shall be the algebraic sum of the monthly totals for the period under consideration. But if the grand total is negative, the time for completion shall not be reduced on account of abnormal rainfall. The total extension of time for any calendar month shall not exceed (Nc – Nn) calendar days, where Nc = number of days calendar days in the month under consideration

The factor (Nw – Nn) shall be considered to represent a fair allowance for variations from the average number of days during which rainfall equals or exceeds Y mm per day.

The factor (Rw – Rn) ÷ X shall be considered to represent a fair allowance for variations from the average for the number of days during which rainfall does not equal or exceed Y mm per day, but when wet conditions prevent or disrupt work.

This formula does not take into account any flood damage, which could cause further or concurrent delays and which should be treated separately in so far as extension of time is concerned.

Accurate rain gaugings shall be taken at a suitable point on the site daily at 08:00 unless otherwise agreed to by the Service Manager, and the Contractor shall, at his own expense, take all necessary precautions to ensure that the rain gauges cannot be interfered with by unauthorized persons.

Information regarding existing rainfall records, if available from a suitable rainfall station near the site, will be supplied in the project specifications, together with calculations of rain delays for

previous years in accordance with the above formula. The average of these delays will be regarded as normal rain delays which the Contractor shall accommodate in his programme, and for which no extension of time will be considered.

23.12 Upon receipt of such written application, referred to in 23.10, the Employer may in writing extend the due completion date of the relevant Identified Project by a period to be determined by the Employer or may refuse to extend the due completion date of the relevant Identified Project. The due completion date of an Identified Project may not be extended beyond the end of the Contract Period stated in the Contract Data.

23.13 Any decision given by the Employer, in terms of 23.12, shall be final and binding on the Parties.

23.14 Should the Service Provider fail to apply in writing for an extension of the due completion date of the relevant Identified Projects within the 21 days referred to in 23.10, or should the Employer not grant an extension of the due completion date then the due completion date stipulated in the relevant written instruction referred to in 23.5 shall not be extended nor the Service Provider exonerated from liability to pay the penalty stipulated in 23.9 or from specific performance of the service/works within the period in the relevant written instruction.

24. *SUSPENSION OF THE SERVICES*

24.1 The Service Provider shall, on the written order of the Service Manager, suspend the provision of the Services or any part thereof for such time or times and in such manner as the Service Manager shall order and shall, during such suspension, properly protect the Services so far as is necessary.

24.2 If the Service Provider is instructed in writing by the Service Manager to suspend any or all of the Services, the Service Provider shall re-schedule the relevant Services. For the duration of such suspension all penalties applicable to that Service will be waived. Should the Service Provider suffer any additional costs resulting from such suspension, the Service Provider shall be entitled to make a claim therefor provided that the Service Provider shall prove his claim and that he has taken all reasonable steps to mitigate the additional costs.

24.3 If the Service Provider is unable to render any of the Services for any reason other than an instruction by the Employer to suspend the Services in terms of clause 24.1, the Employer shall not be liable for any claim of whatever nature, including a claim for costs, by the Service Provider.

25. *PENALTY FOR NON-PERFORMANCE*

25.1 The Service Provider shall be liable for a performance deduction, if the Service Provider in rendering any of the Services required under the Scope of Works, as amended from time to time,

25.1.1 delays in performing any of the Services;

25.1.2 fails to perform any of the Services;

25.1.3 fails to perform any of the Services to the standard required in the Scope of Works, as amended from time to time.

25.2 The performance deduction shall be calculated in accordance with the formula detailed in the Scope of Works.

25.3 The Service Provider shall not be liable for a performance deduction, if the Service Provider is unable to perform due to no fault of his own, his employees, agents or representatives.

26. *PAYMENTS*

26.1 The Service Manager will evaluate the Service Provider's performance on a monthly basis.

26.2 The Service Provider shall submit a monthly certificate taking into account the following:

26.2.1 the assessment of the Services rendered during the assessment month, including routine services, management fees, and services using call down rates;
26.2.2 adjustments in terms of the pricing data;

26.2.3 additional work rendered by the Service Provider;

26.2.4 CPAP adjustment where stated in the Contract Data; and

26.2.5 VAT. Vat will be indicated separately in all documents.

26.3 If the Service Provider elects a security of 2,5% retention, or a 1,25% cash and 1,25% retention, then 5% of all moneys (excl. VAT) in the monthly certificate assessed by the Service Manager as being due to the Service Provider will be retained until such time as the amount retained equals 2.5% or 1,25%, whichever is applicable, of the Contract Sum (excl. VAT)

26.4 The monthly certificate shall be supported by a detailed report substantiating the Services rendered at each Facility during the month under assessment.

26.5 The monthly certificate shall be assessed by the Service Manager. If the Service Manager agrees with the certificate, he will issue a statement within 14 days of the receipt of the certificate, taking into account inter alia the following:

i. Deductions for penalties;
ii. Deductions for overpayments;
iii. Deductions for retention
iv. Deductions for damages.

26.6 The Service Provider shall, on receipt of the statement referred to in 26.5, issue to the Employer a tax invoice in the amount reflected in the statement. The Employer shall effect payment to the Service Provider within 16 days of receipt of the tax invoice.

26.7 If the Service Manager does not agree with the certificate issued by the Service Provider in terms of Clause 26.2, the Service Manager shall within 14 days of receipt of the certificate, issue a statement in the amount to which the Service Manager agrees and shall give reasons for rejecting the balance of the claim indicated in the statement.

26.8 The Service Provider shall furnish the Employer with a tax invoice in the amount indicated in the statement referred to in Clause 26.7.

26.9 With regards to the claim in dispute, the Service Provider may, within 14 days of the Service Manager issuing the statement referred to in 26.7, submit a revised certificate or a justification for his claim or declare a dispute in terms of 34.

26.10 If it is later resolved that the amount in dispute or any part thereof is owing to the Service Provider, the Employer shall be liable for interest thereon from 30 days after the issue of the relevant monthly certificate referred to in 26.2 until the date of payment at the interest rate determined from time to time, by the Minister of Finance in terms of section 80 (1)(b) of the Public Finance Management Act, 1999 (Act 1 of 1999), as amended.

26.11 All the work shall be evaluated in accordance with the provisions of the Pricing Data.

26.12 In assessing the quality of the work presented by the Service Provider, the Employer may enlist the assistance of third persons. In assessing the work the third person shall act reasonably. The

selection of such third persons shall be in the absolute discretion of the Employer and the Service Provider shall abide by such selection.

26.13 Any and all extra costs incurred by the Service Provider, resulting from the Service Provider having to address and/or rectify queries arising from a claim submitted in respect of work done, shall be for the account of the Service Provider.

27. *RELEASE OF SECURITY*

27.1 If the Service Provider has furnished a security by way of a variable guarantee of 2.5% of the Contract Sum (excl. VAT), the security will be reduced and be released in accordance with the provisions of such variable guarantee.

27.2 If the Service Provider elects to furnish a security by way of a cash deposit of 2.5% of the Contract Sum (excl. VAT), then the security will be released as follows:

27.2.1 annually in equal portions, subject to 27.2.2 and 27.2.3;

27.2.2 95% of the last annual portion of retention shall be released within 30 days of the expiry of the Service Period;

27.2.3 the remaining retention shall be released within 30 days of the issue of the Certificate of Completion.

27.3 If the form of security selected is:

(a) a retention of 2.5% of the Contract Sum (excl. VAT); or
(b) a 1,25% cash deposit and a 1,25% retention of the Contract Sum (excl. VAT),

then security will only be released after the 2,5% or 1,25% retention respectively has been accumulated, as follows:

27.3.1 annually in equal portions, subject to 27.3.2 and 27.3.3;

27.3.2 95% of the last annual portion of retention shall be released within 30 days of the expiry of the Service Period;

27.3.3 the remaining retention shall be released within 30 days of the issue of the Certificate of Completion.

28. *OVERPAYMENTS*

28.1 If any overpayment of whatever nature is made to the Service Provider, the Service Provider shall be obliged to repay such amount to the Employer and the Employer shall be entitled to deduct such over payment from any amount due to the Service Provider, in respect of this Contract or any other contract, which the Employer may have with the Service Provider. The Employer shall be entitled to claim interest on any and all overpayments made to the Service Provider at the rate prescribed, from time to time, by the Minister of Finance in terms of section 80 (1)(b) of the Public Finance Management Act, 1999 (Act 1 of 1999), as amended.

29. *COMPLETION*

28.1 At the expiry of the Service Period the Service Manager shall furnish the Service Provider with a written list of Employer's Assets and Data handed over at commencement of the Contract and accumulated during the Contract Period.

29.2 At the expiry of the Contract Period, the Service Manager shall issue to the Service Provider a Certificate of Completion.

29.3 Upon the issue of a Certificate of Completion, unless otherwise provided in the Contract:

29.3.1 The Guarantee shall be returned, if applicable.

29.3.2 The final cash deposit or retention, whichever is applicable, shall be reduced to zero.

30. *ASSIGNMENT*

30.1 The rights and obligations of the Parties in terms of this Contract shall not be ceded, assigned, delegated, or otherwise transferred, by either Party to any person outside of the Service Provider and the Employer, save with the prior written consent of the other Party.

30.2 Each Party warrants that he is acting as a principal and not as an agent of an undisclosed principal.

31. *INDULGENCES*

31.2 No extension of time, latitude or other indulgences which may be given or allowed by either Party to the other shall constitute a waiver or alteration of this Contract, or affect such Party's rights, or prevent such Party from strictly enforcing due compliance with each and every provision of this Contract.

32. *OWNERSHIP AND PUBLICATION OF DOCUMENTS*

32.1 The Employer will become the owner of the information, documents, advice, recommendations and reports collected, furnished and/or compiled by the Service Provider during the course of, and for the purposes of executing this Contract, all of which will be handed over to the Employer, unless otherwise stipulated in the Contract, within ten (10) days of request therefor, but in any event on the termination and/or cancellation of this Contract for whatever reason. The Service Provider relinquishes its retention or any other rights to which it may be entitled.

32.2 The copyright of all documents, recommendations and reports compiled by the Service Provider during the course of and for the purposes of finalising Services, and the Contract as a whole, will vest in the Employer, and may not be reproduced or distributed or made available to any person outside the Employer's service, or to any institution in any way, without the prior written consent of the Employer. The Employer shall have the right to use such material for any other purpose without the approval of, notification to or payment to the Service Provider.

32.3 The copyright of all electronic aids, software programmes etc. prepared or developed in terms of this Contract shall be vested in the Employer, who shall have the right to use such material for any other purpose without the approval of, information or payment to the Service Provider.

32.4 In case of the Service Provider providing documents or material to the Employer, the development of which has not been at the expense of the Employer, copyright shall not be vested in the Employer. The Service Provider shall be required to indicate to which documents and/or materials this provision applies.

32.5 The Service Provider hereby indemnifies the Employer against any action or claim that may be instituted against the Employer and for any damages suffered or legal costs (including costs on an attorney and client scale) incurred on the grounds of an alleged infringement of any copyright or any other intellectual property right in connection with the work outlined in this Contract.

32.6 All information, documents, recommendations, programmes and reports collected or compiled must be regarded as confidential and may not be communicated or made available to any person outside the Employer's service and may not be published either during the currency of this Contract or after termination thereof without the prior written consent of the Employer.

33. *BREACH OF CONTRACT*

33.1 In the event of a breach by the Service Provider of any of the terms and conditions of this Contract, the Employer shall issue a notice of non- compliance requiring compliance within 10 (ten) days. In the event that the Service Provider fails to remedy such breach on expiry of the notice period, then the Employer shall without prejudice to any other rights that it may have, be entitled to exercise any or all of the following rights:

33.1.1 Enforce strict compliance with the terms and conditions of the Contract;

33.1.2 To terminate this Contract without prejudice to any other rights it may have;

33.1.3 To suspend further payments to the Service Provider;

33.1.4 To appoint other service providers to complete the execution of the Services, in which event the Service Provider shall be held liable for costs incurred in connection with and arising from the appointment of such a service provider as well as damages suffered.

33.2 The Service Provider agrees to, within ten (10) days of written request from the Employer, give access to and to make available all information, documents, programmes, advice, recommendations and reports collected, furnished and/or compiled by them to enable the Employer to assume responsibility for and the benefit of the project as a whole.

33.3 In the event of breach by the Employer of the terms and conditions of this Contract, and in the event of the Employer remaining in breach after ten (10) days' written notice calling for rectification of the breach, the Service Provider shall be entitled to:

33.3.1 enforce strict compliance with the terms and conditions of the Contract; or

33.3.2 terminate the Contract by delivering written notice to the Employer to that effect to the extent that such breach is of a material term of this Contract.

34. *STOPPAGE AND/OR TERMINATION OF CONTRACT*

34.1 The Employer reserves the right to terminate this Contract or temporarily stop the Services, or any part thereof, at any stage of completion.

34.2 The Employer shall have the right to terminate this Contract without prejudice to any of its rights upon the occurrence of any of the following acts:

34.2.1 on breach of this Contract by the Service Provider as stipulated in Clause 33;

34.2.2 on commencement of any action for the dissolution and/or liquidation of the Service Provider, except for purposes of an amalgamation or restructuring approved in advance by the Employer in writing;

34.2.3 if the Service Provider receives a court order to be placed under judicial management or to commence liquidation proceedings that is not withdrawn or struck out within five (5) days;

34.2.4 if the Service Provider informs the Employer that it intends to cease performing its obligations in terms of this Contract;

34.2.5 if the Service Provider informs the Employer that it is incapable of completing the Services as described; or

34.2.6 if in the opinion of the Employer the Service Provider acted dishonestly;

34.3 The Employer reserves the right to, even in the absence of breach or the events referred to in 34, terminate this Contract at any time, by giving one (1) calendar month written notice to the Service Provider.

34.4 Further, the Contract shall be considered as having been terminated:

34.4.1 where the Employer stops the Contract and/or the Project and instructions to resume or reinstate the Services are not issued within twelve (12) months of the instruction; or

34.4.2 if instructions, necessary for the Service Provider to continue with the Services after a stoppage instruction, are not received from the Employer within three (3) months after such instructions were requested by the Service Provider.

34.5 Should the Contract between the Employer and the Service Provider, or any part thereof, be terminated by either of the Parties due to reasons not attributed to the Service Provider:

34.5.1 The Service Provider will be remunerated for the appropriate portion of the Services satisfactorily completed, calculated in accordance with the agreed rates.

34.5.2 Invoices for work done shall be submitted to the Employer within three (3) months after the termination of the Contract, failing which the Employer will not be obliged to pay same.

34.5.3 The Service Provider shall not be entitled to advance a right of retention or any similar right if this Contract is terminated and specifically agrees to, within ten (10) days of written request from the Employer, give access to and to make available all information, documents, programmes, advice, recommendations and reports collected, furnished and/or compiled by them to enable the Employer to assume responsibility for and the benefit of the Contract as a whole.

35. *DISPUTE RESOLUTION*

35.1 In the event of a dispute, the Parties shall endeavour to resolve such dispute through negotiation, in good faith.

35.2 If the Parties fail to resolve a dispute through negotiation as mentioned in 35.1, within 14 days of a dispute being declared, the Parties may by written agreement refer the matter to mediation.

35.3 The mediator shall be a person agreed to by the Parties, failing agreement, the President: South African Facilities Management Institute shall nominate the mediator.

35.4 Whether or not mediation resolves the dispute and irrespective of the outcome of thereof, the Parties shall bear their own costs arising from the mediation and shall equally share the costs of the mediator and related costs. The mediator and the Parties shall, before the commencement of the mediation, agree on a scale of fees on which the mediator's fees will be based.

35.5 The Parties shall appoint the mediator within 21 days of agreeing to mediate.

35.6 On appointment of the mediator, the Parties shall jointly with the mediator decide on the procedure to be followed, representation, dates and venue for the mediation.

35.7 If the dispute or any part thereof is settled, the agreement shall be recorded by the mediator and signed by both Parties. The agreement shall be binding on the Parties to the extent that it correctly records the issues agreed upon between the Parties.

35.8 If the dispute or any part thereof remains unresolved, it may be resolved by litigation proceedings.

35.9 If the mediator or any Party, at any time during the mediation process, is of the opinion that the mediation will not resolve the dispute, then he may in writing stop the mediation process. The dispute may then be dealt with in terms of 35.8.

35.10 Notwithstanding anything else herein contained to the contrary, it is agreed that irrespective of the fact that the dispute is referred to negotiation, mediation or litigation in court, the decision of the Employer on the dispute involved will immediately be given effect to by the Service Provider and the Service Provider shall proceed with the Services with all diligence unless the Parties agree otherwise in writing.

36. *GENERAL*

36.1 This is the entire Contract between the Parties and may only be amended if reduced to writing and signed by the duly authorised representatives of both Parties, whereafter such amendments will take effect.

36.2 The Contract shall be governed by, construed and interpreted according to the law of the Republic of South Africa.

37. *DOMICILIUM CITANDI ET EXECUTANDI*

37.1 The domicilium citandi et executandi of the Parties for all purposes arising from this Contract for the service of notices and legal process shall be as specified by the Parities in the Contract Data.

37.2 Each of the Parties shall be entitled at any time by way of written notice to the other Party, to change its domicilium citandi et executandi to another physical address.

37.3 Any notice in terms of the conditions of the Agreement must either be:

37.3.1 delivered by hand during normal business hours of the recipient; or

37.3.2 sent by prepaid registered post to the address chosen by the addressee.

37.4 A notice in terms of the provisions of this Agreement shall be considered to be duly received:

37.4.1 if hand-delivered on the date of delivery;

37.4.2 if sent by registered post as indicated in clause 37.3.2 above, ten (10) days after the date it was posted, unless the contrary is proved.

37.5 Notwithstanding anything to the contrary contained or implied in this Agreement, the written notice or communication actually received by one of the Parties from the other, including by way of facsimile transmission, shall be adequate written notice or communication to such Party.

37.6 Any notice, request, consent, or other communication made between the Parties pursuant to the Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or one day after being sent by facsimile to such Party at the number specified in the Contract Data or one week after being sent by registered post to the addressee specified in the Contract Data.

TERMS OF REFERENCE/ SPECIFICATIONS

Bid no: GQET-2026/2027-012

Bid/ Project Description: MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTHAFRICA

TERMS OF REFERENCE / SPECIFICATIONS: TERM SERVICE CONTRACT

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE
EBEN DONGES BUILDING
CORNER HANCOCK AND ROBERTS STREETS
NORTH END
GQEBERHA
6056

1. LEGISLATIVE COMPLIANCE & STANDARD SPECIFICATIONS

The following standards, specifications, regulations, By-Laws and guidelines, but not limited to, are applicable to this service:

A1.1. Environmental Conservation Act, 1989 (Act No. 73 of 1989) A1.2. Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) A1.3. Basic Conditions of Employment Act, 1997 (No. 75 of 1997)
A1.4. National Environmental Management Act, 1998 (Ac No. 107 of 1998) A1.5. National Environmental Management: Waste Act (Act No. 10 of 2004) A1.6. National Regulator for Compulsory Specifications Act (Act 5 of 2008) A1.7. ISO 9001 – Quality Management System
A1.8. ISO 14001 – Environmental Management Systems
A1.9. Local Authority Bylaws (Respective Jurisdictions)
A1.10. South African Bureau of Standards (SABS) / South African National Standards (SANS) A1.11. Agrément South Africa Act (Act No. 11 of 2015)

A.2 ABBREVIATIONS AND DEFINITION OF TERMS

A2.1 Definition of Abbreviations

Abbreviation	Definition
ASIB	Automatic Sprinkler Inspection Bureau
CA	Condition Assessment
CoC	Certificate of Compliance
CIN	Component Identification Number
DCP	Dry Chemical Powder
DPWI	Department of Public Works and Infrastructure
EUL	Expected Useful Life
GIAMA	Government Immovable Asset Management Act
NIAMM	National Immovable Asset Maintenance Management (Framework)
OHS	Occupational Health and Safety
RUL	Remaining Useful Life
RTF	Run-to-Failure
SABS	South African Bureau of Standards
SANS	South African National Standard
SAQCC	South African Qualification & Certification Committee (Fire Industry)
SP	Service Provider

Definition of Key Terms

NB! THE SERVICE PROVIDER (TO-BE AND AS APPOINTED) MUST CROSS REFERENCE THE DEFINITIONS OF KEY TERMS ON READING THIS DOCUMENT AND ITS SUBSEQUENT SECTIONS TO ENHANCE PROPER AND THOROUGH UNDERSTANDING, COMMENCING WITH ESTIMATING OF COSTS, CULMINATING WITH THE EFFECTIVE AND EFFICIENT MANAGEMENT OF THE CONTRACT.

Term	Definition
Asset Care	The term linking optimised maintenance with the periodic renewal of infrastructure assets. Asset care activities are considered and planned for, from a whole asset life cycle perspective. (NIAMM)
Base Location	The location as determined by the Employer (DPWI), to be where the Service Provider is based out of for the purpose of service delivery coordination, mileage calculation and cost capping.
Bounded Assets	Assets that are highly regulated for safety, environmental protection or other reasons in the public interest and require a Certificate of Compliance (CoC) to be conspicuously displayed. For the purpose of this document, bounded assets refer to the fire protection components and subcomponents.
Breakdown maintenance	This entails repair and /or replacement of defective equipment, units or parts of installations following a breakdown that leaves the installation inoperable or unsafe, and subsequent action to restore installations to their normal functional condition, within the maximum down-time allowed.
Component	A component (Note 1) is a specific part of a complex asset (Note 2) that has independent physical or functional identity and specific attributes such as different life expectancy, maintenance and renewal requirements and regimes, risk or criticality.
Corrective maintenance	Maintenance carried out after a failure has occurred and subsequent actions taken to restore a components / subcomponent to a state in which it can perform its required function.
Critical Component	Components that are likely to result in a more significant financial, environmental and social cost in terms of impact on organisational objectives and service delivery (NIAMM).
Custodian	Refers to a National or Provincial Department designated in terms of the Government Immovable Asset Management Act (GIAMA No. 19 of 2007) that must plan, acquire, manage and dispose of immovable assets. For the purpose of this document, "custodian" means the Department of Public Works and Infrastructure.
Decal	sign on a thin vinyl or retro-reflective sheet that is pressure sensitive and that, when a paper liner is peeled off and pressure is applied, will adhere to a flat surface
Emergency maintenance repairs	These repairs are defined as any work required to rectify an emergency breakdown that disables a complete / critical part of an installation and prevents it from functioning to its designed service level.
Expected useful life (EUL)	The useful life of an asset is the period over which an asset is expected to be available for use by an entity or the number of production or similar units expected to be obtained from the asset by an entity (GRAP).
Failure	A component has suffered a failure when it is no longer capable of fulfilling one or more of its intended functions. A component does not need to be completely unable to function to have suffered a failure. *An example:* a fire pump that is still operating, but is not capable of pumping the required flow rate, has failed – a dominant asset failure mode in this case is performance (NIAMM).
Failure mode	Not all assets fail in the same way. Assets' failure mode status are; (1) performance, (2) condition, (3) capacity / utilisation, (4) Cost of operations.

Term	Definition
	An example: electricity supply capacity and / or performance are the leading failure modes.
Fatal breakdown	Fatal breakdown is defined as an occurrence when an installation or a specified part thereof fails to operate for any period of time other than during the execution of routine preventative and corrective maintenance activities.
Immediate response repairs	These repairs are defined as repair work required where no breakdowns are allowed at any time.
Maximum down-time	Maximum down-time shall mean the period of time allowed to repair a breakdown, and actual down-time shall mean the measured period from the instant when the breakdown was logged with the Service Provider until the installation has been repaired to its functional specification.
National Immovable Asset Maintenance Management (NIAMM) Framework	Sets out the key principles and practices required for the maintenance of immovable assets through their lifecycle and for the purpose of this document – encompasses the Water Treatment & Waste Water Treatment Plants and Boreholes. The framework includes six documents: c) NIAMM Management Standard d) NIAMM Accounting Framework e) NIAMM Monitoring and Evaluation Protocol f) NIAMM Planning Guidelines g) NIAMM Competency Framework h) Contractor Development through the Maintenance Industry The NIAMM framework is accessible at: https://www.cidb.org.za/resource-centre/downloads-2/#47-94-wpfd-infrastructure-maintenance
Ordinary maintenance repairs	These repairs are defined as all maintenance work required other than emergency maintenance repairs.
Preventative maintenance	This entails the rendering of services and servicing of equipment according to a predetermined maintenance control plan to: 1. Service and replace subcomponents of equipment, units or parts thereof for each installation at prescheduled moments regardless of condition; 2. Readjust, reset, clean, corrosion protect all the components of equipment, units or parts thereof for each installation, and 3. Carry out all implied actions to maintain installation in their present functional condition. Preventative maintenance shall be aimed at minimisation of breakdowns.
Remaining useful life (RUL)	The time remaining until an asset ceases to provide the required service level or economic usefulness (NIAMM).
Renewal	Expenditure on an existing asset which returns the service potential of the asset or expected useful life of the asset to that which it had originally. *Note 1:* Renewal can include works to replace existing assets or facilities with assets or facilities of equivalent capacity or performance capability. *Note 2:* Expenditure on renewals is funded through the entity's capital budget and such expenditure is recognised in the entity's statement of financial position (NIAMM).
Routine Maintenance	Maintenance carried out during the time that the component is in use. Regular or repeated elementary maintenance activities which usually do not require special qualifications, authorisation(s) or tools.

Term	Definition
	***Note -** Routine maintenance may include for example cleaning, tightening of connections, checking liquid level, lubrication, etc.
Run-to-failure (RTF) maintenance	A maintenance strategy in which assets (components / subcomponents) are used until they break down or require repair or replacement. RTF maintenance is reactive.
Standard of service	The service that a client is entitled to receive. *An example:* comfort cooling from air conditioners in courtrooms will be provided at an acceptable range of 18-24ºC and performance defects will be repaired within 3 hours of notification.
Unplanned Maintenance	Corrective work required in the short term to restore an asset to working condition so that it can continue to deliver the required service or to maintain its level of security and integrity
Useful life	The useful life of an asset is the period over which an asset is expected to be available for use by an entity or the number of production or similar units expected to be obtained from the asset by an entity (GRAP).
User	Refers to a National or Provincial Department that uses or intends to use an immovable asset in support of its service delivery objectives and includes a custodian in relation to an immovable asset that it occupies or intends to occupy, represented by the Minister of such National or Provincial department (GIAMA).

SERVICE DESCRIPTION

PROJECT TITLE:	**MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS**

FA TECHNICAL SPECIFICATION - STEAM GENERATING INSTALLATION

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FA 01 SCOPE

(a) This specification covers the general repair and maintenance of steam generating installations which include the following two types of coal-fired boilers:

(i) Horizontal packaged wetback shell and fire-tube type boilers with chain grate stokers

(b) This specification also covers the repair and maintenance to the following ancillary boiler and boiler house equipment:

(i) Coal handling equipment
(ii) Ash handling equipment
(iii) Grit collectors and chimneys
(iv) Chain grate and underfeed stokers
(v) Induced draught fan and damper controls
(vi) Forced draught fan and damper controls
(vii) Boiler level controls and alarms
(viii) Feed-water pumps
(ix) Hot well tanks
(x) Water treatment plant and equipment
(xi) Coal chutes and hoppers
(xii) Boiler main steam valves, safety valves, non-return valves, blow-down and drain valves
(xiii) Soot blower (if applicable)
(xiv) Refractories
(xv) Instrumentation and controls
(xvi) Electrical control panel
(xvii) Spares and tooling
(xviii) Insulation and cladding
(xix) Ladders and landings.

(c) This specification also addresses the following:

(i) Hydraulic testing and internal and external inspections
(ii) Training and boiler efficiencies
(iii) Operating of boilers
(iv) Coal quality and control.

(d) and This specification shall form an integral part of the repair and maintenance contract document, shall be read in conjunction with the additional and particular specifications compiled as part of this document.

This specification shall act as a guideline to the Particular Specification and, in the event of any discrepancies between the Technical Specification and the Particular Specification, the latter shall take precedence.

The Contractor shall at all times adhere to this specification unless otherwise specified in the Particular Specification.

FA 02 STANDARD SPECIFICATIONS

FA 02.01 GENERAL STANDARD SPECIFICATIONS, REGULATIONS AND CODES

The latest edition, including all amendments up to date of tender, of the following specifications, publications and codes of practice shall be read in conjunction with this specification and shall deemed to form part thereof:

FA 02.01.01 SANS and other specifications and codes

SANS 0400	-	The applications of the building regulations
SANS 0142	-	Code of practice for the wiring of premises
SANS 0140	-	Identification colour marking
SANS 044	-	Parts I to IV: Welding
SANS 460	-	Copper tubes for domestic plumbing
SANS 0103	-	The measurement and rating of environmental noise with respect to annoyance and speech communications.

SANS Specifications listed on page 3 of the DPW specification OWG 371

CKS 332 - Specifications for industrial V-belts

Atmospheric Pollution Prevention Act, No 45 of 1965

BS 2790
BS 1740
BS 21
BS 1640

FA 02.01.02 Department of Public Works specifications

OWG 371	-	Specification of materials and methods to be used
STD.PWD.VII	-	Standard Specification for steam boiler installations (Issue VII 1997)
	-	Standard Specification for electrical installations and equipment pertaining to mechanical installations

FA 02.01.03 Occupational Health and Safety Act of 1993

All regulations and statutory requirements as laid down in the latest edition of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) shall be adhered to.

FA 02.01.04 Manufacturers' specifications, codes of and practice and installation instructions

All equipment and materials shall be installed, serviced and repaired strictly in accordance with the manufacturers' specifications, instructions and codes of practice.

FA 02.01.05 Municipal regulations, laws and by-laws

All municipal regulations, laws, by-laws and special requirements of the Local Authority shall be adhered to unless otherwise specified.

FA 02.01.06 CSIR Publications

Technical Guide K15, CSIR 1970: A guide to water treatment in low-pressure and medium-pressure boilers

FA 03 VARIATIONS AND ADDITIONS TO STANDARD SPECIFICATIONS

The following additional general specifications and requirements shall be read in conjunction with this specification and shall be adhered to unless otherwise specified in the Particular Specification.

FA 03.01 GENERAL REPAIR AND INSTALLATIONS REQUIREMENTS

(a) All materials and equipment supplied and installed shall be of new high quality, design and manufactured to the relevant specifications, suitable for providing efficient, reliable and trouble-free service.

(b) All work shall be executed in a first-class workman-like manner by qualified tradesmen.

(c) All equipment, component parts, fittings and materials supplied and/or installed, shall conform in respect of quality, manufacture, test and performance to the requirements of the applicable current SANS specifications and codes, except where otherwise specified or approved by the Engineer/Departmental Representative in writing.

(d) All materials and workmanship which, in the opinion of the Engineer/Departmental Representative, is inferior to that specified for the work will be condemned. All condemned material and workmanship shall be replaced or rectified as directed and approved by the Engineer/Departmental Representative.

(e) The Contractor shall submit a detailed list of the equipment and material to be used to the Engineer/Departmental Representative for approval before placing orders or commencing installation.

(f) All new equipment, materials and systems shall be installed and positioned such as to not impede on access routes, entrances and other services. The Contractor shall coordinate these items taking other services and equipment into account.

(g) All control equipment and serviceable items shall be installed and positioned such that they will be accessible and maintainable.

(h) The Contractor shall make sure that all safety regulations and measures are applied and enforced during the repair and construction periods to ensure the safety of the public and User Client.

(i) Repair work shall be programmed in accordance with General Decommissioning, Testing and Commissioning Procedures, to ensure the shortest possible down-time of any service and the least inconvenience to the User Client and the public. The Contractor shall make sure that the necessary notifications and notices are timeously put into place for these activities.

FA 04 OPERATING AND MAINTENANCE MANUALS

The Contractor shall be responsible for the compilation of an inventory list and operating and maintenance manuals.

This shall be done in accordance with Operating and Maintenance Manuals.

All information shall be recorded and reproduced in electronic format, as well as three sets of hard copies to be supplied to the Department.

Over and above what is specified in Operating and Maintenance Manuals, the operating and maintenance manual to be compiled shall be structured to include at least the following:

(a) System description

Complete system description and the working of the plant.

(b) Commissioning data

Complete commissioning, test and inspection data of plant.

(c) Operating data

(i) Plant running check list and frequency of servicing required;
(ii) Safety precautions to be implemented;
(iii) Manual and automatic operation;
(iv) Operator's duties (logging requirements);
(v) Lubricating oils and service instructions;
(vi) Pre-start checklist for each system;
(vii) Starting and stopping procedures.

(d) Mechanical equipment

(i) Description of all major items with the make, model number, names, addresses and telephone numbers of the suppliers, manufacturer or their agents;
(ii) Design capacities of all equipment, including selection parameters, selection curves, capacity tables, etc;
(iii) Manufacturers' brochures and pamphlets;
(iv) Schedule of spares with part numbers recommended to be held as stock.

(e) Maintenance instructions

(i) Schedule of maintenance particulars, frequency of services and replacements;
(ii) Trouble-shooting guide;
(iii) Part number of all replacement items and spares;
(iv) Capacity curves of pumps, fans and compressors;
(v) Serial numbers of all items of equipment.

(f) Electrical equipment

(i) Schedule of equipment, indicating manufacturer, type, model number, capacity and addresses and telephone numbers of suppliers;
(ii) Maintenance instructions;
(iii) Manufacturers' brochures and pamphlets;
(iv) Complete as-built circuit diagrams and diagrammatic representation of interconnections of all electrical equipment.

(g) Instrumentation and control

(i) Description of each control system;
(ii) Schedule of control equipment indicating manufacturer, type, model number, capacity and addresses and telephone numbers of suppliers;
(iii) Maintenance instructions;
(iv) Manufacturer's brochures and pamphlets.

(h) Drawings

(i) Paper prints of all as-built mechanical and electrical drawings;
(ii) Wiring diagrams framed behind glass shall be mounted adjacent to each relevant control panel.

FA 05 **LOGGING AND RECORDING PROCEDURES**

The Contractor shall under this repair and maintenance contract institute a logging and recording system as part of his maintenance control plan as defined in General and Maintenance. This shall consist of a log and record book which shall be utilised to log and record all operations, faults, system checks, breakdowns, maintenance visits, inspections, coal delivery, chemical and salt deliveries, ash removal, readings, etc.

The logbook shall be kept in a safe place inside the boiler house and shall only be utilised by the boiler house supervisor, the Contractor and the Engineer/Departmental Representative. Copies of the monthly entries and recordings into the logbook shall be submitted by the Contractor together with his monthly report to the Engineer/Departmental Representative.

The logbook shall be structured to include at least the following:

(a) Daily inspection and maintenance actions;
(b) Monthly inspection and maintenance actions;
(c) Three-monthly inspection and maintenance actions;
(d) Six-monthly inspection and maintenance actions;
(e) Annual inspection and maintenance actions;
(f) Breakdown reports;
(g) Daily boiler plant operating conditions, observations, recordings and measurements (including CO_2 measurement, steam consumption if available, steam pressure, water meter readings, etc);
(h) Statutory inspection and test comments and reports;
(i) Coal delivery report, stating the date, quality, quantity and delivery vehicle registration number;
(j) Chemical and salt delivery reports, stating the date, quantity, description and vehicle registration number;
(k) Ash removal report, stating the date and vehicle registration number.

The Contractor shall also institute an attendance register which shall be kept in a safe place inside the boiler house. This register shall be completed by all persons visiting the boiler house, including:

(a) Boiler house operators, cleaning staff and supervisor
(b) Contractor and maintenance personnel
(c) Inspectors
(d) Department personnel
(e) Engineer.

The register shall state the date, time-in, time-out, name, company and reason for visit.

A copy of the register shall be submitted by the Contractor together with his monthly report.

FA 06 TESTS AND INSPECTIONS ON COMPLETION OF REPAIR WORK

Except where otherwise provided in the Contract, the Contractor shall provide all labour, materials, power, fuel, accessories and properly calibrated and certified instruments necessary for carrying out such tests. The Contractor shall make arrangements for such tests and shall give at least 72 hours written notice to the Engineer, before commencing the test.

In the event of the plant or installation not passing the test, the Department shall be at liberty to deduct from the Contract amount all reasonable expenses incurred by the Employer or the Engineer/Departmental Representative attending the repeated test.

Whenever any installation or equipment is operated for testing or adjusting as provided for above, the Contractor shall operate the entire system for as long a period as may be required to prove satisfactory performance at all times in the occupied space served by that system for up to twenty-four hours a day continuously until the system is handed over.

The Contractor shall provide all labour and supervision required for such operation and the Department may assign operating personnel as observers, but such observation time shall not be counted as instruction time.

After completing the installation or system, all equipment shall be tested, adjusted and readjusted until they operate to the satisfaction and approval of the Engineer/Departmental Representative.

The Contractor shall submit certificates of tests carried out to prove the efficiency of all equipment, as well as certificates to be obtained from all relevant authorities and statutory bodies, etc.

FA 07 QUALITY ASSURANCE SYSTEM

The Contractor shall institute an approved quality assurance (QA) system which shall be submitted to the Engineer for approval. The records of this QA system shall be kept throughout the duration of the Contract and submitted to the Engineer at regular intervals as required.

FA 08 COMMISSIONING AND RE-COMMISSIONING OF PLANT AND INSTALLATION

FA 08.01 GENERAL

On completion of the repair work and/or the installation of new systems the plant and equipment shall be put into operation after all tests and adjustments have been carried out to the satisfaction of the Engineer/Departmental Representative. Where new plant is installed, the Contractor shall run and operate the system for a period of time as specified by the Engineer/Departmental Representative and train the staff of the User Client to operate and maintain the system.

Logging of the operation of the installations shall commence immediately upon startup.

The Contractor shall submit a full commissioning report.

FA 08.02 RE-COMMISSIONING OF BOILERS AND ANCILLARY EQUIPMENT

On completion of the statutory inspections and tests or major boiler repairs the Contractor shall re-commission the boiler and its ancillary equipment. This operation shall be done strictly in accordance with the manufacturer's specification and shall be witnessed by the Engineer. This shall include but not be limited to the following:

(a) All required pre-commissioning mechanical checks:

(i) Check boiler shell waterside to ensure that it is clean of all residue and foreign matter.
(ii) Check that all fittings, hand holes, manholes, blow-down valves, pipe connections, etc, are properly secured and installed in accordance with the manufacturer's specification.
(iii) Clean out feed pump strainers.
(iv) Check that all joint seals are replaced with new and properly installed.
(v) Check boiler shell gas side to ensure that it is clean of any dust, slag, ash, loose refractory waste material, etc.
(vi) Check and inspect all refractory work for compliance with manufacturer's specification.
(vii) Check that all tube holes has been brushed and free of any foreign matter.
(viii) Check that all moving components are free to move and that they are securely installed.
(ix) Check all expansion joints and seals. Reinstall all covers and doors and check that they are properly secured.
(x) Check that the stoker is properly installed and that all components are installed in accordance with manufacturer's specification. These checks shall include alignment, tensioning, movement of grate without obstruction, seals, movement of dampers, guillotine door, grate links, set points, secureness of all equipment and components.
(xi) Check for the correct installation and operation of the soot blowers.
(xii) Check and record that all lubrication to equipment and components have been done in accordance with manufacturer's specification.
(xiii) Check that the FD and ID fans have been correctly installed and reassembled in accordance with manufacturer's specification.
(xiv) Check and clean grit collector and ensure that grit discharge port seals are in place and seal properly
(xv) Check that chimneys are clean and securely supported and fixed.
(xvi) Check and ensure that all valves and safety valves are correctly installed and in the correct operating position, safety valves to be set in accordance with the required blow-off pressure for this installation.
(xvii) Check and clean out hot well tank and flush out water supply to boilers.

(b) All required pre-commissioning electrical checks

(i) Check all wiring connections for tightness and repair any hot connections.
(ii) Check that all electrical equipment have been properly reconnected in accordance with the manufacturer's specification.
(iii) Perform and record all required electrical insulation tests on equipment.
(iv) Check and test all controls with main circuits isolated.
(v) Check all motor-driven equipment for correct rotational directions.
(vi) Check and test the operation of all indication and warning lights.
(vii) Check, set, record and readjust all equipment control and set points in accordance with manufacturer's specification.
(viii) Run all motor-driven equipment for a period to ensure free movement and correct operation, feed pumps only to be operated for a short interval to check rotation.

(c) Commissioning of the boiler

On completion of the pre-commissioning checks the Contractor shall proceed with the commissioning of the boiler. This shall be done strictly in accordance with the manufacturer's specification and shall include but not be limited to the following:

(i) Fill boiler with feed water from the hot well tank to the prescribed level in the manner as described by the manufacturer.
(ii) During this process all level and warning system checks shall be performed on the water level control system.
(iii) The feed pump's operation must be tested and indication lights checked.
(iv) Check, test and set up water softener and chemical dosing equipment to the required water quality for the boiler.
(v) Set and adjust all stoker controls in accordance with the manufacturer's specification.
(vi) Set and adjust ID and FD damper controls in accordance with the manufacturer's specification.
(vii) Set and adjust combustion controls in accordance with the manufacturers specification.
(viii) Set and test steam pressure detector to the correct boiler operating pressure.
(ix) Check the operation of the guillotine door and adjust to the required starting coal bed depth.
(x) Check the coal hopper and coal level controls. Check and ensure that the coal conveying system operates and that the coal is at the correct level inside the hopper.
(xi) Check and test the draught gauges for the correct operation.
(xii) Proceed with lighting the fire.
(xiii) Bring boiler up to steam, following the correct procedures as described by the manufacturer and ensuring correct combustion, coal bed depth, ignition line, etc, and that all controls are functioning properly and are set in the correct position.
(xiv) When operating pressure has been reached the steam valve to the system has to be cracked open until full supply pressure to system is achieved, on which the valve can be fully opened.
(xv) During the load conditions the boiler has to be readjusted and finally switched to automatic operation on completion of all automatic control functions for correct operation.

The Contractor shall visit, inspect, test and readjust the boiler over the 30-day period following the re-commissioning to ensure the correct functioning of the boiler and its associated equipment.

FA 09 **GUARANTEE OF INSTALLATION AND EQUIPMENT**

The Contractor shall provide guarantees obtained from the manufacturer(s) and/or supplier(s) to the effect that each piece of new equipment, supplied and installed under the repair work, complies with the required performance and will function as part of the complete system.

All new equipment, including, the complete new installations and the systems as a whole shall be guaranteed for a period of 12 (twelve) months commencing upon day of issue of certificate of completion for repair work of the installation.

FA 10 **MAINTENANCE TOOLS AND SPARES**

Each boiler house shall be equipped with the necessary maintenance tools and spares required by the specific type of boilers and installation for the daily operation and maintenance of the plant. At the start of the repair and maintenance contract the Contractor shall in the presence of the User Client make an inventory of the existing tools and spares, and any shortfall or damaged tools and spares shall be

replaced with new. All replacement tools and spares shall be as specified by the boiler and equipment manufacturers. These tools and spares shall be kept in a lockable room or cabinet of which the boiler house supervisor and the Contractor shall carry keys. The Contractor shall on a monthly basis take stock of these items in the presence of the boiler house supervisor and record and report to the Engineer/Departmental Representative. Any shortfall shall be replaced by the Contractor as part of his responsibility under this Contract.

The tools and spares to be carried shall include but not be limited to at least the following:

(a) Tools

Manhole spanner
Hand hole spanner
Double-ended spanners
Tube cleaning rods
Correct size tube cleaning brushes
Correct size tube de-scaling tools
Tube cleaning machine where required
CO2 analyser
Grate crank handle
Ash shovel
Grease gun
Driving drift
Shear pins
All other necessary tools for the type of installation

(b) Spares

Manhole and hand hole joints
Replacement gauge glasses and accessories
Replacement sight glasses
Replacement belt drives
Grate links and rods
Any other spares that may be required for the specific installation and/or due to the remoteness of the installation.

FA 11 COAL DELIVERY RECORDING AND CONTROL

As part of this repair and maintenance contract, the Contractor shall, in collaboration with the User Client and coal provider, institute a quality and delivery control plan for each boiler house. This control plan shall consist of a set of records to be completed with each coal delivery, stating the following:

(a) Delivery note number
(b) Date of coal delivery
(c) Quantity of coal delivered
(d) Type of coal delivered
(e) Coal sample identification number
(f) Contractor's signature on acceptance of information and coal sample
(g) Coal deliverer's signature
(h) Boiler house supervisor's signature
(i) Comments by any party.

The type of coal to be accepted shall comply with the specification to be agreed between the User Client and the Engineer/Departmental Representative.

The Contractor shall be responsible for taking a sample of each batch of delivered coal and sending it to an approved laboratory for confirmation that the coal samples conform to the agreed type of coal for the specific installation. The result of the tested sample shall contain the following:

(a) Various coal sampled mesh sizes
(b) Calorific value
(c) Moisture content
(d) Ash content
(e) Ash fusion temperature
(f) Volatile content.

The results of these tests shall be submitted to the Engineer/Departmental Representative.

The recorded information shall also be utilised to determine the boiler efficiency, together with other relevant information to be gathered.

The Contractor shall, in collaboration with the Engineer/Departmental Representative, institute the necessary measures to ensure the safe keeping and security of the coal storage.

All the relevant recorded information shall be submitted monthly together with Contractor's maintenance schedules to the Engineer/Departmental Representative.

FA 12 **ASH REMOVAL RECORDING AND CONTROL**

As part of this repair and maintenance contract, the Contractor shall, in collaboration with the User Client, ash removal company and the Engineer/Departmental Representative institute an ash removal control plan for each boiler house. This control plan shall consist of a set of records to be completed with each removal taking place and shall include the following:

(a) Date of contact of removal company for removal of ash;
(b) Date of actual ash removal;
(c) Approximate quantity of ash removed;
(d) Ash destination address, to be completed by removal company;
(e) Random samples of ash taken and recorded by Contractor;
(f) Contractor's signature on acceptance of information;
(g) Removal company signature;
(h) Boiler house supervisor's acceptance signature;
(i) Comments by any party.

The Contractor shall at random take samples of the ash and send it to an approved laboratory for analysis in order to determine the amount of un-burnt carbon. The un-burnt carbon in the ash should normally not be more than 20 % per volume.

The Contractor shall, in collaboration with the User Client and the Engineer/Departmental Representative, also institute a control plan to ensure safe handling and storing of the ash.

All the relevant recorded information shall be submitted, together with Contractor's maintenance schedules, monthly to the Engineer/Departmental Representative.

FA 13 **WATER TREATMENT CHEMICAL DELIVERIES AND CONTROL**

As part of this repair and maintenance contract, the Contractor shall, in collaboration with the User Client and chemical supplier, institute a quality and delivery control plan for each boiler house. The control plan shall consist of a set of records to be kept up to date with each delivery of chemicals, stating the following:

(a) Delivery note number
(b) Date of delivery
(c) Type and quantity of salts and chemicals delivered
(d) Make-up water volume, recorded regularly
(e) Feed-water volume, recorded regularly

(f) Random sampled feed-water recorded by chemical supplier
(g) Contractor's signature on acceptance of information
(h) Chemical supplier deliverer's signature
(i) Boiler house supervisor's signature
(j) Comments by any party.

The type of salts and chemicals to be accepted as in compliance with the specification shall be agreed between the User Client and the Engineer/Departmental Representative, and shall be applicable to the type of boilers employed, as well as the make-up water supplied to the feed tank.

The Contractor shall ensure, together with the chemical supplier, that at regular intervals the boiler feed-water be sampled and analysed, feed-water treatment equipment be adjusted to ensure the correct dosing percentages and treatment for the specific installation.

The Contractor shall, in collaboration with the User Client and Engineer/Departmental Representative, also institute a control plan to ensure safe handling and storing of the chemicals.

All the relevant recorded information shall be submitted, together with Contractor's maintenance schedules, monthly to the Engineer/Departmental Representative.

Where specified in the Particular Specification and/or Schedule of Quantities the Contractor shall be responsible for the supply and delivery to site of the chemicals and salts for the 36-month maintenance contract period. The Contractor shall appoint an approved chemical supplier for the delivery of these chemicals and salts. The Engineer/Departmental Representative reserves the right to send samples of these chemicals and feed water for analysis by an independent laboratory for compliance checks.

FA 14 **BOILER EFFICIENCY CONTROL**

As part of this repair and maintenance contract, the Contractor shall, in collaboration with the boiler house supervisor, institute a boiler efficiency control plan for each boiler house. The control plan shall consist of a set of records to be completed regularly by monitoring the following:

(a) Date and time entries recorded
(b) Make-up water meter reading
(c) Feed-water to boiler meter reading
(d) Steam pressure gauge reading
(e) CO2 percentage reading of exhaust gases
(f) Final exhaust gas temperature reading
(g) Furnace pressure gauge reading
(h) Steam flow meter reading if installed
(i) Quantity of coal consumed.

The Contractor shall, in collaboration with the boiler house supervisor, ensure that these records are taken at predetermined intervals to ensure the efficient operation of the plant. Together with the boiler manufacturer's information and the above-mentioned recorded information, the Contractor shall issue a calculation indicating the approximate plant efficiency.

All the relevant recorded information shall be submitted, together with the Contractor's maintenance schedules, monthly to the Engineer. It shall be the responsibility of the Contractor to ensure that the boiler can operate at the design efficiency in all respects.

FA 15 REPAIR WORK TO INSTALLATIONS, SYSTEMS AND EQUIPMENT

FA 15.01 GENERAL

During the repair and maintenance contract all the systems, installations and equipment shall be repaired as specified in the Particular Specification. This repair work shall include but no be limited to the specified Particular Specification details.

All repair work shall be executed using approved materials and equipment suitable to the systems and/or installations they serve. The said repair work shall be executed in accordance with the relevant codes of practice, standards, regulations, municipal laws and by-laws, manufacturer's specifications and codes of practice and all additional and particular specifications included in this document.

The repair work items are listed in tabular form in the Particular Specification with all relevant details, such as capacity, size, manufacturer, model number, etc.

All repair work shall be executed within the period specified in the Appendix to Tender. All new equipment, materials and systems shall be furnished with a written guarantee of a defects liability period of 12 months commencing on the date of issue of a certificate of completion of the repair work. These guarantees shall be furnished in favour of the Department of Public Works.

Repair work items for the steam generating installations are categorised under the following headings:

(a) Statuary inspections and tests

- (i) Internal and external inspection
- (ii) Hydraulic pressure test

(b) Coal-fired boiler

- (i) Boiler shell water side
- (ii) Boiler shell gas side
- (iii) Integral piping
- (iv) Boiler valves and mountings
- (v) Refractories and brickwork
- (vi) Soot blowers
- (vii) Lagging and cladding

(c) Feed-water equipment and controls

- (i) Feed-water tanks
- (ii) Feed-water pumps
- (iii) Water level equipment and controls

(d) Combustion and draught equipment

- (i) Stoker and stoker controls
- (ii) Fans and damper controls
- (iii) Combustion controls
- (iv) Chimneys
- (v) Ducting

(e) Coal handling and conveying equipment

- (i) Coal bunker and gratings

(ii) Coal conveying equipment

(f) Ash and grit removal equipment

(i) Grit collectors
(ii) Ash conveying equipment
(iii) Ash and grit trolleys
(iv) Ash storage and handling

(g) Electrical installation, wiring and control panels

(i) Instrumentation and controls
(ii) General electrical power and lighting installation
(iii) Electrical control panels

(h) Water treatment equipment

(i) Water softener
(ii) Chemical dosing equipment

(i) Boiler house ancillary equipment

(i) Blow-down sump
(ii) Ladders and galleries
(iii) Painting of equipment, plant and building

FA 15.02 **STATUTORY INSPECTIONS AND TESTS**

The Contractor shall at the commencement of the repair and maintenance contract arrange for the compulsory statutory inspections and tests on each of the boilers in his contract in accordance with the Occupational Health and Safety Act, 1993. This shall include an internal and external inspection and hydraulic test of the boilers. These inspections and tests shall be performed and certified by an approved inspection authority. The Contractor shall be responsible for all the preparation work and ancillary work as specified. Only one boiler at a time shall be taken out of commission for these purposes in accordance with General Decommissioning, Testing and Commissioning Procedures.

During this period the Contractor shall inspect, service, repair, replace and overhaul all ancillary boiler equipment associated with these boilers. These actions shall be planned in such a manner as to minimise the down-time of the boiler, as well as without influencing the operation of the rest of the plant. All defective equipment shall be replaced and repair work required to the boilers shall be done.

All inspections and findings shall immediately be reported to the Engineer/Departmental Representative.

FA 15.02.01 Hydraulic pressure testing and internal and external inspections

A hydraulic pressure test and internal and external inspection shall be performed on each boiler in accordance with the requirements of The Occupational Health and Safety Act, No 85 of 1993 as amended and shall be witnessed and certified by an approved inspection authority.

The inspections and hydraulic test shall be performed every 24 months as prescribed in the Occupational Health and Safety Act of 1993.

In accordance with the regulations the Contractor shall be responsible for providing the necessary tools, workmen, lights, equipment and apparatus which may be required by the Inspector for the purposes of the inspection and tests, and shall include the following equipment and actions:

(a) All equipment, tools, rigging and other facilities necessary for conducting the test and inspections shall be provided.
(b) The boiler test pump and gauges calibration certificates shall be made available prior to commencing the hydraulic testing.
(c) The hydraulic test medium shall be clean cold water. The required test pressure shall be as stipulated in the Occupational Health and Safety Act, No 85 of 1993, as amended.
(d) The maximum rating of any hand-held light source shall be 50 volt.
(e) The hydraulic test date shall be confirmed/negotiated with the approved inspection authority.
(f) All notices as required by the regulations shall be provided and put into place.
(g) The up to date boiler log book and Government boiler register shall be made available to the Inspector.

FA 15.02.02 Boiler preparation for statutory inspection and testing

The following preparation work shall be carried out, prior to the external and internal inspection and hydraulic test, by the Contractor:

a) All electrical supplies and controls to the boiler shall be isolated prior to starting of testing and inspection procedures.
b) The boiler shall be emptied and cleaned. All scale deposits are to be removed from internal shell, tubes and water spaces. Methods to be used shall be approved by the Engineer/Departmental Representative and shall carry the approval of the boiler manufacturer.
c) Dismantle and remove boiler lagging and cladding where necessary and where directed by the Engineer/Departmental Representative.
d) Remove stoker from boiler
e) Remove required refractory brickwork from boiler before inspection.
f) All boiler fittings shall be stripped down, de-scaled, machined, re-seated, overhauled and tested to manufacturer's specification by approved engineering works. These are to be certified as complying with the manufacturer's specification. Each boiler fitting shall be hydraulically tested and witnessed as such by the Engineer/Departmental Representative.
g) Any boiler fittings found to be beyond repair shall be replaced with new on approval of the Engineer/Departmental Representative.
h) Remove all manholes, hand hole covers, mud holes and wash-out plugs.
i) Remove boiler fusible plug and replace with new.
j) Clean out and wire brush stacks, smoke boxes, flues and plates.
k) Smoke boxes, stack uptake and domes to be painted in accordance with manufacturer's specification.
l) Tubes to be cleaned, inspected and replaced if necessary.
m) Open and clean out all blow-down and other trenches and replace damaged and leaking pipework.
n) Chemical cleaning of the tubes shall not be allowed without the consent of the Engineer/Departmental Representative.
o) Internal parts of the boiler shall only be painted on completion of the successful boiler inspection by the Inspector.

FA 15.02.03 Internal and external inspection

On completion of all the required preparation work the Contractor shall notify the Engineer/Departmental Representative and shall arrange for the external and internal inspection of the boiler to take place by the approved inspection authority. The inspection shall be certified with relevant comments by the inspection authority.

FA 15.02.04 The hydraulic pressure test

On completion of the necessary preparation work and internal and external inspection and relevant repair work, the Contractor shall prepare for the hydraulic test to be executed, which shall include the following:

(a) Replace all manholes, hand hole covers, mud holes and wash-out plugs. All joints are to be renewed.
(b) Replace boiler refractory brickwork and refractories prior to hydraulic pressure.
(c) Properly clean and expose all boiler seams, stay heads and mountings.
(d) All safety valves, steam valves and other connections to the boiler shall be blanked off prior to starting of testing procedures.
(e) Ensure that all water gauge cocks are in the off-position and that all gauge glass protectors are in place.
(f) The boiler shall be filled with clean water up to the highest opening of the boiler shell.
(g) The system shall be put under the specified hydraulic pressure, with the boiler test pump, at least 15 minutes prior to the witnessing of the hydraulic test pressure.
(h) The pressure shall be maintained for a minimum period as specified by the Inspector.
(i) On completion of the hydraulic test, all boiler controls shall be tested.
(j) Any leaks resulting from the hydraulic test shall be repaired and witnessed by the Engineer/Departmental Representative. Any repair work shall lead to a new hydraulic test to be witnessed by the Inspector.
(k) The witnessed hydraulic test shall be signed off by the approved inspection authority.
(l) After repair of defects and reinstallation of all equipment, components, lagging, fittings, etc, and approval and certification of all inspections and tests the Contractor shall put the boiler back into operation.

The re-commissioning shall be done strictly in accordance with the boiler manufacturer's specification and shall be witnessed by the Engineer/Departmental Representative.

FA 15.03 BOILER PLANT EQUIPMENT AND INSTALLATION

Any repair work which may be required on the boiler plant installation shall be executed with approved materials, equipment, methods and tooling suitable for the specific application. The said repair work shall be executed in accordance with the relevant codes of practice, standards, regulations, statutory regulations, manufacturers' specifications and codes of practice and as specified in all additional and particular specifications included in this document. During the statutory inspections and tests the following items are to be repaired and serviced as required by the Inspection Authority, boiler manufacturer and this specification.

FA 15.03.01 Coal-fired boilers

(a) Boiler shell water side

Check and inspect boiler shell for any signs of corrosion, leaks, damages and ensure that the inside is clear of all foreign matter. All scale deposits are to be removed by means of approved method of the boiler manufacturer. If any signs of damage and/or corrosion are observed, the Contractor shall notify the Engineer. Together with the Inspection Authority a decision shall be taken on the approved type of repairs to be implemented, if repair work is possible. All repair work to the boiler shell shall be done in accordance with the boiler manufacturer's specification, by qualified personnel, and shall be approved and witnessed as complying by the Inspection Authority. Check and inspect all internal pipe connections for correct fitting and soundness, ensure that all openings are clear of any foreign matter. Replace all hand hole, manhole and mud hole covers using new joint seals and rings. All existing paint work to boiler shell shall be properly prepared and repainted in accordance with the manufacturer's specification.

(b) Boiler shell gas side

Remove all smoke box covers and doors. Clear and clean out all dust, slag, ash and any foreign matter. Brush and clean out furnace tubes ensuring that no foreign matter is left behind. Boiler furnace tubes are to be inspected by the Inspection Authority. If any tubes are found in need of replacement these shall be done in accordance with the boiler manufacturer's specification, by qualified personnel, and shall be approved and witnessed by the Inspection Authority. All existing paintwork to boiler shell shall be properly prepared and repainted in accordance with the manufacturer's specification. Replace all smoke box covers and doors and ensure that they are all properly secured.

(c) Integral pipe work

All integral pipe work to the boiler to be inspected, cleaned and checked. The Contractor shall ensure that any defective piping, fittings, etc, be replaced and/or repaired in accordance with the manufacturer's specification.

(d) Boiler valves and mountings

All boiler valves including safety, blow-down, steam stop, air release, feed-water check, sequencing, drain valves, etc, are to be stripped, de-scaled, inspected, and overhauled. Where valves are found to be beyond repair these shall be replaced with new ones on approval of the Engineer/Departmental Representative.

Overhauling of valves shall include repacking of gland packing’s, machining and reseating of valve seats and valves. All boiler valves and fittings shall be inspected by the Inspection Authority prior to reassembling. All valves shall be hydraulically pressure tested, prior to refitting, and witnessed by the Inspection Authority.

The Contractor shall ensure that certificates of compliance to the manufacturer's specification are obtained and issued to the Engineer/Departmental Representative, on all overhauled and refurbished valves, prior to refitting to boilers.

All overhauling and refurbishing work to boiler valves shall be done in accordance with the manufacturer's specification.

All boiler valve mountings on removed boiler valves are to be inspected and replaced with approved new mountings in accordance with the manufacturer's specification, which shall include washers, bolts, nuts, studs, etc.

Safety valves are to be adjusted and tested to the correct blow-off pressure.

(e) Refractories and brickwork

All removed refractories and brickwork during the internal and external inspection are to be replaced with new in accordance with the manufacturer's specification. All other refractories and brickwork not removed shall be inspected and repaired where necessary.

All recasting and replacement brickwork and refractories shall be done with approved materials, tooling, moulds, etc, in accordance with the manufacturer's specification.

On completion of the above work the Inspection Authority shall inspect and certify the work.

(f) Soot blowers

All soot blowers are to be removed, inspected, cleaned, overhauled and refurbished in accordance with the manufacturer's specification. On completion prior to refitting the soot blowers shall be tested in the presence of the Inspection Authority.

(g) Lagging and cladding

Boiler lagging and cladding are to be inspected, repaired and/or replaced where necessary.

On completion of statutory inspections and testing the removed lagging and cladding are to be replaced in an approved manner, replacing damaged sections of cladding and lagging, fixing screws to be properly secured and missing screws replaced. On completion cladding has to be repainted if necessary.

Where lagging and cladding are damaged beyond repair it shall be replaced with approved type as supplied by the manufacturer of the boiler.

FA 15.03.02 <u>Feed-water equipment and controls</u>

(a) Feed-water tanks

The feed-water tank has to be emptied, inspected, cleaned, repaired and refilled and put back into operation. Where only a single feed-water tank exists, this operation shall be carefully planned, as a complete plant shut-down will have to be arranged. This shall be done in close collaboration with the User Client and Engineer, ensuring the minimum shut-down period. Where dual feed-water tanks are present, only one tank at a time shall be taken out of operation for the necessary repair and service work.

The repair work to these tanks shall include at least the following:

(i) Inspect and test the feed-water tank and associated equipment and pipework for any leakages.

(ii) Isolate supply water, condensate inlets and feed-water outlet to tank.
(iii) Empty tank by means of draining it through the drain valves.
(iv) Remove and clean tank of all mud, sediment, scale deposits and foreign matter by means of approved methods.
(v) Carry out all necessary repair work to the tanks and associated equipment and pipework.
(vi) Inspect tank lining for any defects and corrosion and if necessary carry out any required repair actions.
(vii) Inspect, test, repair and replace if necessary the filling mechanism.
(viii) Inspect tank stand for any defects and damages, and carry out the necessary repair work if any.
(ix) Inspect lagging and cladding to feed-water tanks and carry out the necessary repair or/and replacement work.
(x) Refill feed-water tank with clean water and open feed-water supplies to boilers.
(xi) Inspect painting to tank and tank stand and if necessary prepare and repaint.

(b) Feed-water pumps

The feed-water pumps to the boilers are to be inspected, tested, serviced, repaired together with their associated equipment and pipe work. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the feed-water pumps and equipment shall include at least the following:

(i) Inspect and test the feed-water pumps for correct operation.
(ii) Replace gland packings, seals and gaskets.
(iii) Inspect and test for any bearing noise and replace if necessary.
(iv) Clean out pump strainers, check non-return valves, valves, etc.
(v) Test pump motor windings for balance phases, insulation test and check wiring.
(vi) Inspect pump mountings and repair if necessary.

(c) Water level equipment and controls

The boiler water level and feed pump controls are to be inspected, tested, adjusted, serviced and repaired in accordance with the manufacturer's specification. This shall include at least the following:

(i) Float type water level controls are to be dismantled, stripped, de-scaled, cleaned, serviced, repaired and where necessary replaced.
(ii) All water level controls are to be reassembled, refitted, tested and adjusted in accordance with the manufacturer's specification. The adjustments shall be in accordance with the manufacturer's specification for starting and stopping the pumps.
(iii) Low water level alarms shall be tested, inspected and adjusted to the correct level ensuring that the alarms are sound and indicated.
(iv) Where modulating valves are fitted these shall be inspected, tested, serviced and repaired in accordance with the manufacturer's specification. The pressure relief valve on pump discharge shall be cleaned, serviced, overhauled and readjusted to the correct blow-off level.
(v) Replace water level gauge glasses and gaskets.

FA 15.03.03 Combustion and water treatment

(a) Stoker and stoker controls

The stoker and stoker controls are to be inspected, tested, serviced, repaired together with their associated equipment. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

(i) The repair work to the stoker, stoker controls and equipment shall include at least the following:
(ii) Remove stoker from boiler furnace during the statutory inspections.
(iii) Inspect and replace burnt or/and damaged chain grate links and rods where necessary.
(iv) Replace chain grate bearings.
(v) Inspect sprockets and replace if required.
(vi) Inspect shafts, rear roller and re-machine or replace if necessary.
(vii) Inspect stoker chassis for straightness, alignment and possible damages, and repair if necessary.
(viii) Inspect undergrate damper guide vanes and ensure that they are clean of any dust, slag and foreign matter.
(ix) Renew and recast all refractories and brickwork in accordance with the manufacturer's specification.
(x) Inspect main worm wheel for any defects and replace if necessary.
(xi) Replace all joint seals with new.
(xii) Reassemble stoker and stoker components.
(xiii) Replace guillotine door support cables.
(xiv) Inspect, service and overhaul stoker drive and gearbox in accordance with the manufacturer's specification.
(xv) Replace shearpin.
(xvi) Adjust and readjust grate tension.
(xvii) Check and adjust fuel bed depth indicator.
(xviii) Lubricate all required lubrication points as directed by the manufacturer.
(xix) Mount FD fan and controls onto stoker.
(xx) Reinstall stoker into boiler furnace in accordance with manufacturer's specification.

(b) Fans and damper controls

The FD and ID fans and associated dampers and damper controls are to be dismantled, stripped, inspected, serviced, repaired and, where necessary, components have to be replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the FD and ID Fans, dampers and damper controls shall include at least the following:

(i) Dismantle and strip down above equipment during the statutory inspections.
(ii) Inspect fan impeller blades, clearances, etc, for correct curvature and clearance adjustment.
(iii) Replace V-belts.
(iv) Replace FD and ID fan bearings with new.
(v) Inspect fan casings and repair if required.
(vi) Clean casing and repaint.
(vii) Inspect damper controls and dampers for free movement, fan impeller clearance adjustment, linkage adjustments, control movements and settings. Repair, service and replace any defective equipment.

(viii) Test fans and pulling motor windings for balance phases, insulation test and check wiring.
(xi) Lubricate all required lubrication points and replace oils as directed by the manufacturer.
(x) Inspect fan mountings and repair if necessary.
(xi) Reassemble and refit fans, damper controls and dampers.

(c) Combustion controls

The combustion control equipment shall be dismantled, stripped, inspected, serviced, repaired and, where necessary, components be replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the combustion control equipment shall include at least the following:

(i) Dismantle and strip down above equipment during the statutory inspections.
(ii) Inspect, service, adjust and repair combustion control equipment.
(iii) Inspect, service, repair and adjust chain drives and linkages.
(iv) Test motor windings for balance phases, insulation and check wiring.
(v) Lubricate all required lubrication points and replace oils as directed by the manufacturer.
(vi) Inspect mountings and repair if necessary.

(d) Chimneys

The chimney stacks shall be inspected and repaired where required. This shall include at least the following:

For self-supporting stacks check torque tension of holding-down bolts, check access door and reseal, inspect chimney stack for any defects and repair if required, clean out the base of the stack, check and repair lagging and cladding if fitted, prepare and repaint where required.

For guyed type chimneys inspect and replace, if necessary, guy cables and securing points, re-tension guy cables, check and repair lagging and cladding if fitted, prepare and repaint where required.

(e) Ducting

The gas ducting shall be inspected and repaired where necessary. This shall include replacing all joint and expansion seals, cleaning out of ducting of all foreign matter, repairing and/or replacing any defective ducting, prepare and repaint ducting.

FA 15.03.04 <u>Coal handling and conveying equipment</u>

(a) Coal bunker

The coal bunkers or coal storage shall be inspected, cleaned out, and damaged s tructural elements and brickwork be repaired.

For coal bunkers the coal gratings and supports shall be inspected and all defective and/or damaged sections be repaired and/or replaced as might be necessary. Clear the coal storage area of any foreign objects.

(b) Coal conveying equipment

The coal conveying equipment shall be inspected, serviced, tested, repaired and, where necessary, components be replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the coal conveying equipment shall include at least the following:

(i) Test all equipment for correct functioning.
(ii) For en masse conveyors open covers, inspect links, chains and travelling ducting for any defects and/or damages, repair and/or replace components where necessary.
(iii) For screw elevators inspect bushes, screw, casing, etc, for any defects and/or damages, repair and/or replace components where necessary.
(iv) Inspect, service, lubricate and where necessary repair gear boxes and drives.
(v) Test conveying equipment motor windings for balance phases, insulation and check wiring. Where necessary motors shall be reconditioned.
(vi) Inspect, test, service, adjust and where necessary repair and/or replace hopper coal level equipment.
(vii) Inspect, test, service and repair coal conveying electrical control panel ensuring that all controls function properly in accordance with the design.

FA 15.03.05 Ash and grit removal equipment

(a) Grit collectors

The grit collector shall be inspected, serviced, tested, repaired and, where necessary, components be replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the grit collector shall include at least the following:

(i) Inspect grit collector supports and mountings for sturdiness, and repair and/or replace where necessary.
(ii) Clear out grit collector of all grit, dust and foreign matter.
(iii) Inspect all discharge port and other access opening seals and replace with new ones, ensure that grit trolley seals seat tightly onto grit trolley. Check flap operation.
(iv) Prepare and repaint grit collector casing and supports.

(b) Ash conveying equipment

If ash conveying equipment are installed these equipment shall be inspected, serviced, tested, repaired and, where necessary, components be replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the ash conveying equipment shall include at least the following:

(i) Test all equipment for correct functioning.

(ii) For submerged belt ash conveyors drain sump, clean out, inspect belt, roller bearings, frame, etc, any defects and/or damages, repair and/or replace components where necessary.

(iii) For screw ash elevators inspect bushes, screw, casing, etc, for any defects and/or damages, repair and/or replace components where necessary.

(iv) Inspect, service, lubricate and where necessary repair gear boxes and drives.

(v) Test ash conveying equipment motor windings for balance phases, insulation test and check wiring. Where necessary motors shall be reconditioned.

(vi) Inspect, test, service, adjust and where necessary repair and/or replace control equipment.

(vii) Inspect, test, service and repair ash conveying electrical control panel ensuring that all controls function properly in accordance with the design.

(c) Ash and grit trolleys

All ash and grit trolleys are to be inspected, serviced and repaired where necessary.

FA 15.03.06 Electrical installation, wiring and control panels

(a) Instrumentation and controls

All instrumentation and control equipment shall be inspected, tested, repaired, adjusted and where necessary replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the instrumentation and control equipment shall include at least the following:

(i) Test all equipment for correct operation.

(ii) Inspect, test, service, adjust setting and if necessary repair and/or replace steam detector.

(iii) Inspect, recalibrate and if beyond repair replace steam pressure gauge.

(b) General electrical power and lighting installation

The Contractor shall be responsible for the repair and maintenance work of the general power and lighting installation inside the boiler house. All repair work to this installation shall be done in accordance with the Standard Specification for Electrical Installations and Equipment pertaining to Mechanical Services of the Department of Public Works. This work shall include all repair work to the existing power sockets, cabling, wiring, lighting, and distribution boards.

(c) Electrical control panels

All electrical control panels shall be inspected, tested, and repaired, including all equipment inside the control panel. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the electrical control panels shall at least include the following:

(i) Test all control equipment for correct operation.
(ii) Check and test all MCBs, isolators, contactors, overloads, other type of motor drives, pilot lights, control switches, etc, and readjust all set points; where equipment is found to be faulty these shall be replaced with new approved equipment.
(iii) Check all wiring and connections for proper conducting and replace where hot connections are found.
(iv) Clean out panel interior and exterior, inspect panel body, fascias, doors, paintwork, etc, and repair where necessary.

FA 15.03.07 Water treatment equipment

(a) Water softener

The water softener shall be inspected, tested, repaired, adjusted and, where necessary, components be replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the water softener shall at least include the following:

(i) Test all equipment for correct operation.
(ii) Sample of feed-water shall be taken and analyzed to ensure that water softener is adjusted to the correct percentage. The hardness of the water shall be within the boiler manufacturer's specification.
(iii) Check control and mixing equipment and salt container.

(b) Chemical dosing equipment

The chemical dosing units and containers shall be inspected, tested, repaired, adjusted and where necessary, components be replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the chemical dosing units and containers shall include at least the following:

(i) Test all equipment for correct operation.
(ii) Sample of feed-water shall be taken and analysed to ensure that the chemical dosing rate and chemicals conform to the requirements of the boiler manufacturer.
(iii) Check, inspect, service and repair control and dosing pump equipment.
(iv) The above work shall be done in collaboration with the water treatment supplier company.

FA 15.03.08 Boiler house ancillary equipment

(a) Blow-down sump

The blow-down sump shall be emptied, cleaned out, inspected and any repair work to the structure, manhole covers and frames, vent pipes, sparge pipes, etc, to be carried out.

(b) Ladders and galleries

The ladders and galleries inside the plant room shall be inspected and any defects and/or damages repaired. Ladders and galleries shall be prepared and repainted. All mountings and fixing points shall be inspected and repaired if necessary.

(c) Painting of equipment, plant and building

The Contractor shall on completion of the repair work clean and repaint the complete plant room and equipment as specified in accordance with the Department's Specification.

FA 16 MAINTENANCE TO INSTALLATIONS, SYSTEMS AND EQUIPMENT

FA 16.01 GENERAL

Monthly maintenance responsibilities for each installation including all units and components as specified, shall commence with access to the site. A difference shall be made in payment for the maintenance prior to and after practical completion of repair work.

Maintenance responsibilities of the completed installation shall commence upon the issue of a certificate of practical completion for repair work, and shall continue for the remainder of the 36-month contract period.
This part of the Contract shall include:

(a) Routine preventative maintenance;
(b) Corrective maintenance, and
(c) Breakdown maintenance,

as defined in General Maintenance, for the specified installations described under FA 01 of this specification.

The maintenance work to be performed and executed shall be done strictly in accordance with Additional Specification SA: General Maintenance, and as specified in Particular Specification PFA and this specification.

The said maintenance work shall be executed in accordance with the relevant codes of practice, statutory regulations, standards, regulations, municipal laws and by-laws and the manufacturers' specifications and codes of practice.

The maintenance schedules and frequency shall be developed under the maintenance control plan to be instituted by the Contractor, as specified in General Maintenance.

All new equipment, components and materials supplied and installed under the maintenance contract shall be furnished with a prescribed manufacturer's guarantee.

The maintenance work and items are to be categorised for each maintenance activity under the following headings:

(a) Coal-fired boiler
(b) Combustion equipment
(c) Coal handling equipment
(d) Ash handling equipment
(e) Grit collection and draught equipment
(f) Water treatment and feed-water tanks
(g) Steam and condensate installation
(h) Electrical installation and controls.

The Contractor shall be remunerated monthly, based on his performance, for maintaining the complete installation in a perfect functional condition.

FA 16.02 **ROUTINE PREVENTATIVE MAINTENANCE**

This routine maintenance of the installations, systems and equipment shall be done in accordance with General Maintenance and the Particular Specification related to this work.

The routine maintenance work to be performed and executed shall include, but not be limited to the items listed in tables FA 16.02/1, FA 16.02/2, FA 16.02/3, FA 16.02/4, FA 16.02/5 and FA 16.02/6 below under the respective headings.

These actions and findings shall be logged and reported on the relevant approved schedules and reports.

TABLE FA 16.02/1: DAILY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY ACTION
1	Measure CO2 content of exhaust with CO2 analyser.	Boiler house supervisor Check/Record
2	Blow-down gauge glasses.	Boiler house supervisor Check/Record
3	Test level controls for correct functioning.	Boiler house supervisor Check/Record
4	Inspect boiler valves for leakages.	Boiler house supervisor Check/Record
5	Inspect boiler feed-water pumps for leakages, correct functioning and bearing noises.	Boiler house supervisor Check/Record
6	Clean exterior of boiler and keep boiler plant room clean.	Boiler house supervisor Check/Record
	Check stoker grate tension and report to Contractor if need to be adjusted. to adjust tension in accordance with manufacturer's specification, if reported.	Boiler house supervisor and Contractor Check/Record
8	Check stoker grate links and rods for any damages. All damages to be reported to Contractor who shall replace any damaged links or/and rods.	Boiler house supervisor and Contractor Check/Record/Repair
9	Complete log book actions as specified in FA 06, FA 12, FA 13, FA 14 and FA 15. Boiler house supervisor	Boiler house supervisor Check/Record

TABLE FA 16.02/2: WEEKLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY ACTION
1	All as listed under table FA 16.02/1	Boiler house supervisor and Contractor Check/Record/Adjust/Repair
2	Test safety valves as described by the boiler manufacturer.	Contractor Test/Record
3	Check the furnace draught gauge for correct operation in accordance with the manufacturer's specification.	Contractor Check/Record
4	Inspect stoker brickwork and refractories and if found to be damaged it must be repaired.	Contractor Check/Record
5	Lubricate all required lubrication points,	

	including sootblowers, stoker drive shaft bearings, guillotine door and check stoker drive oil level.	Boiler house supervisor and Contractor	Check/Service/Record
6	Visual inspection of all boiler house equipment and installations for any pending defects, faults, etc.	Boiler house supervisor and Contractor	Check/Record
7	Inspect and test all control functions and readjust if necessary.	Contractor	Test/Record/Adjust

TABLE FA 16.02/3: MONTHLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY	ACTION
1	All as listed under tables FA 16.02/1 and FA 16.02/2	Boiler house supervisor and Contractor	Check/Record Adjust/Repair
2	Clean out al strainers.	Contractor	Check/Service/Record
3	Inspect and test sootblowers for correct operation.	Contractor	Check/Record
4	Inspect all V-Belts and replace if necessary.	Contractor	Check/Record/Replace
5	Inspect all brickwork and refractories and repair and/or replace where necessary.	Contractor	Check/Record Repair
6	Inspect all seals and joints for leakages and replace if necessary.	Contractor	Check/Record Replace
7	All grease nipples to be greased with specified grease in accordance with equipment manufacturer's specification.	Contractor	Check/Service/Record
8	Test and analyse water quality, adjust and repair water treatment equipment if necessary and where specified, supply and deliver chemicals and salts.	Contractor and chemical supplier	Test/Record Adjust/Repair
9	Sample and analyse coal quality.	Boiler house supervisor, coal supplier and Contractor	Check/Record/Test
10	Check ash removal implementation and report.	Boiler house supervisor, ash removal company and Contractor	Check/Record
11	Test and record boiler efficiency.	Boiler house supervisor and Contractor	Test/Record
12	Check coal conveying equipment for correct functioning	Contractor	Check/Record/Repair
	and check for any visual faults or defects and repair if necessary.	Contractor	Check/Record
13	Inspect, service, repair and replace where required all electrical equipment and installations.	Contractor	Test/Record Adjust/Repair
14	Inspect, service all steam and condensate piping and equipment.	Contractor	Test/Record Adjust/Repair

TABLE FA 16.02/4: THREE-MONTHLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY	ACTION
1.0	All as listed under tables FA 16.02/1, FA 16.02/2 and FA 16.02/3	Boiler house supervisor and Contractor	Check/Record/Adjust/Repair
2.00	Lubricate ID and FD damper control units.	Contractor	Check/ Record Service

3.00	Replace ID and FD fan bearing grease.	Contractor	Check/ Record Service
4.00	Brush and clean fire tubes and clean flue, back plate, combustion chamber and remove all grit and soot deposits. Inspect and repair where necessary.	Contractor	Check/Record/Service/Repair
5.00	Check boiler water side for scale deposits and clean and de-scale.	Contractor	Check/Record/Service/Repair
6.00	Replace stoker gear box and drive oils.	Contractor	Check/Record Service/Repair
7.00	Check, inspect, service all coal conveying equipment and repair where necessary.	Contractor	Check/Record Service/Repair
8.00	Check, inspect, service and repair if necessary grit collectors and chimney stacks.	Contractor	Check/Record Service/Repair
9.00	Inspect, repair and replace where necessary all lagging and cladding.	Contractor	Check/Record Service/Repair

TABLE FA 16.02/5: SIX-MONTHLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION ACTION	ACTION RESPONSIBILITY
1	All as listed under tables FA 16.02/1, FA 16.02/2 and FA 16.02/3	Boiler house supervisor and Contractor Check/Record/Adjust/Repair
2	Inspect stoker chassis, repair and replace as required.	Contractor Check/Record/Service/Repair
3	Fully test, inspect, service, adjust, repair and replace as required ID and FD dampers.	Contractor Check/Record/Service/Repair
4	Inspect, descale, clean out, repair and replace as required feed-water tanks.	Contractor Check/Record/Service/Repair

TABLE FA 16.02/6: ANNUAL ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION ACTION	ACTION RESPONSIBILITY
1	All as listed under tables FA 16.02/1, FA 16.02/2, FA 16.02/3 and FA 16.02/4	Boiler house supervisor and Contractor Check/Record/Adjust/Repair
2	Annual survey by Occupational, Health and Safety Inspector.	Contractor, Department and Inspector Inspect/Test/Service/Repair
3	Inspect and repaint all equipment and building elements where required.	Contractor Inspect/Test/Service/Repair
4	Inspect, clean, repair blow-down sump.	Contractor Inspect/Test/Service/Repair
5	Remove, strip, service, repair, adjust and repair level controls, alarms and safety equipment.	Contractor Inspect/Test/Service/Repair

FA 16.03 **CORRECTIVE MAINTENANCE**

This corrective maintenance of the installations, systems and equipment shall be done in accordance with General Maintenance and the Particular Specification related to this work.

The Contractor shall inspect and check all equipment, materials, systems and installation for any pending breakdowns, maladjustments or anomalies of equipment.

The Contractor shall report and take actions to correct such shortfall.

FA 16.04 **BREAKDOWN MAINTENANCE**

Breakdown maintenance of the installations, systems and equipment shall be done in accordance with General Maintenance.

All breakdown problems experienced shall be acted upon within the time limitations allowed in the General Maintenance specifications.

All breakdown maintenance shall be done in accordance with the relevant specifications, standards, regulations and codes.

The Contractor shall have access to the necessary spares, equipment and tools for any possible breakdowns.

FB TECHNICAL SPECIFICATION - STEAM DISTRIBUTION INSTALLATIONS

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FB 01 **SCOPE**

This specification covers the general repair and maintenance of steam distribution installations, which include the following:

(a) Steam distribution piping, insulation and associated equipment
(b) Condensate return piping, fittings, insulation and associated equipment
(c) Condensate pumping systems
(d) Steam control equipment
(e) Steam trapping systems.

This specification also addresses the training of User Client and associates, and maintenance staff.

This specification shall form an integral part of the repair and maintenance contract document, and shall be read in conjunction with the additional and particular specifications compiled as part of this document.

This specification shall act as a guideline to the Particular Specification and, in the event of any discrepancies between the Technical Specification and the Particular Specification, the latter shall take precedence.

The Contractor shall at all times adhere to this specification, unless otherwise specified in the Particular Specification.

FB 02 STANDARD SPECIFICATIONS

FB 02.01 GENERAL STANDARD SPECIFICATIONS, REGULATIONS AND CODES

The latest edition, including all amendments up to date of tender, of the following specifications, publications and codes of practice shall be read in conjunction with this specification and shall deemed to form part thereof:

FB 02.01.01 SANS and other specifications and codes

SANS 0400	-	The applications of the building regulations
SANS 0142	-	Code of practice for the wiring of premises
SANS 0140	-	Identification colour marking
SANS 044	-	Parts I to IV: Welding
SANS 460	-	Copper tubes for domestic plumbing
SANS 0103	-	The measurement and rating of environmental noise with respect to annoyance and speech communications

SANS Specifications listed on page 3 of the DPW Specification OWG 371

Atmospheric Pollution Prevention Act, No 45 of 1965

BS 2790
BS 1740
BS 21
BS 1640

FB 02.01.02 Department of Public Works Specifications

OWG 371	-	Specification of materials and methods to be used
STD.PWD.VII	-	Standard specification for steam boiler installations (Issue VII 1997)
	-	Standard Specification for electrical installations and equipment pertaining to mechanical installations (Issue IX December 1998)

FB 02.01.03 Occupational Health and Safety Act of 1993

All regulations and statutory requirements as laid down in the latest edition of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) shall be adhered to.

FB 02.01.04 Manufacturers' specifications, codes of and practice and installation instructions

All equipment and materials shall be installed, serviced and repaired strictly in accordance with the manufacturers' specifications, instructions and codes of practice.

FB 02.01.05 Municipal regulations, laws and by-laws

All municipal regulations, laws, by-laws and special requirements of the Local Authority shall be adhered to unless otherwise specified.

FB 03 VARIATIONS AND ADDITIONS TO STANDARD SPECIFICATIONS

The following additional general specifications and requirements shall be read in conjunction with this specification and shall be adhered to unless otherwise specified in the Particular Specification.

FB 03.01 General repair and installations requirements

All materials and equipment supplied and installed shall be of new high quality, design and manufactured to the relevant specifications, suitable for providing efficient, reliable and trouble-free service.

All work shall be executed in a first-class workman-like manner by qualified tradesmen.

All equipment, component parts, fittings and materials supplied and/or installed, shall conform in respect of quality, manufacture, test and performance to the requirements of the applicable current SANS specifications and codes, except where otherwise specified or approved by the Engineer/Departmental Representative in writing.

All materials and workmanship which, in the opinion of the Engineer/Departmental Representative, is inferior to that specified for the work, will be condemned. All condemned material and workmanship shall be replaced or rectified as directed and approved by the Engineer/Departmental Representative,

The Contractor shall submit a detailed list of the equipment and material to be used to the Engineer/Departmental Representative for approval before placing orders or commencing installation.

All new equipment, materials and systems shall be installed and positioned such as to not impede on access routes, entrances and other services. The Contractor shall coordinate these items taking other services and equipment into account.

All control equipment and serviceable items shall be installed and positioned such that they will be accessible and maintainable.

The Contractor shall make sure that all safety regulations and measures are applied and enforced during the repair and construction periods to ensure the safety of the public and User Client.

Repair work shall be programmed in accordance with General Decommissioning, Testing and Commissioning Procedures, to ensure the shortest possible down-time of any service and the least inconvenience to the User Client and public. The Contractor shall make sure that the necessary notifications and notices are timeously put into place for these activities.

FB 04 OPERATING AND MAINTENANCE MANUALS

The Contractor shall be responsible for the compilation of an inventory list and operating and maintenance manuals.

This shall be done in accordance with Operating and Maintenance Manuals.

All information shall be recorded and reproduced in electronic format, as well as three sets of hard copies to be supplied to the Department.

Over and above what is specified in Operating and Maintenance Manuals, the operating and maintenance manual to be compiled shall be structured to include at least the following:

(a) System description

Complete system description and the working of the plant.

(b) Commissioning data

Complete commissioning, test and inspection data of systems and equipment.

(c) Operating data

(i) Systems and equipment running check list and frequency of servicing required;
(ii) Safety precautions to be implemented;
(iii) Operator's duties (logging requirements);
(iv) Lubricating oils and service instructions.

(d) Mechanical equipment

(i) Description of all major items with the make, model number, names, addresses and telephone numbers of the suppliers, manufacturers or their agents;
(ii) Design capacities of all equipment, including selection parameters, selection curves, capacity tables, etc;
(iii) Manufacturer's brochures and pamphlets;
(iv) Schedule of spares with part numbers recommended to be held as stock.

(e) Maintenance instructions

(i) Schedule of maintenance particulars, frequency of services and replacements;
(ii) Trouble-shooting guide;
(iii) Part numbers of all replacement items and spares;
(iv) Capacity curves of condensate pumps;
(v) Serial numbers of all items of equipment.

(f) Electrical equipment

(i) Schedule of equipment, indicating manufacturer, type, model number, capacity and addresses and telephone numbers of suppliers;
(ii) Maintenance instructions;
(iii) Manufacturer's brochures and pamphlets;
(iv) Complete as-built circuit diagrams and diagrammatic representation of interconnections of all electrical equipment.

(g) Instrumentation and control

(i) Description of each control system;
(ii) Schedule of control equipment, indicating manufacturer, type, model number, capacity and addresses and telephone numbers of suppliers;
(iii) Maintenance instructions;
(iv) Manufacturer's brochures and pamphlets.

(h) Drawings

(i) Paper prints of all as-built mechanical and electrical drawings;
(ii) Wiring diagrams framed behind glass shall be mounted adjacent to each relevant control panel.

FB 05 **LOGGING AND RECORDING PROCEDURES**

The Contractor shall under this repair and maintenance contract institute a logging and recording system as part of his maintenance control plan as defined in General Maintenance. This shall consist of a log and record book, which shall be utilized to log and record all operations, faults, system checks, breakdowns, maintenance visits, inspections, etc.

The logbook shall be kept in a safe place as agreed with the User Client and the Engineer/Departmental Representative and shall only be utilized by the maintenance personnel, the Contractor and the Engineer/Departmental Representative. Copies of the monthly entries and recordings into the logbook shall be submitted by the Contractor together with his monthly report to the Engineer/Departmental Representative.

The logbook shall be structured to include at least the following:

(a) Daily inspection and maintenance actions;
(b) Monthly inspection and maintenance actions;
(c) Three-monthly inspection and maintenance actions;
(d) Six-monthly inspection and maintenance actions;
(e) Annual inspection and maintenance actions;
(f) Breakdown reports;
(g) Daily system and equipment operating conditions, observations, recordings and measurements;
(h) Inspection and test comments and reports.

The Contractor shall also institute an attendance register, which shall be kept in a safe place as agreed with the User Client and the Engineer/Departmental Representative. This register shall be completed by all persons visiting the installation, including:

(a) Maintenance personnel
(b) Contractor
(c) Inspectors
(d) Department personnel
(e) Engineer/Departmental Representative.

The register shall state the date, time-in, time-out, name, company and reason for visit.

A copy of the register shall be submitted by the Contractor together with his monthly report.

FB 06 TESTS AND INSPECTIONS ON COMPLETION OF REPAIR WORK

Except where otherwise provided in the Contract, the Contractor shall provide all labour, materials, power, fuel, accessories and properly calibrated and certified instruments necessary for carrying out such tests. The Contractor shall make arrangements for such tests and he shall give at least 72 hours written notice to the Engineer/Departmental Representative before commencing the test.

In the event of the plant or installation not passing the test, the Employer shall be at liberty to deduct from the Contract amount all reasonable expenses incurred by the Employer or the Engineer/Departmental Representative attending the repeated test.

Whenever any installation or equipment is operated for testing or adjusting as provided for above, the Contractor shall operate the entire system for as long a period as may be required to prove satisfactory performance at all times in the occupied space served by that system for up to twenty-four hours a day continuously until the system is handed over.

The Contractor shall provide all labour and supervision required for such operation and the Department may assign operating personnel as observers, but such observation time shall not be counted as instruction time.

After completing the installation or system, all equipment shall be tested, adjusted and readjusted until it operates to the satisfaction and approval of the Engineer/Departmental Represetative.

The Contractor shall submit certificates of tests carried out to prove the efficiency of all equipment, as well as certificates to be obtained from all relevant authorities and statutory bodies, etc.

The Contractor shall allow for all required inspections, tests and certification by an approved inspection authority on repair work where required by the Occupational Health and Safety Act.

FB 07 QUALITY ASSURANCE SYSTEM

The Contractor shall institute an approved quality assurance (QA) system which shall be submitted to the Employer and/or the Engineer/Departmental Representative for approval. The records of this QA system shall be kept throughout the duration of the Contract and submitted to the Engineer/Departmental Representative at regular intervals as required.

FB 08 COMMISSIONING AND RE-COMMISSIONING OF PLANT AND INSTALLATION

FB 08.01 GENERAL

On completion of the repair work and/or the installation of new systems the plant and equipment shall be put into operation after all tests and adjustments have been carried out to the satisfaction of the Engineer/Departmental Representative. Where new plant is installed, the Contractor shall run and operate the system for a period of time as specified by the Engineer/Departmental Representative and train the User Client's representatives to operate and maintain the system.

The work shall be done in accordance with General Decommissioning, Testing and Commissioning Procedures.

Logging of the operation of the installations shall commence immediately upon start-up.
The Contractor shall submit a full commissioning report.

FB 08.02 RE-COMMISSIONING OF STEAM DISTRIBUTION INSTALLATION AND ANCILLARY EQUIPMENT

On completion of any repairs the Contractor shall re-commission the systems, installation and/or equipment influenced by such repairs.

This operation shall be done strictly in accordance with the manufacturer's specification and applicable standards, norms and specifications of the relevant body, authority and/or department. The operation shall include but not be limited to the following:

(a) All required pre-commissioning mechanical checks
(b) Check all steam, water and drain connections.
(c) Check all moving parts.
(d) Check seals, gaskets and joints.
(e) Reinstall all plugs and covers and check that they are properly secured.
(f) Check and record that all lubrication to equipment and components has been done in accordance with manufacturer's specification.
(g) Check and ensure that all valves and safety valves are correctly installed and in the correct operating position. Safety valves are to be set in accordance with the required blow-off pressure for the installation.
(h) Check and ensure that all control equipment such as pressure-reducing valves, heat control equipment, etc, are set and adjusted to the correct controlling value in accordance with the system parameters and manufacturer's specification.
(i) Check and clean out condensate tanks and storage facilities.
(j) Check, test and inspect the correct installation and operation of all condensate trapping arrangements.
(k) Check, test and inspect the correct installation and operation of all condensate pumping installations.

(l) Check that all the required pressure testing to the repaired installations and/or new equipment has been done, witnessed and recorded in accordance with the relevant specifications.
(m) Check, test and inspect all bracketing and supports for the relevant installations and equipment to ensure that they are properly secured and installed in accordance with the manufacturer's specifications and installation specification of the relevant controlling authority.
(n) Check, inspect and ensure that all logging and cladding are installed and repaired in accordance with the applicable specifications of the relevant controlling authority.
(o) Check, inspect and ensure that no leaks to equipment, systems and installations occur.

All required pre-commissioning electrical checks

(a) Check all wiring connections for tightness and repair any hot connections.
(b) Check that all electrical equipment has been properly reconnected in accordance with the manufacturer's specification.
(c) Perform and record all required electrical insulation tests on equipment.
(d) Check and test all controls without livening up electrical equipment.
(e) Check all motor-driven equipment for correct rotational directions.
(f) Check and test the operation of all indication and warning lights.
(g) Check, set, record and readjust all equipment control and set points in accordance with manufacturer's specifications.
(h) Run all motor-driven equipment for a period to ensure free movement and correct operation, feed pumps only to be operated for a short interval to check rotation.

Commissioning of equipment

On completion of the pre-commissioning checks the Contractor shall proceed with the commissioning of the equipment. This shall be done strictly in accordance with the manufacturer's specification and system parameters and shall include but not be limited to the following:

(a) During the commissioning process all level and warning system checks are to be performed on the water-level control system where applicable.
(b) During load conditions the equipment shall be readjusted and finally switched to automatic operation on completion of all automatic control functions for correct operation where applicable.
(c) Check steam pressure valves and readjust them where necessary to the correct set point under load conditions.
(d) Check the operation of all steam trap arrangements.
(e) Check the correct operation of all condensate pumping systems. Readjust level controls and/or other control equipment where applicable.
(f) Test and check for any leaks to the system, equipment and installation.
(g) Check for any unnecessary strain to system, equipment and installation due to expansion and contraction.

The Contractor shall visit, inspect, test and readjust the systems, equipment and installation during the week following the re-commissioning to ensure the correct functioning of the equipment and its associated components.

FB 09 GUARANTEE OF INSTALLATION AND EQUIPMENT

The Contractor shall provide guarantees obtained from the manufacturer(s) and/or supplier(s) to the effect that each piece of new equipment, supplied and installed under the repair contract, complies with the required performance and will function as part of the complete system.

All new equipment, including the complete new installations and the systems as a whole, shall be guaranteed for a period of 12 (twelve) months commencing on the day of issue of a certificate of completion for the repair work of the installation.

FB 10 MAINTENANCE TOOLS AND SPARES

Each installation shall be equipped with the necessary maintenance tools and spares required by the specific type of equipment and installation for the daily operation and maintenance of the system. At the start of the repair and maintenance contract the Contractor shall in the presence of the User Client make an inventory of the existing tools and spares, and any shortfall or damaged tools and spares shall be replaced with new. All replacement tools and spares shall be as specified by the equipment manufacturers. These tools and spares shall be kept in a lockable room or cabinet of which the maintenance supervisor and the Contractor shall carry keys. The Contractor shall on a monthly basis take stock of these items in the presence of the maintenance supervisor and Contractor and record and report to the Engineer/Departmental Representative. Any shortfall shall be replaced by the Contractor as part of his responsibility under this Contract.

The tools and spares to be carried shall include but not be limited to at least the following:

(a) Tools

(i) Grease and oil lubrication equipment;
(ii) Equipment operating keys and tools.

(b) Spares

(i) Spare sight glasses for sight glass indicators, glass seals and gaskets;
(ii) Spare seats, gaskets and gland packing for valves, etc;
(iii) Spare steam traps, at least one of each type present on the installation;
(iv) Spare pressure gauges, at least one of each range and type.

FB 11 REPAIR WORK TO INSTALLATIONS, SYSTEMS AND EQUIPMENT

FB 11.01 GENERAL

During the repair and maintenance contract all the systems, installations and equipment shall be repaired as specified in the Particular Specification. This repair work shall include but no be limited to the specified Particular Specification details.

All repair work shall be executed using approved materials and equipment suitable to the systems and/or installations they serve. The said repair work shall be executed in accordance with the relevant codes of practice, standards, regulations, municipal laws and by-laws, manufacturer's specifications and codes of practice and all additional and particular specifications included in this document.

The repair work items are listed in the Particular Specification and Schedule of Quantities with all relevant details, such as capacity, size, manufacturer, model number, etc.

All repair work shall be executed within the specified durations listed in the Appendix to Tender. All new equipment, materials and systems shall be furnished with a written guarantee of a defects liability period of 12 months commencing on the date of issue of a certificate of completion for the repair work. These guarantees shall be furnished in favour of the Department of Public Works.

Repair work items for the steam generating installations are categorised under the following headings:

(a) General requirements for steam and condensate installations

(b) Steam and condensate pipework

(i) Steam and condensate piping and fittings
(ii) Jointing methods and specification
(iii) Bracketing and support work

(c) Lagging and cladding

(i) Lagging and cladding materials and installation requirements

(d) Pressure testing

(e) Steam trap arrangements

(i) Steam trap equipment
(ii) Steam trap installation requirements

(f) Pressure-reducing equipment and requirements
(i) Pressure-reducing equipment
(ii) Pressure-reducing requirements

(g) Heating control equipment

(i) Steam heating equipment
(ii) Steam heating requirements

(h) Condensate pumping installations

(i) Steam operated condensate pumping installations
(ii) Electrically operated, steam operated installations

(i) Steam and condensate piping ancillary equipment

(i) Strainers
(ii) Valves
(iii) Air vents
(iv) Separators
(v) Expansion equipment
(vi) Flow meters
(vii) Check valves
(viii) Vacuum breakers
(ix) Sight glasses
(x) Safety valves
(xi) Pressure gauges
(xii) Electrical installation, wiring and control panels

(j) Electrical installation, wiring and control panels

(i) Electrical control panels
(ii) Wiring and cabling
(iii) Instrumentation and controls.

Any repair work, which may be required on the systems, equipment and installations, shall be executed using approved materials, equipment, methods and tooling suitable for the specific application. The said repair work shall be executed in accordance with the relevant codes of

practice, standards, regulations, statutory regulations, manufacturer's specifications and codes of practice and as specified in all additional and particular specifications included in this document.

During the repair and maintenance contract, the specified repair work in the Particular Specification shall be done in accordance with the items listed below. Any repair work during the maintenance period shall also adhere to this specification.

FB 11.02 GENERAL REQUIREMENTS FOR STEAM AND CONDENSATE INSTALLATIONS

All repair work and new installation of steam and condensate installations shall adhere to the standard specifications of the Department of Public Works and the following general requirements:

All steam pipes shall be installed with a fall towards the steam traps of not less than 1:250. Pipes shall be so arranged that the piping can drain completely and no pockets of condensate shall be formed at points other than the trap points.
A sufficient amount of expansion loops and/or bellows are to be installed on all pipe runs to ensure the containment of expansion and contraction on the system thus ensuring that no unnecessary strain is enforced on the brackets, supports, pipe system and any structural element. These offsets or expansion bellows shall be installed with sufficient cold draw to allow pipes to return to normal when hot. All bellows expansion joints shall be capable of withstanding without damage, expansion movement of not less than 150 % of the predicted maximum in the location for which they are intended. Bellows expansion joints which are strained during tests due to being wrongly located, etc, shall at the Engineer/Departmental Representative's discretion be replaced by the Contractor at no extra cost to the Department.

Each bellow expansion joint shall be fitted with a clearly inscribed plate showing maximum working pressure, maximum and minimum operating lengths and direction of steam flow. They shall be installed strictly in accordance with the manufacturer's recommendations.

All branch pipes shall be taken off from the top of the steam mains.

Where it is necessary to reduce pipes in size on horizontal runs only eccentric reducing fittings shall be used. On vertical runs, only reducing sockets shall be used. Reducing bushes will not be allowed on any steam reticulation system.

All steam piping above 50 mm diameter shall be jointed to fittings by means of welding and to weld on flanges shall be used. Screwed and socketed joints shall only be permitted on piping smaller than and equal to 50 mm diameter. Sufficient flanged joints on pipes larger than 50 mm diameter and unions on pipes smaller than and equal to 50 mm diameter shall provide sufficient flexibility to the system for maintenance purposes.

Only full reduced levels are to be utilized on steam distribution networks. Elbows shall only be used with prior approval by the Engineer/Departmental Representative and/or if otherwise specified in the Particular Specification.

Pipes shall be neatly and properly supported. Where beams, stanchions, etc, interfere with the straight running of pipes, suitable offsets shall be provided so that pipes may follow the line of the walls both vertically and horizontally.

Where pipes pass through structures, walls and partitions, the pipe shall be sleeved with medium class black steel pipes, large enough to leave a clearance of at least 10 mm around the pipe, including lagging and cladding. Exposed pipes passing through floors or walls shall be provided with floor, ceiling and wall finishing plates. Plates shall allow for expansion and contraction and shall be securely fixed to the sleeves.

Dirt pockets shall be installed at all low points and before the trap take-off. These pockets shall extend at least 700 mm below the line trap take-off and shall be the same pipe size as the main steam line and equipped with a plugged 15 mm diameter globe valve for blow-down purposes.

Piping shall be so arranged that it will not obstruct other equipment.

Piping shall be connected to equipment in such a way as to permit the easy removal of the equipment with the minimum of dismantling of pipework.

Gravity condensate lines shall be laid to a fall of a minimum of 1:200 towards the discharge end. Pumped condensate lines shall have a minimum fall of 1:400 towards drain points.

Automatic air vents shall be installed at high points of the pipework as required or as indicated on the drawings.
Condensate lines supported off steam mains shall be installed with due regard to cold draw requirements for steam lines and relative expansion/construction that will occur between two lines.
Condensate branch lines shall connect into the top of condensate mains.

FB 11.03 STEAM AND CONDENSATE PIPEWORK

FB 11.03.01 Steam and condensate piping and fittings

During the repair and maintenance contract all the steam lines shall be inspected for any defects and/or damages. This system shall also be pressure tested to the required system test pressure to inspect it for any possible leaks. All dirt pockets shall be blown clear. Any repair and/or new piped installations shall be done to suit the existing installations with the appropriate materials and methods. The following materials shall be used:

(a) Steam piping

All steam pipes shall be uncoated seamless steam class schedule 40 pipe in accordance with SANS 62 or BS 1387, and shall be suitable for an operating pressure of at least 1000 kPa. All piping above 50 mm diameter must be welded and flanged. Piping smaller and equal to 50 mm diameter may be screwed and socketed.

All screwed and socketed fittings shall be heavy steam quality wrought steel fittings in accordance with BS 1740 with threads complying with ISO-R7.

All welded fittings shall be seamless carbon steel butt welded fittings complying with BS 1640 schedule 40.

(b) Condensate piping

All condensate pipes shall be copper tubing class 2 in accordance with SANS 460 with capillary soldered copper fittings conforming to BS 864, ISO 2016 or DIN 2856.

(c) Jointing methods

All pipe joints shall be prepared and executed in accordance with the accepted norms and standards applicable.

(i) Welded joints

All steel welded joints shall be performed by a qualified coded welder. All welding shall fully comply with SANS 044.

The Department reserves the right to randomly select one out of ten pipe welds to be cut out of the system for examination purposes. These pipe welds shall then be tested in accordance with SANS 044.

After removal of the joints, the Contractor shall make the piping good. Should any of the welds prove unsatisfactory, the Contractor will be called upon at his own cost to have all welds examined by X-ray and to have X-ray plates examined by the SANS or other approved authority. All welding proven unacceptable shall be put right at the Contractor's cost.

All flanges shall be welded both internally and externally.

Where in the opinion of the Engineer/Departmental Representative a welder is not competent, the Engineer/Departmental Representative shall request the authority to ask that such welder be replaced with a competent welder.

(ii) Threaded joints

All pipe threads shall be right-handed Whitworth standard taper pipe threads and shall comply with BS 21 or IS-R7. Threaded pipe joints shall be made with either an approved steam pipe jointing compound or PTFE tape.

All surplus compound or tape shall be cleaned off the joints before painting or finishing-off.

(iii) Copper soldered joints

All class 2 copper tubing shall be jointed to capillary soldered fittings by utilizing self-fluxing copper/phosphorus/7 % mm silver or eutectic 1504 solder rods jointed by means of an oxygen acetylene flame to the correct soldering temperature. Care must be taken not to overheat fittings and tubing.

(d) Bracketing and support work

The Contractor shall at the start of the repair and maintenance contract inspect and examine all steam and condensate pipe supports, brackets and hangers for compliance to the pipe loads and stresses exerted onto them, taking into account the expansion and contraction of the pipe system. Where any defects, damages and/or a shortfall of supports and bracketing exist, the Contractor shall rectify, remedy or upgrade the support and bracketing system to the acceptable norms and standards. All supports, brackets and hangers shall be in accordance with the Department's specification and approved by the Engineer/Departmental Representative before installation.

Distances between pipe supports and horizontal pipe runs unless otherwise specified or indicated, shall be not more than those shown below:

STEEL PIPING

Pipe size	Maximum span
15 - 20 mm	2,5 m
25 - 40 mm	3,0 m

40 - 50 mm	3,5 m
65 - 80 mm	4,5 m
100 - 150 mm	6,0 m

COPPER PIPING

Pipe size	Maximum span
15 - 20 mm	1,5 m
25 - 32 mm	2,0 m
40 - 50 mm	2,5 m
65 - 80 mm	3,5 m

All vertical steam pipes and condensate pipes shall be supported at intervals not larger than 2 m. Where horizontal steam pipe support distances are larger than the condensate support distances, condensate pipes shall be supported from the steam pipe by means of two brackets lined by a chain.

Clearance heights at road crossings shall be in accordance with the road ordinance for the applicable road and shall be approved in writing by the relevant parties before installation.

FB 11.04 LAGGING AND CLADDING

The Contractor shall at the start of the repair and maintenance contract inspect all lagging and cladding of the steam and condensate pipe installations for any defects, damages, missing sections and/or shortfall of lagging and cladding. All defects, damages, repairs, replacement and/or new sections of lagging and cladding work shall be attended to in accordance with the relevant specifications and accepted norms and standards.

(a) Lagging and cladding materials and installation requirements

All steam and condensate piping shall be insulated with preformed canvas covered fibreglass or mineral wool sections. All bends, tees, etc, shall be insulated with preformed insulation. All thermal insulation shall be applied and installed by a recognised specialist firm.

Where preformed bends and tees are not available loose lagging material such as asbestos-free composition may be used and bound with wire netting, then plastered to a smooth finish to the same size as the basic insulation.
All exposed piping insulation shall be insulated using valve boxes. Spindles, hand wheels and reducing valves to be left exposed. All exposed insulation ends to be weatherproofed.

All exposed piping insulation shall be provided with a covering of 0,6 mm thick galvanised pre-rolled cladding. The cladding sections shall be secured by 10 mm wide galvanised sheet metal strips spaced at not more than 500 mm centres. All items requiring routine inspection/maintenance shall be fitted with removable cladding secured with stainless steel self-tapping screws. The overlap of the cladding shall be not less than 40 mm and shall be arranged to be water shedding. All longitudinal joints, where possible, shall be made where they are least noticeable.

Sheet-metal cladding inside buildings shall be painted with a suitable primer, then painted the same colour as the walls with two coats of good quality paint.

The Tenderer shall state recommended thickness based on the table below. The Tenderer shall give heat losses and thermal conductivity of the proposed material so that the merits of insulating material can be assessed. Surface temperatures of insulation shall not exceed 40^{o}C.

INSULATION THICKNESS GUIDE

STEAM PIPING

Pipe size	Preformed section thickness
15 - 25 mm dia	40 mm
32 - 50 mm dia	50 mm
65 - 150 mm dia	60 mm

CONDENSATE PIPING

Pipe size	Preformed section thickness
15 - 54 mm dia	30 mm
65 - 100 mm dia	40 mm

Fibreglass must be of 88 to 96 kg/m^3 density. Mineral wool must have a density in the range 160 - 185 kg/m^3.

FB 11.05 **PRESSURE TESTING**

The Contractor shall at completion of the repair work arrange for a complete pressure test to be executed on the steam and condensate installation. This shall be done in collaboration with the User Client and/or Department to ensure the minimum down-time of the installation, as well as to establish a suitable period for this pressure test. All leaks shall be repaired and the system shall be tested at the cost of the Contractor. This test shall be witnessed by the Engineer/Departmental Representative.

The system shall be tested to a pressure of 1,5 times the operating pressure.

On completion the total system shall be flushed out to ensure it is left without welding slug, dust, etc.

FB 11.06 **STEAM TRAP ARRANGEMENTS**

The Contractor shall at the start of the repair and maintenance contract inspect, service, repair and if rendered irreparable replace all steam trap arrangements. All defects, damages, leaks, etc, shall be repaired in accordance with the manufacturer's specification.

Servicing and repair of steam traps shall be done strictly in accordance with the manufacturer's specification.

The Contractor shall also table all steam traps with their relevant details. The Contractor shall at the same time investigate and report on the suitability of the existing steam traps in the installation according to the condensate load and application, taking cold start-up into account.

The following table provides a guideline for the type of trap and the safety factor selection for various applications:

Application	Preferred trap type	Safety factor
Boiler header	IBLV and F&T	1.5:1
Steam mains and branch lines mains	IB or F&T	2:1 for along line and 3:1 if @ end of or before valve on branch
Steam separator	IBLV or F&T	3:1
Steam quality 90 % or less	F&T	3:1
Tracer lines	IB	2:1
Unit heaters and air handlers	IBLV or F&T	3:1
(Variable pressure)	F & T or IBLV	2:1 @ « psi differential
Finned radiation and pipe coils		

(Constant pressure)	IB	3:1 for quick heating 2:1 normally
(Variable pressure)	F & T or IB	3:1 for quick heating 2:1 normally
Process air heaters		
(Constant pressure)	IB or F & T	2:1
(Variable pressure)	F & T or IBLV	3:1 @ « max. pressure differential
Steam absorption machine (Chiller)	F & T	2:1
Shell and tube heat exchangers, pipe and embossed coils		
(Constant pressure)	IB or F & T	2:1
(Variable pressure)	F & T	2:1
Evaporator single effect and multiple effect	F&T	2:1
Jacketed kettles (Gravity drain)	IBLV or thermostatic	3:1
(Syphon drain)	IBLV	3:1
Rotating dryers	DC or IBLV	3:1 for DC. 8:1 for IB constant pressure. 10:1 for IB variable pressure
Flash tanks	IBLV	3:1

IBLV = Inverted bucket with large vent
IBCV = Inverted bucket with internal check valve
IBT = Inverted bucket with thermal vent
F&T = Float and thermostatic
DC = Differential condensate controller
Thermo.= Thermostatic

FB 11.06.01 Steam trap equipment

The following repairs and servicing shall be performed on the various types of steam traps:

(1) Inverted bucket steam trap

(a) Dismantle and strip down trap assembly.
(b) Clean out strainers and trap.
(c) Replace the following:

(i) Valve and seat assembly
(ii) All gaskets
(iii) Bucket
(iv) Bolts and nuts if necessary
(v) Strainer elements.

(d) Reassemble and put back into operation.

(2) Float and thermostatic steam traps

(a) Dismantle and strip down trap assembly.
(b) Clean out all parts.
(c) Replace the following:

(i) Valve and seat assembly including ball float
(ii) Air vent assembly

(iii) Steam lock releases if installed
(iv) All gaskets.

(d) Reassemble and put back into operation.

(3) Thermodynamic steam traps

(a) Dismantle and strip down trap assembly.
(b) Clean out strainer trap body.
(c) Replace the following:

(i) Replace disc and reseat body face
(ii) Strainer
(iii) All gaskets
(iv) Cap and strainer caps only if necessary.

(d) Reassemble steam trap and put back into operation.

(4) Balanced pressure thermostatic steam trap

(a) Dismantle and strip down trap assembly.
(b) Clean out all parts.
(c) Replace the following components:

(i) Element or capsule and seat assembly where applicable.
(ii) All gaskets and O-rings.
(iii) Strainer screen if installed.
(iv) Cover bolts if applicable.

(d) Reassemble and put back into operation.

(5) Bimetallic thermostatic steam trap

(a) Dismantle and strip down trap assembly.
(b) Clean out all parts.
(c) Replace the following components:

(i) Element set, and ensure that the joint faces are clean
(ii) Strainer screen
(iii) All gaskets
(iv) Cover bolts if necessary and where applicable.

(d) Reassemble and put back into operation.

All the above steam traps and those not mentioned in this specification shall be repaired and serviced in accordance with manufacturer's specification. The steam traps described above shall be regarded as a guideline to the required repairs and servicing.

FB 11.06.02 Steam trap installation requirements

The Contractor shall ensure that all steam traps are installed in accordance with the required installation norms and the manufacturer's specification.

This shall include the incorporation of strainers where necessary, sight glasses, shut-off valves on both sides, check valves where necessary, unions for maintainability, test valves, dirt pockets and ensuring that pipe sloping and connections are in accordance with specifications.

FB 11.07 PRESSURE-REDUCING VALVE INSTALLATIONS

The Contractor shall at the start of the maintenance and repair contract inspect, service, repair, readjust and overhaul, if required, all pressure-reducing valves. Servicing, repairs and overhauling shall be done strictly in accordance with the manufacturer's specification.

The pressure-reducing valves shall be tested under load and under no load to ensure that no creepage takes place, as well as that downstream pressure is maintained within the operating parameters.
The overhauling of the pressure-reducing valves shall preferably be performed by an Engineering works firm or manufacturer qualified to do so.

Where no duplicate pressure-reducing valve is installed at a control point, the Contractor shall collaborate with the User Client and the Engineer/Departmental Representative to service and repair the valve at a pre-arranged suitable time and to minimize the down-time of the steam supply to the system.

All pressure-reducing valve pressure set points, details and positions shall be logged by the Contractor.

The Contractor shall also report on the suitability of each pressure-reducing valve to serve the particular system.

The following service, repair and overhaul work shall be regarded as a guideline for the following types of pressure-reducing valves:

(a) Direct acting pressure-reducing valve

(i) Dismantle and strip down pressure-reducing valve.
(ii) Clean out all parts, body, etc, and inspect.
(iii) Replace the pressure adjustment spring assembly.
(iv) Replace bellows assembly if necessary.
(v) Replace valve and seat assembly and ensure that seat faces are clean and reseated.
(vi) Replace strainer element.
(vii) Replace all gasket sets.
(viii) Reassemble, set, test and adjust to the correct downstream pressure.

(b) Pilot operated pressure-reducing valve

(i) Dismantle and strip down pressure-reducing valve.
(ii) Clean out all parts, body, etc, and inspect.
(iii) Replace the pressure adjustment spring assembly.
(iv) Inspect balance and control pipe assemblies and if leaks exist and screw parts are worn, replace with new.
(v) Replace main valve assembly, spring and strainer.
(vi) Inspect main and pilot diaphragms and if required, replace with new.
(vii) Replace all gaskets and seals.
(viii) Inspect, clean and reseat valve seats.
(ix) Reassemble, set, test and adjust pressure-reducing valve to the correct downstream pressure.

(c) Pressure reducing valve installation requirements

The Contractor shall ensure that all pressure-reducing valves are installed in accordance with the manufacturer's requirements. This shall also include the incorporation of strainers, non-return valves, pressure gauges, correctly sized safety

valves, shut-off valves for maintenance purposes, steam trap take-offs before pressure-reducing valve, etc.

FB 11.08 HEATING CONTROL EQUIPMENT

The Contractor shall at the start of the repair and maintenance contract inspect, test, repair, readjust, and if necessary replace heating controls for steam heating equipment.

This shall include the following:

(a) Check for correct switching and/or control operating points.
(b) Check, test and ensure that the safety cut-out mechanisms are in place and that switching controls control at the correct level.
(c) Ensure that equipment has been installed in accordance with the manufacturers' specification.
(d) Ensure that all pockets are descaled and free of any defects.

The following control equipment shall be serviced, repaired and when required, replaced if damaged beyond repair.

FB 11.08.01 Direct heating control equipment

Where immersed type thermostatic steam control valves are utilized, they shall be serviced and repaired as follows:

(a) Dismantle and strip down thermostatic control valve including removal of pocket.
(b) De-scale and clear all equipment.
(c) Replace element subassembly if necessary.
(d) Replace cover joint, gland packing, heater coupling joint and all gaskets where applicable.
(e) Check valve seat and if necessary re-seat.
(f) Reassemble control valve and reinstall, test and adjust to correct level.

FB 11.08.02 Remote capillary control equipment

Where remote control equipment are utilized for heating purposes, these shall be serviced, repaired and overhauled in accordance with the manufacturers' specification.

FB 11.09 CONDENSATE PUMPING INSTALLATIONS

The Contractor shall at the start of the repair and maintenance contract inspect all condensate pumping installations for any defects, damages, and/or shortfall. All defects, damages, repairs, replacement and/or pumps are to be serviced, repaired, overhauled and installed in accordance with the relevant specifications, accepted norms and standards, and manufacturer's specifications.

The following two types of condensate pumping systems shall be regarded as a guideline for repairs, services and overhauling.

FB 11.09.01 Steam operated automatic condensate pumps

The Contractor shall inspect and service these units as follows:

(a) Inspect receiver for any defects and corrosion and clean out.
(b) Inspect steam-driven pumps for any defects and clean out.

(c) Replace steam inlet valve assembly.
(d) Inspect and clean float and replace if necessary.
(e) Inspect guides and replace if necessary.
(f) Replace all gaskets and seals.
(g) Inspect and replace the lever assembly mechanism if necessary.
(h) Inspect and service check valves including replacing of gaskets.
(i) Inspect all steam piping, clean out and replace when necessary.
(j) Clean out strainers and replace strainer elements if necessary.
(k) Replace steam and condensate valve seals and gland packings.
(l) Inspect vent pipe installation and repair where necessary.
(m) Check all inlet and outlet pipe connections.
(n) Service and repair steam traps.
(o) Service and repair sight glasses.
(p) Reassemble and put steam operated pumps back into operation.

FB 11.09.02 Electrically operated automatic condensate pumps

The condensate pumps are to be inspected, tested, serviced, repaired together with their associated equipment and pipework. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the condensate pumps and equipment shall include at least the following:

(a) Inspect and test the pumps for correct operation.
(b) Replace gland packings, seals and gaskets.
(c) Inspect and test for any bearing noise and replace if necessary.
(d) Clean out pump strainers, check non-return valves, valves, etc.
(e) Test pump motor windings for balance phases, insulation test and check wiring.
(f) Inspect pump mountings and repair if necessary.
(g) Inspect, clean out and repair the condensate tank where necessary.
(h) Inspect, test, service, readjust the level controls on the condensate tank.

FB 11.10 STEAM AND CONDENSATE PIPING ANCILLARY EQUIPMENT

The Contractor shall at the start of the repair and maintenance contract inspect, service, repair all ancillary steam and condensate equipment using the following as guideline:

(a) Replace damaged, broken, leaking, corroded equipment.
(b) Repair, replace and service valves including new gaskets, gland packings, seals, bolt and nuts, etc.
(c) Test the proper closing of all valves and where not satisfactory, valves are to be refurbished, de-scaled and replaced if necessary.
(d) Repair, clean and service all strainers including replacement of strainer elements where corroded and installation of new gaskets.
(e) Repair, service and check the proper functioning of all non-return valves.
(f) Repair, service, readjust and calibrate all safety release valves.
(g) Repair, service and clean out all air release valves and vacuum breakers.
(h) Repair, service and log readings of flow meters including cleaning of integral strainers.
(i) Repair, service and check for any damages to the expansion bellows and expansion joints.
(j) Repair, service and clean out all steam separators.
(k) Repair, service and replace glasses and gaskets on sight glass equipment.
(l) Check, service, readjust and calibrate test pressure and temperature gauges.
(m) Pressure test and sterilize repaired new installation and equipment.

(n) Reinstate and make good walls, tiling, floors, concrete, finishes, holes, chases, surfaces, etc, to an acceptable level where any repair, upgrade and/or service work have been executed.
(o) Prepare and repaint all piping equipment, brackets, supports, etc.

FB 11.11 ELECTRICAL INSTALLATION, WIRING AND CONTROL PANELS

FB 11.11.01 Instrumentation and controls

All instrumentation and control equipment shall be inspected, tested, repaired, adjusted and where necessary replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the instrumentation and control equipment shall include at least the following:

(a) Test all equipment for correct operation.
(b) Inspect, test, service, adjust setting and if necessary repair and/or replace steam detector.
(c) Inspect, recalibrate and if beyond repair, replace steam pressure gauge.

FB 11.11.02 Electrical control panels

All electrical control panels shall be inspected, tested, and repaired, including all equipment inside the control panel. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the electrical control panels shall include at least the following:

(a) Test all control equipment for correct operation.
(b) Check and test all MCBs, isolators, contactors, overloads, other type of motor drives, pilot lights, control switches, etc, and readjust all set points. Where equipment is found to be faulty it shall be replaced with new approved equipment.
(c) Check all wiring and connections for proper conducting and replace where hot connections are found.
(d) Clean out panel interior and exterior, inspect panel body, fascias, doors, paintwork, etc, and repair where necessary.

FB 12 MAINTENANCE TO INSTALLATIONS, SYSTEMS AND EQUIPMENT

FB 12.01 GENERAL

Monthly maintenance responsibilities for each installation including all units and components as specified, shall commence with access to the site. A difference shall be made in payment for the maintenance prior to and after practical completion of repair work.

Maintenance responsibilities of the completed installation shall commence upon the issue of a certificate of practical completion for repair work, and shall continue for the remainder of the 36-month contract period.

This part of the Contract shall include:

(a) Routine preventative maintenance;
(b) Corrective maintenance, and

(c) Breakdown maintenance,

as defined in General Maintenance, for the specified installations described under FB 01 of this specification.

The maintenance work to be performed and executed shall be done strictly in accordance with General Maintenance, and as specified in Particular Specification PFB and this specification.

The said maintenance work shall be executed in accordance with the relevant codes of practice, statutory regulations, standards, regulations, municipal laws and by-laws and the manufacturers' specifications and codes of practice.

The maintenance schedules and frequency shall be developed under the maintenance control plan to be instituted by the Contractor, as specified in General Maintenance.
All new equipment, components and materials supplied and installed under the maintenance contract shall be furnished with a prescribed manufacturer's guarantee.

The maintenance work and items are to be categorized by the Contractor for each maintenance activity under the following headings:

(a) Steam piping installation
(b) Condensate piping installation
(c) Supports and bracketing
(d) Lagging and cladding
(e) Steam ancillary equipment
(f) Condensate ancillary equipment
(g) Condensate pumping systems
(h) Electrical controls, panels and wiring.

The Contractor shall be remunerated monthly, based on his performance, for maintaining the complete installation in a perfect functional condition.

FB 12.02 **ROUTINE PREVENTATIVE MAINTENANCE**

The routine maintenance of the installations, systems and equipment shall be done in accordance with General Maintenance, and the Particular Specification related to this work.

The routine maintenance work to be performed and executed shall include, but not be limited to the items listed in tables FB 12.02/1, FB 12.02/2, FB 12.02/3 and FB 12.02/4 below under the respective headings. These actions and findings shall be logged and reported on the relevant approved schedules and reports.

TABLE FB 12.02/1: WEEKLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY
	ACTION	
1	Inspect all steam and condensate installations for any visible defects, leaks, damages or/and pending faults.	Contractor Check/Record
2	Check and record all pressure gauge readings and readjust equipment if necessary.	Contractor Adjust/Check/Record
3	Check operation of condensate pumps	

and controls for correct functioning. Contractor Check/Record

4 Check steam trap arrangements for correct operation. Contractor Check/Record

5 Report any faults, defects, leaks, damages, etc, to Engineer/Departmental Representative. User Client Check/Record/Report

TABLE FB 12.02/2: MONTHLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY	ACTION
1	All as listed under table FB 12.02/1	Contractor/User/Client	Check/Record/Adjust/Repair/Report
2	Blow down all dirt pockets and record.	Contractor	Service/Record
3	Clean out all strainers and record.	Contractor	Service/Record
4	Check all valve gland seals and packings for leaks and replace and repair if necessary.	Contractor	Check/Service/Repair/Record
5	Check, inspect and repair if necessary all expansion joints for leaks and damages.	Contractor	Check/Repair/Record
6	Check sight glasses and repair, clean and replace where necessary.	Contractor	Check/Service/Repair/Record
7	Check all safety devices for correct operation and repair and replace where necessary.	Contractor	Check/Service/Repair/Record
8	Check and test all electrical control functions and operations. Repair and report any faults and defects.	Contractor	Check/Service/Repair/Record
9	Complete logbook and report.	Contractor	Report

TABLE FB 12.02/3: SIX-MONTHLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY	ACTION
1	All as listed under tables FB 12.02/1 and FB 12.02/2	User Client/Contractor	Check/Record/Adjust/Repair
2	Service, repair, clean, replace seals, gaskets, reset and/or replace worn parts as directed by the manufacturer of all steam traps.	Contractor	Check/Service/Repair/Report
3	Service, repair, replace glasses and gaskets where necessary and clean all sight glasses.	Contractor	Check/Service/Repair/Report

4	Repair lagging and cladding where necessary.	Contractor Check/Repair/Report
5	Repair all steam leaks.	Contractor Check/Repair/Report
6	Clean out and repair all condensate tanks.	Contractor Check/Service/Report
7	Test, inspect and repair all condensate pumps.	Contractor Check/Service/Repair/Report
8	Lubricate all lubrication points in accordance with the manufacturer's specification.	Contractor Check/Service/Report
9	Complete logbook and report.	Contractor Report

TABLE FB 12.02/4: ANNUAL ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY	ACTION
1	All as listed under tables FB 12.02/1, FB 12.02/2 and FB 12.02/3	User Client / Contractor	Check/Record/Adjust/Repair
2	Annual survey by inspector	Contractor / Department	Inspect / Test / Service / Repair
3	Inspect and repaint all equipment where required.	Contractor	Inspect / Test / Service / Repair
4	Remove, strip, service, repair, adjust and replace where necessary all pressure control and safety valve equipment.	Contractor	Service / Repair / Adjust / Report
5	Complete logbook and report.	Contractor	Report

FB 12.03 **CORRECTIVE MAINTENANCE**

This corrective maintenance of the installations, systems and equipment shall be done in accordance with General Maintenance, and the Particular Specification related to this work.

The Contractor shall inspect and check all equipment, materials, systems and installation for any pending breakdowns, maladjustments or anomalies of equipment.

The Contractor shall report and take actions to correct such shortfall.

FB 12.04 **BREAKDOWN MAINTENANCE**

Breakdown maintenance of the installations, systems and equipment shall be done in accordance with General Maintenance.

All breakdown problems experienced shall be acted upon within the time limitations allowed in the General Maintenance specifications.

All breakdown maintenance shall be done in accordance with the relevant specifications, standards, regulations and codes.

The Contractor shall have access to the necessary spares, equipment and tools for any possible breakdowns.

FC TECHNICAL SPECIFICATION - HOT-WATER GENERATING INSTALLATIONS

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FC 01 SCOPE

This specification covers the general repair and maintenance of hot-water generating installations, which include the following:

(a) Steam generated hot-water heating equipment
(c) Primary and secondary pumps
(d) Hot-water storage vessels
(e) Lagging and cladding of vessels and piping systems
(f) Hot-water reheating vessels
(g) Corrosion protection linings to storage vessels and re-heaters
(h) Hot, cold and drainage pipework to the plant room installation
(i) Electrical control systems, wiring and control panels
(j) Thermostats and safety equipment.

This specification also addresses the training of User Client and associates, and maintenance staff.

This specification shall form an integral part of the repair and maintenance contract document, and shall be read in conjunction with the additional and particular specifications compiled as part of this document.

This specification shall act as a guideline to the particular specification and, in the event of any discrepancies between the Technical Specification and the Particular Specification, the latter shall take precedence.

The Contractor shall at all times adhere to this specification, unless otherwise specified in the Particular Specification.

FC 02 STANDARD SPECIFICATIONS

FC 02.01 GENERAL STANDARD SPECIFICATIONS, REGULATIONS AND CODES

The latest edition, including all amendments up to date of tender of the following specifications, publications and codes of practice shall be read in conjunction with this specification and shall deemed to form part thereof:

FC 02.01.01 SANS and other specifications and codes

SANS 0400	-	The applications of the building regulations
SANS 0142	-	Code of practice for the wiring of premises
SANS 0140	-	Identification colour marking
SANS 044	-	Parts I to IV: Welding
SANS 460	-	Copper tubes for domestic plumbing
SANS 0252	-	Parts I and II
SANS 0103	-	The measurement and rating of environmental noise with respect to annoyance and speech communications

SANS Specifications listed on page 3 of the DPW specification OWG 371
Atmospheric Pollution Prevention Act, No 45 of 1965
BS 2790
BS 1740
BS 21
BS 1640
BS 5500

FC 02.01.02 Department of Public Works specifications

OWG 371	-	Specification of materials and methods to be used
STD.PWD.VII	-	Standard Specification for steam boiler installations (Issue VII 1997)
	-	Standard Specification for electrical installations and equipment pertaining to mechanical installations (Issue IX 1998)

FC 02.01.03 Occupational Health and Safety Act of 1993

All regulations and statutory requirements as laid down in the latest edition of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) shall be adhered to.

FC 02.01.04 Manufacturers' specifications, codes of and practice and installation instructions

All equipment and materials shall be installed, serviced and repaired strictly in accordance with the manufacturers' specifications, instructions and codes of practice.

FC 02.01.05 Municipal regulations, laws and by-laws

All municipal regulations, laws, by-laws and special requirements of the Local Authority shall be adhered to unless otherwise specified.

FC 03 VARIATIONS AND ADDITIONS TO STANDARD SPECIFICATIONS

The following additional general specifications and requirements shall be read in conjunction with this specification and shall be adhered to unless otherwise specified in the Particular Specification.

FC 03.01 General repair and installations requirements

All materials and equipment supplied and installed shall be of new high quality, design and manufactured to the relevant specifications, suitable for providing efficient, reliable and trouble-free service.

All work shall be executed in a first-class workman-like manner by qualified tradesmen.
All equipment, component parts, fittings and materials supplied and/or installed, shall conform in respect of quality, manufacture, test and performance to the requirements of the applicable current SANS specifications and codes, except where otherwise specified or approved by the Engineer/Departmental Representative in writing.

All materials and workmanship which, in the opinion of the Engineer/Departmental Representative, is inferior to that specified for the work, will be condemned. All condemned material and workmanship shall be replaced or rectified as directed and approved by the Engineer/Departmental Representative.

The Contractor shall submit a detailed list of the equipment and material to be used to the Engineer/Departmental Representative for approval before placing orders or commencing installation.

All new equipment, materials and systems shall be installed and positioned such as to not impede on access routes, entrances and other services. The Contractor shall coordinate these items taking other services and equipment into account.

All control equipment and serviceable items shall be installed and positioned such that they will be accessible and maintainable.

The Contractor shall make sure that all safety regulations and measures are applied and enforced during the repair and construction periods to ensure the safety of the public and User Client.

Repair work shall be programmed in accordance with General Decommissioning, Testing and Commissioning Procedures, to ensure the shortest possible down-time of any service and the least inconvenience to the User Client and public. The Contractor shall make sure that the necessary notifications and notices are timeously put into place for these activities.

FC 04 OPERATING AND MAINTENANCE MANUALS

The Contractor shall be responsible for the compilation of an inventory list and operating and maintenance manuals.

This shall be done in accordance with Operating and Maintenance Manuals.

All information shall be recorded and reproduced in electronic format, as well as three sets of hard copies to be supplied to the Department.

Over and above what is specified in Operating and Maintenance Manuals, the operating and maintenance manual to be compiled shall be structured to include at least the following:

(a) System description

(i) Complete system description and the working of the plant.

(b) Commissioning data

(i) Complete commissioning, test and inspection data of systems and equipment.

(c) Operating data

(i) Systems and equipment running check list and frequency of servicing required;
(ii) Safety precautions to be implemented;
(iii) Operator's duties (logging requirements);
(iv) Lubricating oils and service instructions.

(d) Mechanical equipment

(i) Description of all major items with the make, model number, names, addresses and telephone numbers of the suppliers, manufacturers or their agents;
(ii) Design capacities of all equipment, including selection parameters, selection curves, capacity tables, etc;
(iii) Manufacturer's brochures and pamphlets;
(iv) Schedule of spares with part numbers recommended to be held as stock;
(v) Vessels pressure test and certification certificates.

(e) Maintenance instructions

(i) Schedule of maintenance particulars, frequency of services and replacements;
(ii) Trouble-shooting guide;
(iii) Part number of all replacement items and spares;
(iv) Capacity curves of all pumps;
(v) Serial numbers of all items of equipment.

(f) Electrical equipment

(i) Schedule of equipment, indicating manufacturer, type, model number, capacity and addresses and telephone numbers of suppliers;
(ii) Maintenance instructions;
(iii) Manufacturer's brochures and pamphlets;
(iv) Complete as-built circuit diagrams and diagrammatic representation of interconnections of all electrical equipment.

(g) Instrumentation and control

(i) Description of each control system;
(ii) Schedule of control equipment, indicating manufacturer, type, model number, capacity and addresses and telephone numbers of suppliers;
(iii) Maintenance instructions;
(iv) Manufacturer's brochures and pamphlets.

(h) Drawings

(i) Paper prints of all as-built mechanical and electrical drawings;
(ii) Wiring diagrams framed behind glass shall be mounted adjacent to each relevant control panel.

FC 05 LOGGING AND RECORDING PROCEDURES

The Contractor shall under this repair and maintenance contract institute a logging and recording system as part of his maintenance control plan as defined in General and Maintenance. This shall consist of a log and record book, which shall be utilized to log and record all operations, faults, system checks, breakdowns, maintenance visits, inspections, etc.

The logbook shall be kept in a safe place as agreed with the User Client and the Engineer/Departmental Representative and shall only be utilized by the maintenance personnel, the Contractor and the Engineer/Departmental Representative. Copies of the monthly entries and recordings into the logbook

shall be submitted by the Contractor together with his monthly report to the Engineer/Departmental Representative.

The logbook shall be structured to include at least the following:

(a) Weekly inspection and maintenance actions;
(b) Monthly inspection and maintenance actions;
(c) Four-monthly inspection and maintenance actions;
(d) Annual inspection and maintenance actions;
(e) Breakdown reports;
(f) Daily system and equipment operating conditions, observations, recordings and measurements;
(g) Inspection and test comments and reports.

The Contractor shall also institute an attendance register, which shall be kept in a safe place as agreed with the User Client and the Engineer/Departmental Representative. This register shall be completed by all persons visiting the installation, including:

(a) Maintenance personnel
(b) Contractor
(c) Inspectors
(d) Department personnel
(e) Engineer/Departmental Representative.

The register shall state the date, time-in, time-out, name, company and reason for visit.

A copy of the register shall be submitted by the Contractor together with his monthly report.

FC 06 TESTS AND INSPECTIONS ON COMPLETION OF REPAIR WORK

Except where otherwise provided in the Contract, the Contractor shall provide all labour, materials, power, fuel, accessories and properly calibrated and certified instruments necessary for carrying out such tests. The Contractor shall make arrangements for such tests and he shall give at least 72 hours written notice to the Engineer/Departmental Representative before commencing the test.

In the event of the plant or installation not passing the test, the Employer shall be at liberty to deduct from the Contract amount all reasonable expenses incurred by the Employer or the Engineer/Departmental Representative attending the repeated test.

Whenever any installation or equipment is operated for testing or adjusting as provided for above, the Contractor shall operate the entire system for as long a period as may be required to prove satisfactory performance at all times in the occupied space served by that system for up to twenty-four hours a day continuously until the system is handed over.

The Contractor shall provide all labour and supervision required for such operation and the Department may assign operating personnel as observers, but such observation time shall not be counted as instruction time.

After completing the installation or system, all equipment shall be tested, adjusted a readjusted until it operates to the satisfaction and approval of the Engineer/Departmental Representative. The Contractor shall submit certificates of tests carried out to prove the efficiency of all equipment, as well as certificates to be obtained from all relevant authorities and statutory bodies, etc.

FC 07 QUALITY ASSURANCE SYSTEM

The Contractor shall institute an approved quality assurance (QA) system that shall be submitted to the Engineer/Departmental Representative for approval. The records of this QA system shall be kept

throughout the duration of the Contract and submitted to the Engineer/Departmental Representative at regular intervals as required.

FC 08 COMMISSIONING AND RE-COMMISSIONING OF PLANT AND INSTALLATION

FC 08.01 GENERAL

On completion of the repair work and/or the installation of new systems the plant and equipment shall be put into operation after all tests and adjustments have been carried out to the satisfaction of the Engineer/Departmental Representative. Where new plant is installed the Contractor shall run and operate the system for a period of time as specified by the Engineer/Departmental Representative and train the staff of the User Client to operate and maintain the system.

Logging of the operation of the installations shall commence immediately upon start-up. The Contractor shall submit a full commissioning report.

FC 08.02 RE-COMMISSIONING OF HOT-WATER GENERATING INSTALLATION AND ANCILLARY EQUIPMENT

On completion of any repairs the Contractor shall re-commission the systems, installation and/or equipment influenced by such repairs.

This operation shall be done strictly in accordance with the manufacturer's specification and relevant standards, norms and specifications from the applicable body, authority and/or department. The operation shall include but not be limited to the following:

(a) All required pre-commissioning mechanical checks
(b) Check all steam, water and drain connections (when applicable).
(c) Check all moving parts.
(d) Check seals, gaskets and joints.
(e) Reinstall all plugs and covers and check that they are properly secured.
(f) Check and record that all lubrication to equipment and components has been done in accordance with manufacturer's specification.
(g) Check and ensure that all valves and safety valves are correctly installed and in the correct operating position. Safety valves are to be set in accordance with the required blow-off pressure for the installation.
(h) Check and ensure that all control equipment such as pressure-reducing valves, heat control equipment, etc, are set and adjusted to the correct controlling value in accordance with the system parameters and manufacturer's specification.
(i) All steam and condensate pre-commissioning checks shall be done in accordance with Technical Specification FB (where applicable).
(j) Check and confirm that all required tests and inspections to storage vessels, primary heater vessels and re- heater vessels have been done and that all required certificates are in place.
(k) Check and ensure that the domestic hot-water and cold-water piping system is operational and that no leaks are present.
(l) Check, test and inspect the correct installation and operation of all primary and secondary pumping (where applicable).
(m) Check that all the required pressure testing to the repaired installations and/or new equipment has been done, witnessed and recorded in accordance with the relevant specifications.
(n) Check, test and inspect all bracketing and supports for the relevant installations and equipment to ensure that they are properly secured and installed in accordance with the manufacturer's specifications and installation specification.

(o) Check, inspect and ensure that all lagging and cladding to the vessels and piping installation are installed and repaired in accordance with the applicable specifications from the relevant controlling authority.

(p) Check, inspect and ensure that no leaks to equipment, systems and installations occur.

(q) All required pre-commissioning electrical checks
- (i) Check all wiring connections for tightness and repair any hot connections.
- (ii) Check that all electrical equipment has been properly reconnected in accordance with the manufacturer's specification.
- (iii) Perform and record all required electrical insulation tests on equipment.
- (iv) Check and test all controls without livening up electrical equipment.
- (v) Check all motor-driven equipment for correct rotational directions.
- (vi) Check and test the operation of all indication and warning lights.
- (vii) Check, set, record and readjust all equipment control and set points in accordance with manufacturer's specifications.
- (viii) Run all motor-driven equipment for a period to ensure free movement and correct operation

FC 08.03 Commissioning of equipment

On completion of the pre-commissioning checks the Contractor shall proceed with the commissioning of the equipment. This shall be done strictly in accordance with the manufacturer's specification and system parameters and shall include but not be limited to the following:

(a) During the commissioning process all safety and warning system checks are to be performed on the thermostatic control system where applicable.

(b) During load conditions the equipment shall be readjusted and finally switched to automatic operation on completion of all automatic control functions for correct operation where applicable.

(c) Check that steam pressure valves are readjusted where necessary to the correct set point under load conditions where applicable.

(d) This shall be done in accordance with Technical Specification FB: Steam Generating Installations.

(e) Check the operation of all steam trap arrangements where applicable.

(f) This shall be done in accordance with Technical Specification FB: Steam Generating Installations.

(g) Check that water pressure-reducing valves are adjusted and set to the correct operating value for the specific system.

(h) Check the correct operation of all systems. Readjust primary and secondary pumping control equipment where applicable.

(i) Test and check for any leaks to the system, equipment and installation.

(j) Check for any unnecessary strain to system, equipment and installation due to expansion and contraction.

(k) Check the correct functioning of all heating temperature control equipment to ensure the correct switching levels and that all safeties are operational.

(l) Record temperatures and flow conditions.

The Contractor shall visit, inspect, test and readjust the systems, equipment and installation during the week following the re-commissioning to ensure the correct functioning of the equipment and its associated components.

FC 09 GUARANTEE OF INSTALLATION AND EQUIPMENT

The Contractor shall provide guarantees obtained from the manufacturer(s) and/or supplier(s) to the effect that each piece of new equipment, supplied and installed under the repair contract, complies with the required performance and will function as part of the complete system.

All new equipment, including, the complete new installations and the systems as a whole shall be guaranteed for a period of 12 (twelve) months commencing upon the day of issue of a certificate of completion for the repair work of the installation.

FC 10 MAINTENANCE TOOLS AND SPARES

Each installation shall be equipped with the necessary maintenance tools and spares required by the specific type of equipment and installation for the daily operation and maintenance of the system. At the start of the repair and maintenance contract the Contractor shall in the presence of the User Client make an inventory of the existing tools and spares, and any shortfall or damaged tools and spares shall be replaced with new. All replacement tools and spares shall be as specified by the equipment manufacturers. These tools and spares shall be kept in a lockable room or cabinet of which the maintenance supervisor and the Contractor shall carry keys. The Contractor shall on a monthly basis take stock of these items in the presence of the User Client's maintenance supervisor and record and report to the Engineer/Departmental Representative. Any shortfall shall be replaced by the Contractor as part of his responsibility under this Contract.

he tools and spares to be carried shall include but not be limited to at least the following:

(a) Tools

(i) Grease and oil lubrication equipment;
(ii) Equipment operating keys and tools.

(b) Spares

(i) Spare sight glasses for sight glass indicators, seals and gaskets (where applicable);
(ii) Spare seats, gaskets and gland packings for valves, etc;
(iii) Spare steam traps, at least one of each type present on the installation (where applicable);
(iv) Spare pressure gauges, at least one of each range and type;
(v) Spare electrical elements (where applicable);
(vi) Spare thermostats, at least one of each type present on the installation (where applicable);
(vii) Spare pilot lights, contactors, circuit brackets, relays, thermal overloads, etc, for electrical control panels;
(viii) Spare temperature gauges, at least one of each range and type.

FC 11 REPAIR WORK TO INSTALLATIONS, SYSTEMS AND EQUIPMENT

FC 11.01 GENERAL

During the repair and maintenance contract all the systems, installations and equipment shall be repaired as specified in the Particular Specification. This repair work shall include but no be limited to the specified Particular Specification details.

All repair work shall be executed using approved materials and equipment suitable to the systems and/or installations they serve. The said repair work shall be executed in accordance with the relevant codes of practice, standards, regulations, municipal laws and by-laws, manufacturer's specifications and codes of practice and all additional and particular specifications included in this document.

The repair work items are listed in the Particular Specification and Schedule of Quantities with all relevant details, such as capacity, size, manufacturer, model number, etc.

All repair work shall be executed within the specified durations listed in the Appendix to Tender. All new equipment, materials and systems shall be furnished with a written guarantee of a defects liability period of 12 months commencing on the date of issue of a certificate for

completion of the repair work. These guarantees shall be furnished in favour of the Department of Public Works.

Repair work items for the hot water generating installations shall be categorised under the following headings:

(a) General requirements for hot-water generating installations
(b) Steam and condensate pipework (where applicable) Refer to Technical Specification FB: Steam Distribution Installations.
(c) Hot-water storage vessels
  (i) Existing hot-water storage vessels
  (ii) Electrically driven storage vessels, new hot-water storage vessels
  (iii) Heating services for hot-water storage vessels.
(d) Lagging and cladding of vessels and piping
  (i) Vessel lagging and cladding
  (ii) Hot-water and hot-water return pipe lagging and cladding
(e) Pressure testing
(f) Corrosion protection linings
(g) Sterilization of installation
(h) Heating control equipment
  (i) Steam heating equipment
  (ii) Electrical heating equipment
(i) Instruments and controls
  (i) Type of instrumentation and controls
  (ii) Instrumentation and controls, installation requests
(j) Primary and secondary pumping installations
  (i) Primary pumping equipment
  (ii) Secondary pumping equipment
(k) Domestic hot-water and cold-water pipe installations
  (i) Strainers
  (ii) Valves
  (iii) Air vents
  (iv) Thermostatic water flow control valve
  (v) Expansion equipment
  (vi) Flow meters
  (vii) Check valves
  (viii) Vacuum breakers
  (ix) Expansion release valve
  (x) Safety valves
  (xi) Pressure gauges

(l) Electrical installations
  (i) Electrical control panels
  (ii) Wiring and cabling.

Any repair work, which may be required on the systems, equipment and installation, shall be executed using approved materials, equipment, methods and tooling suitable for the specific application. The said repair work shall be executed in accordance with the relevant codes of practice, standards, regulations, statutory regulations, manufacturer's specifications and codes of practice and as specified in all additional and particular specifications included in this document.

At the start of the repair and maintenance contract, the repair work specified in the Particular Specification shall be done in accordance with the items listed. Any repair work during the maintenance period shall also adhere to this specification.

FC 11.02 GENERAL REQUIREMENTS FOR HOT-WATER GENERATING INSTALLATIONS

All repair work and new installation of hot-water generating installations shall adhere to the standard specifications of the Department of Public Works and all relevant specifications, norms, standards and regulations applicable to this type of installation, including the following general requirements:

The hot-water generating installation shall be repaired, installed and maintained as a complete functional unit, with all the responsibilities, functions and operating parameters taken into account to ensure the continuous supply of hot water to the consumer points.

The hot-water generating installation shall be capable of providing ample supply of hot water to the consumer points by means of ensuring the correct sizing of the hot-water storage and production.

FC 11.03 STEAM AND CONDENSATE PIPEWORK

All steam and condensate installations shall be done in accordance with Technical Specification FB: Steam Distribution Installations.

FC 11.04 HOT-WATER STORAGE VESSELS

FC 11.04.01 Existing hot-water storage vessels

At the start of the maintenance and repair contract the Contractor shall inspect, repair, service, clean out and test all hot-water storage vessels.

The inspection shall include the following:

(a) Isolate drain, open manholes and clean out hot-water vessels.
(b) Inspect vessel welds.
(c) Inspect internal corrosion lining and check for any pit holes and damages to the vessel material and connections.
(d) Inspect lagging and cladding.
(e) Inspect condition of all elements, steam heating coils, controls, safety valves, etc.
(f) During this inspection the Contractor shall notify the Engineer/Departmental Representative in advance to allow the Engineer/Departmental Representative to witness the Contractor's findings. The Contractor shall submit a written report on the findings.
(g) All manhole and pipe gaskets shall be replaced.

No repair work shall be proceeded prior to approval from the Engineer/Departmental Representative. Should any welding repair work be required it shall be performed by a coded welder in accordance with acceptable practices, codes and norms.

Should the corrosion lining be damaged or corroded, thus necessitating the relining of the vessel, this shall be done with an approved lining suitable for the water quality and operating temperature under which this system is functioning.

For further details on repair to resisting linings and installation of new linings refer to FC11.06.

All safety valves shall be serviced, overhauled and readjusted to the correct safety pressure blow-off part.

All lagging and cladding shall be inspected, repaired and where necessary replaced.

On completion of all repair and service work the Contractor shall reinstate all equipment, fill the hot-water vessel with water and pressure test it to 1,5 times the permissible operating pressure or allowable test pressure.

On passing of the pressure test the Contractor shall re-commission the hot-water vessels and put it back on line.

FC 11.04.02 New hot-water storage vessels

Where new hot-water storage vessels are to be installed it shall be done in accordance with the following specification and on approval of the necessary workshop drawings to be provided by the Contractor.

The storage vessels shall be of the vertical cylindrical type with dished ends on both sides, and shall be manufactured to BS 5500 Category II in mild steel for a working pressure as indicated for the three systems. A pressure test certificate for each vessel shall be supplied by the manufacturer.

The vessel shall be equipped with at least the following :

(a) Properly sized flanged manhole for easy access
(b) Flanged inlets and outlets to SANS 1123 Table 10
(c) Sparge pipe on the cold-water inlet
(d) Correctly sized thermometer
(e) Correctly sized temperature and pressure relief valve
(f) Air release valve
(g) Correctly sized pressure gauge
(h) BSP threaded sockets for thermostats
(i) 40 mm diameter BSP threaded socket at the lowest point of the storage tank for draining purposes
(j) 50 mm diameter boss element segments for auxiliary elements.

An expansion relief valve shall be installed on the inlet to the storage vessels for thermal expansion.

Where pipe connections to the storage vessel are done by dissimilar materials (such as copper), isolating flanges shall be used (dielectric coupling).

Before ordering and manufacturing of storage vessels a workshop drawing shall be submitted to the Engineer/Departmental Representative for approval.

The Contractor shall satisfy himself that access and plantroom sizes are to the dimensions on the drawings and that the equipment will fit into the space allowed.

FC 11.04.03 Heating sources for hot-water storage vessels

(a) Electrical elements

Where electrical immersion elements are used to heat the water inside the hot-water storage vessel, these elements shall be replaced at the start of the repair and maintenance contract.

All the thermostat controls and safety cut outs shall be cleared, inspected, tested, adjusted to the correct valve and where necessary replaced.

(b) Steam heating

Where steam heat exchangers are used to heat the water inside the storage vessel, these coils shall be removed together with the steam chest and associated equipment. The coils shall be de-scaled, cleaned, inspected and tested.

Where necessary the heat exchanger and/or coils shall be replaced.

FC 11.05 LAGGING AND CLADDING

All lagging and cladding to hot-water vessels, primary heaters, secondary heaters and hot and circulation water piping shall be inspected for defects, damages and shortages at the start of the repair and maintenance contract. The Contractor shall report his findings to the Engineer/Departmental Representative in writing.

All repairs to be done shall match the existing installation and the Contractor shall ensure that no sharp edges from the metal cladding pose a danger to anybody.

The following specification shall be adhered to:

(a) Vessel lagging and cladding

The storage vessels shall be insulated with a 80 mm thick layer of mineral glass wool with a density of 88 kg/m3 and finally covered with 0,6 mm thick galvanized sheet metal. The sheet-metal work has to be done by a specialist. (All edges are to be rolled and no sharp edges will be allowed.)

(b) Hot-water and return water pipe lagging and cladding

All hot water and hot-water return pipes shall be insulated with preformed fibreglass sections covered with galvanized sheet-metal muffs in a water tight manner. Sheet-metal muffs shall be installed with the joints overlapping at least 50 mm and the longitudinal overlap pointing downwards to prevent ingress of water. The sheet-metal muff shall be strapped with 10 mm galvanized straps by means of a strapping tool with a minimum of 2 straps/section. All pipe bends, T-pieces, etc, shall be insulated with 25 mm diameter fibreglass rope covered with a 12 mm thick layer of self-setting fibre cement. A reinforcing gause shall be wrapped over the fibre cement while wet and then painted with mastic paint when dry.

Table FC 11.05/1 below provides a guideline for the preformed fibreglass section thickness to be used.

The fibreglass sections shall have a density of 88 at least kg/m^3.

TABLE FC 11.05/1: FIBREGLASS SECTION THICKNESS

PIPE SIZE (STEEL)	PIPE SIZE (COPPER)	THERMAFLEX THICKNESS
100 mm dia	108 mm dia	50 mm
80 mm dia	76 mm dia	40 mm
65 mm dia	67 mm dia	40 mm
50 mm dia	54 mm dia	25 mm
40 mm dia	42 mm dia	25 mm
32 mm dia	35 mm dia	25 mm
25 mm dia	28 mm dia	20 mm
20 mm dia	22 mm dia	20 mm
15 mm dia	15 mm dia	15 mm

FC 11.06 PRESSURE TESTING

The Contractor shall at the completion of the repair contract arrange for a complete pressure test to be executed on the hot-water generating installation. This shall be done in collaboration with the User Client and Engineer/Departmental Representative to ensure the minimum down-time of the installation, as well as to establish a suitable period for this pressure test. All leaks shall be repaired and the system shall be tested at the cost of the Contractor. This test shall be witnessed by the Engineer/Departmental Representative.

The tests shall be performed on all hot-water storage vessels, primary heating vessels, secondary heater vessels and domestic water pipe systems.

All safety and expansion release valves shall be removed and plugged, and on completion these shall be reinstalled.

The systems shall be filled with water after all branches have been plugged, sealed or closed.

The systems shall be hydraulically pressure tested by means of a suitable manually operated or mechanically driven pressure pump.

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

Tests should not be performed against closed valves.

Leakage which occurs shall be measured, calculated and checked against the allowable losses, as specified in SANS 1200.

If the completed sections comply with all specifications and pass the tests and inspection, it can be approved and the Contractor may be instructed to re-commission the plant.

FC 11.07 CORROSION PROTECTION LININGS

All vessel corrosion protection linings shall be inspected and repaired and/or replaced where necessary.

Repairs shall only be done to linings where the supplier and installer of these linings approve of such repairs. These repairs shall then be done strictly in accordance with the manufacturer's specification and shall be certified by an approved inspection authority.

Where new linings are to be installed, the required preparation work including sand blasting and removed of old lining shall be done in accordance with the recommendation of the supplier of the new lining.

Where new linings are to be introduced they shall be similar or equal to the following:

Internally coated with a durable, high operating temperature glass flake lining with DTF of one millimetre, similar or equal to a Polygrass VE lining as supplied by Corrocoate, suitable for an operating temperature of 95^{o}C at the indicated working pressures.

The applications of these linings shall be witnessed and certified to the manufacturer's application standards by an approved inspection authority.

Externally the vessels shall be coated with two coats of red oxide paint.

FC 11.08 STERILISATION OF WATER SIDE OF INSTALLATION

The Contractor shall at the completion of the repair contract sterilize the complete water side of the hot-water system including vessels and pipes.

This shall be done as described in the following guidelines.

The complete system shall be filled with potable water chlorinated to a concentration of 15 mg of chlorine per litre of water which shall remain in contact with the inner surface of the pipeline for a period of not less than 24 hours. The pipeline shall be filled for sterilizing in such a manner that no chlorine shock is created or air is trapped in the pipeline.

The Contractor shall submit full details of the proposed method for sterilizing the pipeline to the Engineer/Departmental Representative for approval at least 14 days before commencing sterilizing.
The cost of water for filling the pipeline for sterilizing shall be borne by the Contractor.

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

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

(i) Chloride of lime to SANS 295 yielding 33 % free chlorine by mass;
(ii) Calcium hypochlorite to SANS 295 yielding 70 % free chlorine by mass;
(iii) Chlorine gas applied by chlorinator.

After sterilization, an approved water quality test to a minimum number of 10 % of the total water points, randomly selected, evenly spread and marked on drawings, shall be carried out. This test shall include a full bacteriological test as per SANS 241 and the results shall be submitted to the Engineer/Departmental Representative for inclusion in the Contract documents. Each abortive test shall be for the Contractor's cost.

When tested the water shall comply with the limits given in column 2 or 3, as relevant, of table FC 11.08/1.

TABLE FC 11.08/1: BACTERIOLOGICAL REQUIREMENTS

PROPERTY	RECOMMENDED MAXIMUM LIMIT	MAXIMUM ALLOWABLE LIMIT
Total coliform bacteria count per 100 millilitre	Nil*	5
Faecal coliform bacteria count per 100 millilitre	Nil	Nil
Standard plate count per millilitre	100	Not specified

Note:

* If any coliform bacteria are found in a sample, take a second sample immediately after the tests on the first sample have been completed; this sample shall be free from coliform bacteria.

Not more than 5 % of the total number of water samples (from any one reticulation system) tested per year may contain coliform bacteria.

FC 11.09 HEATING CONTROL EQUIPMENT

The Contractor shall at the start of the repair and maintenance contract inspect, test, repair, readjust, and if necessary replace heating controls for the hot-water system.

This shall include the following:

(a) Check for correct switching and/or control temperature operating points.
(b) Check, test and ensure that the safety cut-out mechanisms are in place and switch and/or control at the correct level.
(c) Ensure that equipment has been installed in accordance with the manufacturer's specification.
(d) Ensure that all pockets are de-scaled and free of any defects.

The following control equipment shall be serviced, repaired and where required replaced if damaged beyond repair.

FC 11.09.01 Steam heating control equipment

Where immersed type thermostatic steam control valves are utilised they shall be serviced and repaired as follows:

(a) Dismantle and strip down thermostatic control valve including removal of pocket.
(b) De-scale and clean all equipment.
(c) Replace element subassembly if necessary.
(d) Replace cover joint, gland packing, heater joint, coupling joint and all gaskets where applicable.
(e) Check valve seat and if necessary reseat.
(f) Reassemble control valve and reinstall, test and adjust to correct level.

All other type of thermostatic heating control valves shall be serviced, repaired and overhauled in accordance with the manufacturer's specification.

FC 11.09.02 Electrical heating control equipment

All electrical thermostat control equipment shall be serviced and repaired in accordance with the manufacturer's specification. This shall include the following:

(a) Dismantle, clean and de-scale thermostat pockets.
(b) Test switching actions for correct operation.
(c) Test safety cut-out switching points for correct operation.

Replace thermostat if the switching does not take place in accordance with the manufacturer's specification.

FC 11.10 PRIMARY AND SECONDARY PUMP INSTALLATIONS

The Contractor shall at the start of the repair and maintenance contract inspect, test, service and if required replace primary and secondary circulating pumps.

The pumps are to be inspected, tested, serviced and repaired together with their associated equipment and pipework. All repair and service work shall be done strictly in accordance with the manufacturer's specification.
The repair work to the pumps and equipment shall include at least the following:

(a) Inspect and test the pumps for correct operation.
(b) Replace gland packings, seals and gaskets.
(c) Inspect and test for any bearing noise and replace if necessary.

(d) Clean out pump strainers, check non-return valves, valves, etc.
(e) Test pump motor windings for balance phases, insulation test and check wiring.
(f) Inspect pump mountings and repair if necessary.

Where in-line glandless canned pumps are used, these shall be inspected, tested, serviced where possible, impeller inspected and cleaned and if found beyond repair, replace with a suitable replacement in accordance with the operating parameters.

FC 11.11 DOMESTIC HOT AND COLD WATER INSTALLATIONS

The Contractor shall at the start of the repair and maintenance contract inspect, tests, service, repair and if required, replace damaged items on the complete hot and cold-water piping installation inside the hot-water generating plant rooms.

The repair work specification shall be read in conjunction with Technical Specification AA: Plumbing and Drainage Installations.

Repair work to the domestic hot and cold-water installation networks shall be as detailed in the Particular Specification and shall include, but not be limited to the following:

(a) Replace damaged, broken, leaking and corroded above and underground pipework, fittings and equipment.
(b) Repair, replace and service valves, including new gaskets, gland packings, seals, bolt and nuts, etc.
(c) Test the proper closing of all valves and where valves do not close properly, the valves shall be refurbished, de-scaled and if necessary replaced.
(d) Repair, clean and service all strainers including replacement of strainer elements where corroded and installation of new gaskets.
(e) Repair, service, test and readjust pressure-reducing valves. Pressure gauges shall be recalibrated and checked. Up and downstream pressures are to be logged. Downstream pressure to be adjusted to an acceptable level taking the allowable working pressure of the system and its components into account.
(f) Repair, service and check the proper functioning of all non-return valves.
(g) Repair, service, readjust and calibrate all safety and expansion relief valves.
(h) Repair, service and clean out all air release valves and vacuum breakers.
(i) Do repair work to bracketing systems including fixing and repair of existing brackets and the introduction of additional brackets where required.
(j) Hot-water pipe lagging and cladding shall be inspected, repaired, sealed and replaced where required.
(k) Repair, service and log readings of water meters including cleaning of integral strainers.
(l) Water pipes are to be sampled for corrosion and scaling. The Engineer/Departmental Representative shall evaluate the actions to be carried out if the outcome of this sampling requires attention.
(m) Water supply shall be sampled and chemically analyzed for the suitability to the systems and materials it serves.
(n) Pressure test and sterilize repaired new installation and equipment.
(o) Reinstate and make good walls, tiling, floors, concrete, finishes, holes, chases, surfaces, etc, to an acceptable level where any repair, upgrade and/or service work has been executed.

FC 11.12 ELECTRICAL INSTALLATION, WIRING AND CONTROL PANELS

FC 11.12.01 Instrumentation and controls

All instrumentation and control equipment shall be inspected, tested, repaired, adjusted and where necessary replaced. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the instrumentation and control equipment shall include at least the following:

(a) Test all equipment for correct operation.
(b) Inspect, test, service, adjust setting and if necessary repair, and/or replace steam detector.
(c) Inspect, recalibrate and, if beyond repair, replace steam pressure gauge.

FC 11.12.02 Electrical control panels

All electrical control panels shall be inspected, tested, and repaired, including all equipment inside the control panel. All repair and service work shall be done strictly in accordance with the manufacturer's specification.

The repair work to the electrical control panels shall include at least the following:

(a) Test all control equipment for correct operation.
(b) Check and test all MCBs, isolators, contactors, overloads, other type of motor drives, pilot lights, control switches, etc, and readjust all set points; where equipment is found to be faulty these shall be replaced with new approved equipment.
(c) Check all wiring and connections for proper conducting and replace where hot connections are found.
(d) Clean out panel interior and exterior, inspect panel body, fascias, doors, paintwork, etc, and repair where necessary.

FC 12 MAINTENANCE TO INSTALLATIONS AND EQUIPMENT

FC 12.01 GENERAL

Monthly maintenance responsibilities for each installation including all units and components as specified, shall commence with access to the site. A difference shall be made in payment for the maintenance prior to and after practical completion of repair work. Maintenance responsibilities of the completed installation shall commence upon the issue of a certificate of practical completion for repair work, and shall continue for the remainder of the 36-month contract period.
This part of the Contract shall include:

(a) Routine preventative maintenance;
(b) Corrective maintenance, and
(c) Breakdown maintenance,

as defined in for the specified installations described under FC 01 of this specification.

The maintenance work to be performed and executed shall be done strictly in accordance with General Maintenance, and as specified in Particular Specification PFC and this specification.

The said maintenance work shall be executed in accordance with the relevant codes of practice, statutory regulations, standards, regulations, municipal laws and by-laws and the manufacturers' specifications and codes of practice.

The maintenance schedules and frequency shall be developed under the maintenance control plan to be instituted by the Contractor, as specified in General Maintenance.

All new equipment, components and materials supplied and installed under the maintenance contract shall be furnished with a prescribed manufacturer's guarantee.

The maintenance work and items are to be categorized by the Contractor for each maintenance activity under the following headings:

(a) Steam and condensate pipework (where applicable)
(b) Hot-water storage vessels
(c) Heating equipment
(d) Lagging and cladding of vessels and piping
(e) Corrosion protection linings
(f) Circulating pumps
(g) Domestic hot and cold-water piping systems
(h) Electrical controls, panels and wiring.

The Contractor shall be remunerated monthly, based on his performance, for maintaining the complete installation in a perfect functional condition.

FC 12.02 ROUTINE PREVENTATIVE MAINTENANCE

The routine maintenance of the installations, systems and equipment shall be done in accordance with General Maintenance and the Particular Specification related to this work.

The routine maintenance work to be performed and executed shall include but not be limited to the items listed in tables FC 12.02/1, FC 12.02/2, FC 12.02/3 and FC 12.02/4 below under the respective headings. These actions and findings shall be logged and reported on the relevant approved schedules and reports.

TABLE FC 12.02/1: WEEKLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY	ACTION
1	Inspect equipment, components and installations for any visible defects, leaks, damages and/or pending faults. Check/Record	Contractor	
2	Check and record all pressure gauge temperature and flow meter readings, and readjust equipment if necessary. Adjust/Check/Record	Contractor	
3	Check operation of pumps, heating equipment and controls for correct functioning. Check/Record	Contractor	
4	Check electrical control panels for any faults. Check/Record	Contractor	
5	Report any faults, defects, leaks, damages, etc, to Engineer/Departmental		

Representative. User/Client
Check/Record/Report

TABLE FC 12.02/2: MONTHLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY	ACTION
1	All as listed under table FC 12.02/1	Contractor/User Client	Check/Record/Adjust/Repair/Report
2	Blow down all dirt pockets and record.	Contractor	Service/Record
3	Clean out all strainers and record.	Contractor	Service/Record
4	Check all valve gland seals and packings for leaks and replace and repair if necessary.	Contractor	Check/Service/Repair/Record
5	Check, inspect and repair if necessary all expansion joints for leaks and damages.	Contractor	Check/Repair/Record
6	Check all safety devices for correct operation and repair and replace where necessary.	Contractor	Check/Service/Repair/Record
7	Check and test all electrical control functions and operations. Repair and report any faults and defects.	Contractor	Check/Service/Repair/Record
8	Complete logbook and report.	Contractor	Report

TABLE FC 12.02/3: FOUR-MONTHLY ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY	ACTION
1	All as listed under tables FC 12.02/1 and FC 12.02/2.	User Client/ Contractor	Check/Record/Adjust/Repair
2	Service, repair, clean, replace seals gaskets, reset and/or replace worn parts as directed by the manufacturer of all steam traps (where applicable).	Contractor	Check/Service/Repair/Report
3	Service, repair, replace glasses and gaskets where necessary and clean all sight glasses.	Contractor	Check/Service, Repair, Report
4	Repair lagging and cladding where necessary.	Contractor	Check/Repair/Report
5	Repair all steam leaks.	Contractor	Check/Repair/Report
6	Repair all water leaks.	Contractor	Check/Repair/Report
7	Inspect and test all heating equipment		

	Repair where necessary.	Contractor	
Check/Repair/Report			
8	Inspect all hot -water storage vessels for any leaks and packing faults.		
	Repair if necessary.	Contractor	
Check/Repair/Report			
9	Test, inspect and repair all pumps.	Contractor	Check/Service/
Repair/Report			
10	Lubricate all lubrication points in accordance with the manufacturer's specification.	Contractor	Check/Service/
Report			
11	Complete logbook and report.	Contractor	
	Report		

TABLE FC 12.02/4: ANNUAL ACTIONS AND MAINTENANCE

ITEM	MAINTENANCE DESCRIPTION	ACTION RESPONSIBILITY	
	ACTION		
1	All as listed under tables FC 12.02/1, FC 12.02/2 and FC 12.02/3.	User Client / Contractor	Check/Record/
Adjust/Repair			
2	Drain, clean out, inspect and repair all defects and linings on hot-water storage vessels.	Contractor	Inspect / Test / Service /
Repair			
3	Inspect and repaint all equipment where required.	Contractor	Inspect / Test / Service /
Repair			
4	Remove, strip, service, repair, adjust and replace where necessary all pressure control and safety valve equipment.	Contractor	Service / Repair / Adjust /
Report			
5	Complete logbook and report.	Contractor	
Report			

FC 12.03 CORRECTIVE MAINTENANCE

This corrective maintenance of the installations, systems and equipment shall be done in accordance with General Maintenance, and the Particular Specification related to this work.

The Contractor shall inspect and check all equipment, materials, systems and installation for any pending breakdowns, maladjustments or anomalies of equipment.

The Contractor shall report and take actions to correct such shortfall.

FC 12.04 BREAKDOWN MAINTENANCE

Breakdown maintenance of the installations, systems and equipment shall be done in accordance with General Maintenance.

All breakdown problems experienced shall be acted upon within the time limitations allowed in the General Maintenance specifications.

All breakdown maintenance shall be done in accordance with the relevant specifications, standards, regulations and codes.

The Contractor shall have access to the necessary spares, equipment and tools for any possible breakdown.

PRICING SCHEDULE/ BILLL OF QUANTITIES

Bid no: GQET-2026/2027-012

Bid/ Project Description: MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS

Department of Correctional Services						
Mechanical Term Contract						
Shedule 1		Preliminary and General				
Payment	Item	Description	Qty	Unit	Rate	Amount
		Conditions of Contract: Compliance with contractual requirements and obligations in terms of Contract and Contract Data				
	1003	Conditions accepted as elsewhere measured: Time related	1	sum		
	1004	Surety, performance bond: Fixed	1	sum		
	1005	Insurance: Construction works: time related	1	sum		
	1006	Insurance: Public Liability: Time related	1	sum		
	1007	Insurance: Special Risks: (SASRIA): Time related	1	sum		
	1008	Insurance: Occupational Compensation (COID): Time related	1	sum		
	1009	Programme of Works: Maintaine current: Time related	1	sum		
	1010					
	1011					
		Facilities as specified or necessary for the duration of the contract including establishment at commencement and removal upon completion				
	1013	Admin facilities: Site Instruction book, communications etc	1	sum		
	1014	Scaffolding - Acquire and install complete for safe use. Use and remove from site as required. Priced complete per meter high (verticle)	100	m		
		Occupational Health and Safty: Compliance with the applicable Act including specified additional requirements				
	1016	Safety Officer appointment	1	sum		
	1017	Submit Health and Safety Plan Must incl. COVID H&S prevention plan	1	sum		
	1018	First Aid kit: Supply and maintain on site for duration of contract.	1	sum		
	1019	Monthly Safety meetings: Conduct and record print all proceedings.	1	sum		
	1020	Balance of safety related compliance including HIV requirements	1	sum		
		Supervision and Management of the progress of construction works including the attendance at meetings at the site with the Departmental Representative / Engineer as and when required, including quality control of all work done by technical staff.				
	1021	Supervision and Management	1	sum		
	1022	Access control and identification of staff	1	sum		
	1023	Quality system	1	sum		
CARRIED FORWARD						

		Brought forward				
	1024	Monthly expences - telephone, Fax, cell phone, e.mail facilities - to be available 24hrs a day / 7 days a week	1	sum		
		Additional tests				
	1026	Additional tests required by theDepartmental Representative/Enginee	1	sum	80000	
	1027	Attendance and profit on item 1026	%	……..	10	
		Provision and reporting of required contractor staff / subcontractor / additional employment.				
	1030	Monthly EPWP/NYS reporting and submission of all on site staff personel information, as required by the department. The information as per the example (three sheets) included under additional documents, shall be completed and priced for submission per month.	36	months	120	
		Waste removal, recycling and disposal				
	1032	All waste materials and liquids to be removed from site and disposed in an approved or identified dumping site such that accumulation of waste does not unsafely restrict access to site for the full duration of the contract (36 month contract). Priced per month. Wherever possible waste material will be recycled.	36	months	1000	
		Provision of Personal Protective Equipment (PPE)				
	1033	Where required, contractors shall provide all employees with all required PPE, such as safety shoes, protective gloves and ear and eye protection for the full duration of the contract (36 month contract). Priced per month. (as per SI OHS specification)	36	months	1500	
		Asbestos removal				
	1034	Complete removal and disposal of any asbestos material in accordance with the OHS act of 1993. The price shall include and take into account, the procedure and documentation required for the disposal thereof.	50	Kg	20	
	1035	Supply and installation of project name board, as per sample drawing attached.	1	no	10000	
TOTAL FOR PRELIMINARY AND GENERAL - CARRIED FORWARD TO SUMMARY PAGE						

Schedule 2						
		FA 1 - Steam generation - Horizontal coal fired boilers				
Ref	**Item**	**Description Contractor to note that all work conducted on the boilers and other items mentioned in this tender, shall be done in accordance with manufacturer's specification.**	**Unit**	**QTY**	**Rate**	**Amount**
		GENERAL				
FA 04		**As-built information and Operating and Maintenance Manuals:**				
SB 05.01 FA 04	02001	Obtaining of all available information, compiling, reproducing (1) one set of hard copy as-built and operating & maintenance manuals as specified in SB 05.01 and FA 04. Documents to be handed over to the Departmental Representative / Engineer.	sum	1		
	02002	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.	sum	1		
FA 05	02003	Logging and recording of operating of conditions, services, maintenance visits, reports, breakdowns, samples, inspections, tests etc.	sum	1		
		STATUTORY INSPECTIONS FOR 12 MONTH AND 36 MONTH BOILER INSPECTIONS				
FA 15.02	02004	Decommission and isolate boiler for preparation of statutory 12 and 36 month inspections and tests.	sum	1		
FA 15.02	02005	**12 month inspection:** Preparation of boilers for internal fire (gas) side / external inspection, including removal of chain grate, welding seam covers and insulation and cladding, as required by the Occupational Health and Safety Act, No 85 of 1993 and witnessed by the approved Inspection Authority.	sum	1		
FA 15.02	02006	**36 month inspection:** Preparation of boilers for internal fire and water side / external inspection, including removal of chain grate, all insulation and cladding, as required by the Occupational Health and Safety Act, No 85 of 1993 and witnessed by the approved Inspection Authority.	sum	1		
		Carried Forward				

		Brought Forward				
FA 15.02.03	02007	**12 month inspection:** Allow for the cost of Inspection Authority to perform all required inspections and tests related to the internal/external inspection as required by the Occupational Health and Safety Act, No 85 of 1993, including submission of all reports/certificates and completion of the necessary record books.	sum	1		
FA 15.02.03	02008	**36 month inspection:**Allow for the cost of Inspection Authority to perform all required inspections and tests related to the internal/external inspection as required by the Occupational Health and Safety Act, No 85 of 1993, including submission of all reports/certificates and completion of the necessary record books.	sum	1		
FA 06.02.01	02009	**12 and 36 month inspection:** Allow for all the required assistance, notices, tools, equipment, etc, for the Inspection authority's inspection and tests.	sum	1		
FA 15.02.04	02010	**12 and 36 month inspection:** Preparation of boilers for hydraulic pressure tests, as required by the Occupational Health and Safety Act, No 85 of 1993, including all required equipment and tools necessary to pressurize the boiler under pressure for the inspection Authority's witnessing and certification of test.	boilers	1		
		REQUIRED WORK TO BOILERS DURING STATUTORY INSPECTIONS				
		Boiler shell water side:				
	02011	Clean out and de-scale complete boiler (acid pickle) once (1) including final refilling of the boiler with treated water.	no	1		
	02012	Replace one manhole cover seal, including the installation of all items ready for pressure testing.	no	1		
	02013	Replace all manhole, hand-hole, mud-hole cover seals and joint rings, including the installation of all items ready for pressure testing.	no	1		
		Carried Forward				

		Brought Froward				
	02014	Additional boiler shell thickness test, as directed by the Inspection Authority.	m^2	1		
	02015	Additional boiler welding crack test, as directed by the Inspection Authority.	m^2	1		
	02016	Additional X - Ray Tests to the boiler shell water side and welds, as directed by the Inspection Authority.	m^2	1		
	02017	Additional Non Destructive Test to the boiler shell water side and welds, as directed by the Inspection Authority.	m^2	1		
	02018	Additional Magnetic Particle Test to the boiler shell water / steam and welds, as directed by the Inspection Authority.	m^2	1		
	02019	Complete de-scale, de-rust and clean boiler shell. Prepare and repaint boiler external shell with undercoat and 2 (two) coats of approved steam boiler shell coating.	m^3	1		
		Boiler shell gas side:				
	02020	Clear and clean all fire tubes to remove dust, slag, ash, grit and foreign matter, ready for inspection.	no	1		
	02021	Brush and clean out all fire tubes by means of (shot / water blast / scatter scaler to remove carbon residue) ready for inspection.	no	1		
	02022	Inspect boiler gas side, document condition and observations and deliver report to the Authorised Inspection Authority / Departmental Representative / Engineer.	no	1		
	02023	The complete removal and replacement of steam boiler gas tubes, as specified by the boiler manufacturer. The completed work shall be inspected and certified by an Authorised Inspection Authority and witnessed by the Departmental Representative / Engineer. Relacement includes boiler commissioning.	no	1		
		Carried Forward				

		Brought Forward				
	02024	The complete removal and replacement of boiler stay tubes, as specified by the boiler manufacturer. The completed work shall be inspected and certified by an Authorised Inspection Authority and witnessed by the Departmental Representative / Engineer. Relacement includes boiler commissioning.	no	1		
	02025	Prepare, clean and repaint all pipework / walkways / galleries (external) on boiler. Paint colour to suit existing.	m^2	1		
		Boiler valves and mountings complete per boiler:				
	02026	Dismantle, remove and strip down all boiler valves.	no	1		
	02027	De-scale and clean all boiler valves and mountings.	no	1		
	02028	Inspection of all boiler valves and mountings.	no	1		
	02029	Overhauling all boiler valves by a Certified Technician.	no	1		
	02030	Hydraulic testing, setting, adjustment and reassembling of all boiler valves.	no	1		
	02031	Certification of all boiler valves in accordance with manufacturer's specification.	no	1		
	02032	Refitting, installing, testing and adjustment of all boiler valves and mountings.	no	1		
		Refractories and brickwork:				
	02033	Remove and break down all boiler refractories and brickwork.	no	1		
	02034	Recast and complete installion of all new rear flue brick work, with new on completion of inspection.	no	1		
	02035	Recast and complete installation of all new ignition and flue arches with new on completion of inspection.	no	1		
		Carried Forward				

		Brought Forward				**0.00**
		Boiler soot blowers				
	02036	Dismantle, remove and strip down soot blowers.	no	1		
	02037	Clean all soot blower components.	no	1		
	02038	Inspection of soot blowers.	no	1		
	02039	Complete overhauling of boiler soot blower.	no	1		
	02040	Testing of soot blowers.	no	1		
	02041	Lubrication of soot blowers where required.	no	1		
	02042	Complete refitting, installion, testing, commissioning and adjustment of soot blower.	no	1		
	02043	Remove old redundant packing, repack soot blower with new packing, including commission and testing.	no	1		
		Boiler chain grate (Stoker mat)				
		Remove and complete replacement of boiler chain grate damaged / defective parts. The replacement shall include the decommissioning of the boiler and all items required to install defective parts before recommission and testing boiler chain grate for full operation.				
	02044	Removal and complete replacement of boiler chain grate common links.	no	1		
	02045	Removal and complete replacement of boiler chain grate drive links.	no	1		
	02046	Removal and complete replacement of boiler chain grate side links.	no	1		
	02047	Removal and complete replacement of boiler chain grate drive link rods. The replacement shall include washers and split pins.	no	1		
	02048	Removal of complete chain grate, ready for cleaning and inspection of boiler fire side.	no	1		
	02049	Re installation of chaingrate after inspection, including chain grate commissioning.	no	1		
		Carried Forward				

		Brought Froward				**R -**
		Chain grate drive mechanism and accessories				
	02050	Remove and complete replacement of chain grate drive motor including complete installation.	no	1		
	02051	Remove and rewind chain grate drive motor including complete installation.	no	1		
	02052	Replace chain grate drive gearbox complete.	no	1		
	02053	Remove and total overhaul and recomission of drive gearbox, including complete installation.	no	1		
	02054	Remove and complete replacement of chain grate rear roller.	no	1		
	02055	Remove and complete replacement of chain grate front (Sprockets) roller complete.	no	1		
	02056	Remove and complete replacement of all chain grate side seals complete per boiler.	no	1		
	02057	Remove and complete replacement of chain grate carbofrax blocks end stops.(Retaining ends)	no	1		
	02058	Remove and complete replacement of chain grate carbofrax block stays/keeps.	no	1		
	02059	Remove and complete replacement of all chain grate carbofrax blocks.	no	1		
	02060	Remove and complete replacement of chain grate drive cogs. Per set of two (2).6 Sets	no	1		
		Boiler lagging, insolation and steel cladding.				
	02061	Remove and reinstall all removed lagging and cladding in preperation of statutory inspections as per manufacture specification.	sum	1		
	02062	Remove and complete replacement of damaged lagging / insolation sections to suit existing and installed as per manufacture specification.	m^2	1		
	02063	Remove and replace damaged metal cladding sections to suit existing and installed as per manufacture specification.	m^2	1		
		Carried Forward				**R -**

		Brought Forward				**R -**
		Boiler feed-water tank.				
	02064	Service as per Technical Specification FA 15.03.02	sum	1		
	02065	Remove and replace lagging and insulation with new galvanised sheeting to suit existing.	m²	1		
SC.12.01						
		FEED-WATER EQUIPMENT AND CONTROLS				
		Feedwater tank additional requirements:				
	02066	Adjust make-up water ball float valve to correct level.	sum	1		
	02067	Check and adjust tank temperature control system c/w all valves and sparge pipe.	sum	1		
		Boiler feed-water pumps:				
SC.12.02						
	02068	Complete replacement of 1 (one) boiler feed pump and motor complete to match manufactuerers specifications.	no	1		
	02069	Isolate boiler, strip, dismantle, de-scale and clean out feed water-pumps.	set	1		
	02070	Inspect and report on condition of pump and motor components.	no	1		
		Carried Forward				**-**

		Brought Forward				**R -**
	02071	Replace packings, seals, pump and pump motor bearings and gaskets.	no	1		
	02072	Replace and worn-out or/and damaged impellers, diffusers and stage casings to suit existing, all inclusive of all gaskets and seals.	sum per stage	1		
	02073	Clean out pump strainers	set	1		
	02074	Inspect and repair pump mountings	set	1		
	02075	Remove insulation and cladding from feed water suction line and delivery line and set cladding aside for reuse. Replace insulation with rock wool insulation, refit cladding and paint over if applicable to mild steel.	m^2	1		
	02076	Overhaul existing feed water check valves and test for correct operation.	no	1		
		Refit, install and test feed-water pumps	set	1		
		Boiler water - level equipment and controls:				
	02077	Dismantle, strip, de-scale and clean, replace dual and single switch float operated controls (Mobrey type)	set	1		
	02078	Supply and install new switch float operated controls (Mobrey type)	no	1		
	02079	Dismantle, strip, de-scale and clean both (2) water-level gauge glasses. Replace all with new, gauge glasses, rubbers, graphite gaskets and refit to boiler. Graphite Spindle bushes and spindles)	set	1		
	02080	Supply and install new single gauge glass with two rubbers. Refit to boiler.	no	1		
	02081	Supply and install new single gauge glass shut off valve shaft handle. Refit to boiler.	no	1		
	02082	Supply and install new single gauge glass shut off valve shaft. Refit to boiler.	no	1		
	02083	Supply and install new single gauge glass shut off valve graphite gasket. Refit to boiler.	no	1		
	02084	Dual and single level controls to be overhauled, inspected, tested, adjusted and refitted.	set	1		
	02085	Test alarm levels and operation and recalibrate.	set	1		
SC.12.02	02086	Test dual mobrey controls for correct operation and recalibrate.		1		
	02087	Inspect repair, reconditioning, comissioning, high water level controls.	no	1		
		Carried Forward				**R -**

		Brought Forward				**R -**
	02088	Inspect repair, reconditioning, comissioning, low water level controls.	no	1		
	02089	Remove and complete replacement / comissioning of new low water level control.	no	1		
	02090	Remove and complete replacement / comissioning of new high water level control.	no	1		
	02091	Remove and complete replacement / comissioning of new water level control alarm.	no	1		
		Additional boiler related items				
	02092	Inspect, test, service and recalibrate steam pressure gauge. Includes issue of certificate.	no	1		
	02093	Remove and repack gland packing on boiler main crown valve.	no	1		
	02094	Remove and repack boiler blowdown gland packing with new packing, including new stainless steel studs, nuts and washers.	no	1		
	02095	Remove and replace ID fan belts (one), including comissionion.(Match sets)	no	1		
		Boiler chemicals and softner plant				
	02096	Remove, supply and install new pressure pump and electric motor, to suit existing. Including commissioning.	no	1		
	02097	Remove, supply and install new pressure pump pressure vessel and bladder, to suit existing. Including commissioning.	no	1		
		Carried Forward				**R -**

		Brought Froward				R -
	02098	Remove, supply and install new pressure pump gauge, non return valve and pressure switch, to suit existing. Including commissioning.	no	1		
	02099	Supply, delivery and installation of steam boiler chemical plant for boiler working at full capacity, minimum of 17 hours per day, 7 days a week. Chemicals supplied shall conform to the boiler manufactures specification. Sufficient boiler chemical shall be kept on site at all times and the item shall be priced all inclusive for one months supply of chemicals.	no	1		
		Ducting:				
	02100	Inspect and clean all gas ducting	no	1		
	02101	Replace all joint seals and gaskets with new	no	1		
	02102	Prepare and repaint gas ducting	m^2	1		
	02103	Weld socket on gas ducting and install new dial type gas thermometer to suit existing.	no	1		
	02104	Remove and replace main stack support brackets and cables.(Price per stack)	no	1		
		Carried Forward				R -

		Brought Froward				R -
		COAL HANDLING AND CONVEYING EQUIPMENT				
		Coal bunker:				
	02105	Inspect and clean out coal bunker for full access to the complete coal screw below ground level. Allowance shall be made by the contractor for the removal of coal.	m^3			
	02106	Reinstall coal removed from coal bunker. Allowance shall be by the contractor for the install of coal.	m^3	1		
	02107	Supply, deliver, install, test, commission and handing-over of a new permanent 1.5 Kw submersible pump installation inside coal conveying equipment chamber below coal bunkers. (Coal bunker drain sump)	no	1		
	02108	Remove, clean, test, reinstall and commission submersible pump inside coal conveying equipment chamber, below coal bunkers.	no	1		
		Coal conveying equipment:				
	02109	Remove and complete replacement of high level vertical coal screw with equivalent new unit, complete screw with new tube casing	no	1		
	02110	Dismantle, strip down and replace worn flights on vertical coal screw shaft, refit.	M	1		
	02111	Inspect and service conveyor gearbox drive chains and gears.	no	1		
	02112	Remove and complete replacement of conveyor gearbox to suit existing.	no	1		
	02113	Remove and complete replacement of two (2) conveyor gearbox drive chain gears to suit existing.	no	1		
		Carried Forward				R -

		Brought Forward				**R -**
	02114	Test, inspect, service, commission motor drives and gear boxes, including testing windings for	no	1		
	02115	Lubricate all required lubrication points and replace gearbox oil as directed by the	no	1		
	02116	Remove and complete replacement of boiler coal receiving hopper and coal shut-off door.	no	1		
	02117	Remove and complete replacement of coal screw control panel/s. To match existing installation.	no	1		
	02118	Inspect, clean, test electrical control panel and controls.	no	1		
	02119	Prepare and clean complete coal screw casing, prepare and repaint with two coats of approved paint.	no	1		
	02120	Remove and complete replacement / comissioning of new coal screw drive motor and coupling, including commission.	no	1		
	02121	Remove and complete replacement of new vertical coal screw gearbox and coupling, including commissioning. Gearbox shall suit existing.	no	1		
	02122	Remove and complete replacement / comissioning of horizontal cross feed coal screw with gear box and motor. Gearbox shall suit existing.	no	1		
	02123	Remove and complete replacement of horizontal coal screw 150 mm diameter x 12 m.	no	1		
	02124	Remove and complete replacement of coal screw outer tube 150 mm or to suit diameter x 12 m. inclusive of flanges and bolts.	no	1		
	02125	Remove and complete replacement of coal screw coupling.	no	1		
		Carried Forward				**R -**

		Brought Forward				**R -**
		COAL TESTING **NOTE: COAL SUPPLIED BY USER DEPARTMENT**				
	02126	Test coal and report back to Departmental Representative / Engineer on conformance/non-conformance of coal as specified by the boiler manufacturer. Coal testing shall include, collecting sample, transport, test, certification from a approved laboratory. Priced per sample test.	no	1		
		ASH AND GRIT REMOVAL EQUIPMENT **NOTE:**				
		Grit collectors:				
	02127	Inspect, clean out all grit, dust and foreign matter, including inspection of grit collector supports and casing material.	sum	1		
	02128	Inspect all access ports and discharge ports, and replace all joint seals and gaskets with new.	no	1		
		Prepare and repaint complete grit collector, support structure and casing.	m^2	1		
		Ash and grit trolleys:				
SC.12.02						
	02129	The supply, delivery and replacement of (set of 2) new ash trolley wheels to suit existing.(per trolley)	no of sets	1		
	02130	The supply and delivery of a new replacement ash trolley compltete, to suit existing.	no	1		
		Carried Forward				**R -**
		Brought Forward				**R -**

		Brought Forward				R -
		ELECTRICAL INSTALLATION, WIRING AND CONTROL PANELS				
		Boiler Room Distribution Board				
	02131	All wiring to be tidied up, neatly bundled and secured to backing plates, including replacement of an new updated legend card. Submit condition assessment report.	sum	1		
	02132	Removal and replacement of complete Boiler room main distribution board to match existing/comply with current electrical standards including the submission of a Certificate of Compliance.	no	1		
	02133	Inspect, test, service and clean all instrumentation and control equipment.	no	1		
		Boiler mounted electrical control panels:				
	02134	Inspect, test, service and clean all the electrical boiler control panels. Submit condition assessment report.	no	1		
	02135	Any additional tests which may be required by the Departmental Representative / Engineer resulting from the above inspections.	prov			
	02136	Attendance and profit on item 02274	sum	%		
	02137	All wiring to be tidied up, neatly bundled and secured to backing plates, including replacement of an new updated legend card. Submit condition assessment report.	sum	1		
	02138	Removal and replacement of complete Boiler room main distribution board to match existing/comply with current electrical standards including the submission of a Certificate of Compliance.	no	1		
	02139	Inspect, test, service and clean all instrumentation and control equipment.	no	1		
		Carried Forward				R -

		Brought Forward				
		Boiler mounted electrical control panels:				
	02140	Inspect, test, service and clean all the electrical boiler control panels. Submit condition assessment report.	no	1		
	02141	Any additional tests which may be required by the Departmental Representative / Engineer resulting from the above inspections.	prov			200,000.00
	02142	Attendance and profit on item 02274	sum	%		
		General lighting installation:				
		Remove and complete replacement / comissioning of faulty double tube, 58 Watt open channel fluorescent LED fitting	no	1		
	02143	Remove and complete replacement / comissioning of faulty High Bay fitting (Mercury vapour 250 Watt)	no	1		
		Electrical conductors and switchgear				
	02144	P. V. C. single core 600/1000 volt grade conductors supplied and drawn into conduit and measured from point to point.				
	02145	1.5 mm²	m	1		
	02146	2.5 mm²	m	1		
	02147	4 mm²	m	1		
	02148	6 mm²	m	1		
	02149	10 mm²	m	1		
		Bare copper stranded earth conductor supplied and drawn into conduit with other conductors and measured point to point.				
	02150	2.5mm²	m	1		
	02151	4mm²	m	1		
	02152	6mm²	m	1		
	02153	10mm²	m	1		
		Carried Forward				

		Brought Forward				**R0.00**
		Circuit breaker supplied, installed and connected in distribution board:				
	02154	32 A 15 k A single pole	no	1		
	02155	20 A 15 k A single pole	no	1		
	02156	50 A 15 k A single pole	no	1		
	02157	63 A 15 k A triple pole	no	1		
	02158	160 A 15 k A triple pole	no	1		
		Circuit breaker type isolator supplied, installed and connected in distribution board				
	02159	30 A Double pole isolator	no	1		
	02160	60 A Double pole isolator	no	1		
	02161	60 A Triple pole isolator	no	1		
		Electrical 3 phase motor over loads supplied, installed and connected.				
	02162	220 v motor overload	no	1		
	02163	380 v motor overload	no	1		
		Electrical 3 phase boiler electrical panel relays supplied, installed and connected.				
	02164	Combustion control unit	no	1		
	02165	VSD control Siemens/Delta	no	1		
	02166	Boiler water feed pumps relays complete for pump set.	no	1		
		Carried Forward				

		Brought Forward				
		BOILER HOUSE ANCILLARY EQUIPMENT				
		Blow-down sump:				
	02167	Clean blow down sump drain into existing sewage system.	no	1		
	02168	Inspect, clean all blow-down gullies, secure piping and test for coorect blowdown operation.	no	1		
	02169	Repair existing boiler house blow down trench where concrete is cracked and unstable.	m²	1		
	02170	Repair fixing points for covering. Protect covering from corrosion with etch coat primer, paint and make secure and safe.	m²	1		
		Ladders and galleries on one (1) boiler:				
	02171	Clean and inspect ladders and galleries (Cat walks) for any defects, corrosion, mountings and supports.	m	1		
	02172	Repair ladder steps, side rails, gallery (Cat walk) floors and hand rails.	m	1		
	02173	Prepare and repaint ladders and galleries (Cat walks).	m²	1		
		Painting of equipment, plant and building:				
	02174	Clean boiler house interior walls (where painting is not required).	sum	1		
	02175	Clean and prepare walls for painting. Repaint boiler house interior walls with two coats of high quality approved paint, in accordance with the Department's specification PW 371	sum	1		
	02176	Clean and prepare for painting, and repaint boiler house interior floor complete and demarcation lines in accordance with the Department's specification PW 371.	sum	1		
	02177	Clean and prepare for painting, and repaint Boiler House interior roof structural steel, doors and frames, inside roof, etc, in accordance with the Department's specification PW 371.	sum	1		
		Carried Forward				**R -**

		Brought Forward				**R -**
		BOILER HOUSE PIPED INSTALLATIONS				
		Steam and condensate installation:				
	02178	Clean, test, inspect, service all steam and condensate pipe, fittings, accessories, components and equipment inside the boiler house.	sum	1		
	02179	Repair and complete recondition of existing steam traps sets including steam and water side valves.	no	1		
		Blow-down pipe installation, per one (1) boiler:				
	02180	Clean out blow-down pipe channel and remove all old blow-down piping, drain pipework and accessories. (Ensure that the drainange point is piped correctly into the drain pit and functioning properly)	m	1		
	02181	All blow-down and drains pipework to be removed and replaced with steam schedule 40 piping and welded fittings. (Ensure that the drainange point is piped correctly into the drain pit and functioning properly)	m	1		
		BOILER HOUSE MANAGEMENT				
	02182	Establish and implement a system for the system efficiency and boiler performance audit. FA- 14	no	1		
		Boiler House Tools and Equipment				
		Supply new tools and equipment equipment to be utilized for the daily operation of the boiler house and related sytems.				
	02183	Steam boiler blowdown spanner	no	1		
	02184	Steam boiler grate crank handle spanner	no	1		
	02185	Coal shovel (spade)	no	1		
		Carried Forward				

		Brought Forward				
		BOILER HOUSE OPERATION				
	02186	Full operation of steam boilers. Priced all inclusive per month for all **qualified** operators / supervision and related personal to operate and manage the boilers for a minimum of 17 hours per day, 7 day a week, 2 team a shifts per 17 hours to comply with the Labour Relations Act 66 of 1995 (LRA) [NB: this law was amended in 2002 and the Basic Conditions of Employment Amendment Act 2002.	month	36		
		Other boiler related items				
	02187	Any additional replacements which may be deemed necessary by the Departmental Representative / Engineer.	prov			500,000.00
	02188	Attendance and profit on item 02187	sum	%		
		Amount carried forward to final summary page				

Schedule 3

FB - Steam Distribution

Ref	Item	Description	Unit	QTY	Rate	Amount
		Steam pipework, see PFB.01 for further information				
SC12.03	03001	Repair where leaking as per Technical Specification FB12.03(x10 locations)	no	1		
FB 12.03 FB 12.04		**Replacement of existing steam pipe sections, including removal of old pipe line. This shall include cutting, preparing, welding, weld testing by AIA and fitting into place.**				
FB 12.03	03002	15 NB dia. steam pipe with welded seams	m	1		
FB 12.03	03003	20 NB dia. steam pipe with welded seams	m	1		
FB 12.03	03004	25 NB dia. steam pipe with welded seams	m	1		
FB 12.03	03005	50 NB dia. steam pipe inclusive of pipe flanges	m	1		
FB 12.03	03006	80 NB dia. steam pipe inclusive of pipe flanges	m	1		
FB 12.03	03007	100 NB dia. steam pipe inclusive of pipe flanges	m	1		
FB 12.03	03008	150 NB dia. steam pipe inclusive of pipe flanges	m	1		
FB 12.03						
FB 12.03						
FB 12.03						
FB 12.03 FB 12.04		**Replacement of new galvanized pipe cladding and lagging for the below pipe sizes, to include fitment:**				
FB 12.03	03009	15 NB. steam pipe	m	1		
		Carried Forward				

		Brought Forward				**R0.00**
FB 12.03	03010	20 NB dia. steam pipe	m	1		
FB 12.03	03011	25 NB dia. steam pipe	m	1		
FB 12.03	03012	50 NB dia. steam pipe	m	1		
FB 12.03	03013	80 NB dia. steam pipe	m	1		
FB 12.03	03014	100 NB dia. steam pipe	m	1		
FB 12.03	03015	150 NB dia. steam pipe	m	1		
FB 12.03	03016	Replacement of pipe diameter 15 - 25 mm as per Technical Specification FB12.03	m	1		
FB 12.03	03017	Replacement of pipe diameter 32 - 50 mm as per Technical Specification FB12.03	m	1		
FB 12.03	03018	Replacement of pipe diameter 65 - 150 mm	m	1		
SC12.03						
FB 12.03 FB 12.04		**Replacement of existing condensate copper pipe sections 460/2 only, including removal of old pipe line. This shall include cutting, preparing, soldering, weld testing by AIA and fitting into place.**				
	03019	22 mm dia. condensate pipe	m	1		
	03020	28 mm dia. condensate pipe	m	1		
	3021	35 mm dia. condensate pipe	m	1		
	03022	42 mm dia. condensate pipe	m	1		
	03023	54 mm dia. condensate pipe	m	1		
		Carried Forward				

		Brought Forward				
		Valves, see PFB.01 for further information				
SC12.03	03024	Replace valves with equivalent, as per reference to Technical Specification FB 12.10	number	1		
	03025	Service valves as per Technical Specification FB 12.10	number	1		
FB 12.10		**Replacement of the following steam valve sizes including removal of old and installation of new valves. (globe valves s/steel seat):**				
	03026	15 NB dia. steam globe s/steel seat	number	1		
	03027	20 NB dia. steam globe s/steel seat	number	1		
	03028	25 NB dia. steam globe s/steel seat	number	1		
	03029	32 NB dia. steam globe s/steel seat	number	1		
	03030	50 NB dia. steam globe s/steel seat	number	1		
	03031	65 NB dia. steam globe s/steel seat flanged	number	1		
	03032	80 NB dia. steam globe s/steel seat flanged	number	1		
	03033	Replace 15 mm dia. steam globe valves and fit new 1,5m 15mm shed 40 steam pipe to all existing dirt pockets on steam distribution installation. This shall include reducing bush nipples, brackets and installation.	no	1		
FB 12.10	03034	**Replacement of the following condensate valve sizes including removal of old and installation of new valves. (globe valves PTFE seat):**				
	03035	15 mm dia. PTFE seat	number	1		
	03036	22 mm dia. PTFE seat	number	1		
	03037	28 mm dia. PTFE seat	number	1		
	03038	35 mm dia. PTFE seat	number	1		
	03039	42 mm dia. PTFE seat	number	1		
	03040	54 mm dia. PTFE seat	number	1		
		Carried Forward				

		Brought Forward				
		Condensate transfer tank, see PFB.01 for further information				
SC12.03	03041	Service tank and pumps as per Technical Specification FB12.09.02	number	1		
	03042	Service valves as per Technical Specification FB 12.10	number	1		
FB 12.09	03043	Inspect and report on condensate pumps system, condition and status.	sum	1		
FB 12.09	03044	Drain, clean out and inspect condensate tanks for any defects or damages.	number	1		
FB 12.09	03045	Test, service and inspect level controls.	sum	1		
FB 12.09.02		**Inspect, service and repair electrical condensate pumps including the following:**				
	03046	Inspect and test the pumps for correct operation.	set	1		
	03047	Replace gland packings, seals and gaskets	set	1		
	03048	Inspect and test for any bearing noise and replace if necessary.	set	1		
	03049	Clean out pump strainers, check non-return valves, valves, etc.	set	1		
	03050	Test pump motor windings for balance phases, insulation test and check wiring.	set	1		
	03051	Inspect pump mountings and repair if necessary.	set	1		
FB 12.11.02	03052	Inspect, service, repair and test electrical control panels.	no	1		
	03053	Supply and install additional condensate pumps including modification to suction and delivery piping and installation of isolating valves and check valves.	no	1		
	03054	Modify controls and wiring for twin pump installation including supply of additional high level control.	number	1		
		Carried Forward				

		Brought Forward				
		Steam traps, see PFB.01 for further information.				
SC12.03	03055	Remove and service as per Technical Specification FB12.06 (x40)	no	1		
FB 12.06		**Replace steam traps, including removal of existing trap, all required work for installation of new steam trap for the following sizes:**				
		Inverted bucket				
	03056	20 NB dia	no	1		
		Ball float				
	03057	15 NB dia	no	1		
	03058	20 NB dia	no	1		
		Type 8 adjustable thermostatic				
	03059	20 NB dia.	number	1		
		Carried Forward				

		Brought Forward				
		Pressure reducing valves				
	03060	Repair, service, all pressure reducing valve including documented bench testing certificate.	no	1		
	03061	Repair, service, safety valve including documented bench testing certificate.	no	1		
	03062	Replace 25NB steam PRV station, pressure reducing valve to be set to existing installation requirements.	no	1		
	03063	Complete refurbishment of boiler safety	no	1		
	03064	Clean, service and blow out dirt pockets.	no	1		
		Carried Forward				

		Brought Forward				
		Bracketing				
FB 12.03.01		**Ancillary Equipment**				
		Steam quality stainless steel braided flexible hosing 10 bar rating 1,5 m long:				
FB 12.03	03065	15 NB dia.	no	1		
FB 12.03	03066	20 NB dia.	no	1		
	03067	25 NB dia.	no	1		
		PAINTING				
	03068	Painting of existing pipe work including wire brushing and priming. Pipe diameter up to 50 NB.	Per running m	1		
		Additional items				
	03069	Waterproof pipe bracket penetrations through insulation cladding.	no	1		
FB 12						
		Other steam or condensate related items				
	03070	Any additional replacements which may be deemed necessary by the Departmental Representative / Engineer.	prov			500,000.00
	03071	Attendance and profit on item 03093	sum	%		
		Amount carried forward to final summary page				

Schedule 4

FC - Hot water generation

Ref	Item	Description	Unit	QTY	Rate	Amount
11.04		**DETAIL REPAIR WORK**				
		STORAGE CALORIFIER INSTALLATION				
		Supply and installation of hot and cold water isolating valves.				
	04001	15 mm dia.	no	1		
FC						
	04002	22 mm dia.	no	1		
FC11.07	04003	28 mm dia.	no	1		
	04004	35 mm dia.	no	1		
	04005	54 mm dia.	no	1		
		Replacement of cold water inlet strainer				
	04006	54 mm dia.	no	1		
		Replacement of non return valve				
	04007	54 mm dia.	no	1		
	04008	Replacement of cold water inlet expansion relief valve.	no	1		
	04009	Replacement of combination air release and vacuum breaker valve.	no	1		
	04010	Replacement of temperature and pressure operated safety valve.	no	1		
		Carried Forward				**R -**

		Brought Forward				**R -**
	04011	Replacement of rock wool insulation and galvanized cladding..	m^2	1		
	04012	Replacement of hot water circulating pump - split casing type separate drive 1450 rpm bronze impeller	no	1		
		NEW AND ADDITIONAL PIPE WORK				
		Replacement of new class 2 (two) copper pipe sections. This shall include cutting, preparing, soldering and testing for the following pipe sizes:				
FC						
	04013	15 mm dia. Pipe	m	1		
	04014	22 mm dia. pipe	m	1		
	04015	28 mm dia. pipe	m	1		
	04016	35 mm dia. pipe	m	1		
	04017	42 mm dia. pipe	m	1		
	04018	54 mm dia. pipe	m	1		
		THERMOMETRES AND PRESSURE GAUGES				
	04019	Replacement of dial type thermometer brass pocket. 100 mm dial diameter.	no	1		
	04020	Replacement of calorifier water side glycerine filled 100 mm diameter pressure gauge c/w stop and blow off cock and copper pig tail.	no	1		
		Carried Forward				**R -**

		Brought Forward				**R -**
		SACRIFICIAL ANODES				
	04021	Replacement of 32 dia x 500 long magnesium sacrificial anodes with stainless steel core.	no	1		
SC.12.01	04022	Decommissioning and Testing prior to repair work as per Technical Specification FC03 & FC09, and Additional specification SC10	sum	1		
		REPLACE CALORIFIER				
		Repacement calorifiers shall include all required accessories and commissioning				
		Calorifier, see PFC.01 for further information				
SC12.02	04023	Remove and replace with equivalent as per Technical Specification FC11.04.02 - 12000 litre tank	no	1		
SC12.02						
SC12.02						
		Calorifier, see PFC.01 for further information				
SC12.02	04024	Remove and replace with equivalent as per Technical Specification FC11.04.02 - 5000 litre tank	no	1		
		REPAIR AND SERVICE CALORIFIER				
		Calorifier -6, see PFC.01 for further information				
SC12.02	04025	Repair leaking flange and service as per Technical Specification FC11.04.01	no	1		
		Connecting flanges, see PFC.01 for further information				
SC12.02	04026	Replace with equivalent (x10) as per Technical Specification FC11.04.02	no	1		
		Feedwater tank, see PFC.01 for further information				
SC12.02	04027	Replace with equivalent pump with reference to Technical Specification FC 11.10	no	1		
		Carried Forward				

		Brought Forward				
		Additional items				
FC 11.06		**Perform pressure test on existing calorifiers and provide updated test certificate for each calorifer (certificate to be endorsed by an authorised independent inspection authority) - FC 11.06**				
FC12.06	04028	Calorifier shell -	no	1		
FC 12.06	04029	Calorifier heating coil	no	1		
		Removal test and replacement of new heating coil for calorifiers 1,5 hrs recovery to 50 deg C.				
	04030	5000 litres	no	1		
	04031	12000 litres	no	1		
		STERILISATION OF WATER INSIDE AN				
	04032	Wherever new potentially contaminated (chemically or other) components are assembled to the system, the affected installations shall be sterilised as per FC11.08 to protect and ensure the safety of the end users.	Per litre	1		
FC11.08						
	04033	Recommission installation on completion of repair work as per Technical Specification FC 11. 09, and Additional Specification SC 11	no	1		
SC12.03						
		Other hot water related items				
	04034	Any additional replacements which may be deemed necessary by the Departmental Representative / Engineer.	prov			R 500,000.00
	04035	Attendance and profit on item 04046	sum	%		
		Amount carried forward to final summary page				

Schedule 5

Dayworks

Payment refers to	Item	Description	Unit	QTY	Rate	Amount
		Amounts for expected transport, material and labour costs over the maintenance period of 36 months				
		TRANSPORT COSTS (in transit to site)				
	05001	Transport costs are for a Vehicle with a load of (1) Ton. Inclusive of travelling time for a technician and (1) assistant (Provisional)	km	100,000		R -
		MATERIAL COSTS				
		Provisional amount allowed for non-scheduled items to be used for breakdowns or minor repairs where deemened necessary.	Sum	1		R 4,400,000.00
	05002	Provisional % Amount	%	.....		
		Labour costs for installations and breakdowns will include for all overhead and statutory rates required by law. (Hours for traveling measured under "Transport")				
	05003	Technician normal time (Provisional)	hrs	3000		R -
	05004	Assistant normal time (Provisional)	hrs	3000		R -
	05006	Technician overtime, including public holidays (Provisional)	hrs	1000		R -
	05007	Assistant overtime, including public holidays (Provisional)	hrs	1000		R -
		Amount carried forward to final summary page				

Summary	36-Month Boiler Term Contract	
Schedule no.	**Description**	**Amount**
1	Preliminaries and General	R -
2	Steam Generation (FA)	R -
3	Steam Distribution (FB)	R -
4	Hot water Generation (FC)	R -
5	Dayworks	R -
6	Total works Sched 1 to 5	R -
7	Sub Total	R -
8	15%VAT	R -
Tender Sum carried to: 'Form of Offer and Acceptance' DPW-07-EC		**R -**

DRPW – 05 (EC) CONTRACT DATA

Project title:	**MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS**		
Tender / Quotation no:	**GQET-2026/2027-012**	**Closing date:** Tuesday, 24 November 2026	Time: **11H00**

	CONTRACT VARIABLES THE SCHEDULE (Contract Data [1.1.1.8]) The schedule is the listed variables in this agreement and contains all variables referred to in this document including specific changes made to GCC Third Edition (2015) documentation. It is divided into part 1: contract data completed by the employer and part 2: contract data completed by the contractor. Part 1 must be completed in full and included in the tender documents. Both the part 1 and part 2 form part of this agreement Spaces requiring information must be filled in, shown as 'not applicable' but not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross referenced to the applicable clause of the schedule. Key cross reference clauses are italicised in *[ ]* brackets

	The Conditions of Contract applicable to this Contract are clauses 1 to 10 and contract price adjustment schedule of the GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS, THIRD EDITION (2015) prepared by The South African Institution of Civil Engineering Private Bag X200, Halfway House, 1685. Contractors are cautioned to read the GCC Third Edition (2015) and Contract Data [DPW-05 (EC)] together as some clauses in the GCC Third Edition (2015) have been amended in the Contract Data [DPW-05 (EC)] Specific data, which together with these General Conditions of Contract, collectively describe the risks, liabilities and obligations of the contracting Parties and the procedures for the administration of the Contract. Clauses as amended in the Contract Data amends or replaces the corresponding clauses in the GCC Third Edition (2015). Copies of these conditions of contract may be obtained through *www.saice.org.za*.

PART 1: CONTRACT DATA COMPLETED BY THE EMPLOYER:

A PROJECT INFORMATION

A 1.0 Works [1.1.1.35]

Works description	Refer to document *PG01.1 (EC) – Scope of Works* for detailed description
MDANTSANE PRISON: MAINTENANCE AND REPAIRS OF BOILERS FOR A PERIOD OF 36 MONTHS	

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A 2.0 Site [1.1.1.29]

Erf / stand number	
Site address	VARIOUS SITES
Township / Suburb	
City / Town	PORT ELIZABETH
Province	EASTERN CAPE
Local authority	
GPS Coordinates	

A 3.0 EMPLOYER AND ITS REPRESENTATIVE

A 3.1 Employer:

Official Name of Organ of State / Public Sector Body	Government of the Republic of South Africa in its Department of Public Works & Infrastructure		
Business registration number	Not applicable	VAT number	Not applicable
E-mail	Portia.Mvana@dpw.gov.za	Telephone	041 408 2181
Postal address	Private Bag X3913 North End Gqeberha 6056		

Physical address	Eben Donges Building, Cnr Robert and Hancock Street North End Gqeberha 6056

A 3.2 Employer's representative:

Name	Nwabisa Nkangana	Telephone number	041 408 2055
E-mail	Nwabisa.Nkangana@dpw.gov.za	Mobile number	NONE
Postal address	Private Bag X3913 North End Gqeberha 6056		
Physical address	Eben Donges Building, Cnr Robert and Hancock Street North End Gqeberha 6056		

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A 4.0	Principal Agent [1.1.1.16]	Discipline	Project Manager

Name	Portia U Mvana		
Legal entity of above		Contact person	Portia U Mvana
Practice number		Telephone number	041 408 2181
Country	South Africa	Mobile number	082 327 4062
E-mail	Portia.Mvana@dpw.gov.za		
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

A 5.0	Agent [1.1.1.16]	Discipline	

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			

Postal address	insert postal address insert suburb insert town insert postal code
Physical address	insert physical address insert suburb insert town insert postal code

A 6.0	Agent [1.1.1.16]	Discipline	

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

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A 7.0	Agent [1.1.1.16]	Discipline	

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

A 8.0	Agent [1.1.1.16]	Discipline	

Name			
Legal entity of above		Contact person	

Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

A 9.0	Agent [1.1.1.16]	Discipline	

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

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A 10.0	Agent [1.1.1.16]	Discipline	

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

A 11.0	Agent [1.1.1.16]	Discipline	

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

A 12.0	Agent [1.1.1.16]	Discipline	

Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

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B CONTRACT INFORMATION

B 1.0 Definitions [1.1.1.2]

Bills of quantities: System/Method of measurement	SANS 1200

B 2.0 Law, regulations and notices [1.3.2]

Law applicable to the works, state country [1.3.2]	Law of the Republic of South Africa

B 3.0 Offer and acceptance [1.1.1.20]

Currency applicable to this agreement [1.1.1.20]	South African Rand

B 4.0 Documents [1.1.1.7]

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

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

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B 5.0 Employer's agents [3.0]

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

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

Portia U Mvana

B 6.0 Insurances [8.6]

Insurances by contractor NB: Insurances submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 53 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990). Insured amounts to include VAT.			
	New works [8.6.1.1.1] With a deductible not exceeding 5% of each and every claim	Contract sum plus 10%	Not Applicable
Or	Works with practical completion in sections with a deductible not exceeding 5% of each and every claim	Contract sum plus 10%	Not Applicable
Or	Works with alterations and additions (reinstatement value of existing structures with or including new works) With a deductible not exceeding 5% of each and every claim	Contract sum plus 10%	Not Applicable
	Direct contractors [8.6.1.1.2] where applicable, to be included in the contract works insurance	R Eng / PQS to determine value	Not Applicable
	Sub-Contractors insurance [8.6.3] where applicable, if not included in works insurance	R Eng / PQS to determine value	Not Applicable
	Professional fees not included in the Contract Price, payable in respect of the repair or reinstatement of damage to the Works or said movables, plus Escalation thereon (if not included above). Minimum R1m unless other amount indicated. [8.6.1.1.3]	R Eng / PQS to determine value	Not Applicable
	Free issue where applicable, to be included in the contract works insurance	R Eng / PQS to determine value	Not Applicable

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Public liability insurance [8.6.1.3]]	R 5 000 000	Applicable
Ground support insurance [8.6.1.4]	R Eng / PQS to determine value	Not Applicable
Other insurances		
Hi Risk Insurance when the project is being executed in a geological area classified as a “High Risk Area [8.6.8[CD]]	R Eng / PQS to determine value	Not Applicable
Other insurances: If applicable, description 1:	R Eng / PQS to determine value	Not Applicable

Other insurances; If applicable, description 2:	R Eng / PQS to determine value	Not Applicable

B 7.0 Obligations of the employer

Existing premises will be in use and occupied [5.4.1 & 5.4.2]			Not Applicable
If applicable, description:			
Restriction of working hours [5.8]			Not Applicable
If applicable, description:			
Natural features and known services to be preserved by the contractor [4.7]			Not Applicable
If applicable, description:			
Restrictions to the site or areas that the contractor may not occupy [5.4.1 & 5.4.2]			Not Applicable
If applicable, description:			
Supply of free issue of material and goods [8.6.1.1.2]	Amount	R	Not Applicable
If applicable, description:			

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B 8.0 Subcontractors [4.4]

Select	If applicable, description of specialisation

Specialisation 1	
Specialisation 2	
Specialisation 3	

Specialisation 4	
Specialisation 5	

B 9.0 Description of different portions of the works, if applicable [5.14.7]

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

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

B 10.1 Contract Period

Contract period: Period in months as indicated, include the time from the date of award (commencement date [5.2.1]) for submitting contractual obligatory documents, submission of Health & Safety Plan and approval, period for obtaining the Construction Permit (if applicable), the Construction Period and the Defect Liability Period up to and including Final Completion	
The contract period is determined as follows (Period/s indicated in months):	
Period to submit contractual obligatory documents including submission and approval of health and safety plan by the appointed Health & Safety Agent	21 Days
Period to obtain Construction Permit from Department of Labour upon approval of the Health & Safety Plan by the appointed Health & Safety Agent	n/a

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Total construction period for the Works as a whole up to and including Practical Completion, as indicated below [1.1.1.14, 5.14.1]	36 Months

Period to achieve Completion [5.14.4]	36 Months
Defect liability period up to and including issuing Final Approval Certificate in months [5.16.1]	3
Total Contract Period	36 Months
Penalty amount per calendar day for late submission of contractual obligatory documents: Ten percent (10%) of the penalty amount per calendar day for late Practical Completion, excluding VAT. [5.13]	R 500.00

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

Construction period [B18: 1.2] and Practical Completion for the Works as a whole [5.14.1] The time for achieving Practical Completion of the whole of the Works is measured from the date of possession of the site by the contractor inclusive of all public holidays, special non-working days and builders' holiday shut down periods.	Not Applicable
The date for practical completion for the works as a whole shall be the period in months as indicated, starting from the date of possession of the site by the contractor inclusive of all special non-working days and builders' holiday shut down periods [1.1.1.14, 5.4.1, 5.14.1]	36 Months
Notification period for inspection in working days by the principal agent.	
Penalty amount per calendar day for late Practical Completion, excluding VAT. [5.13].	R 500.00
Penalty amount per calendar day for late Completion [5.14.4, 5.13]: Thirty percent (30%) of penalty amount per calendar day for late Practical Completion, excluding VAT.	R 500.00
Penalty amount per calendar day for late Final Completion (Issuing of Final Approval Certificate) [5.16, 5.13]: Fifteen percent (15%) of penalty amount per calendar day for late Practical Completion, excluding VAT.	R 500.00

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

Construction period and Practical completion for portions of the Works [5.14.7]					Not Applicable	
Portions of the Works in sections:	1	2	3	4	5	6
Notification period for inspection by the principal agent in working days.						
The date for practical completion shall be the period in months as indicated from the date of possession of the site by the contractor [1.1.1.14, 5.14.1]						

The date for practical completion for the whole of the Works, if applicable shall be the period in months as indicated from the date of possession of the site by the contractor inclusive of all public holidays, special non-working days and builders' holiday shut down periods [12.2.7; 24.1]	36 Months
Penalty for late Practical Completion, *if completion in sections is required,* excluding VAT [5.13]	
The penalty amount per day for failing to complete section 1 of the Works is:	R 500.00
The penalty amount per day for failing to complete section 2 of the Works is:	R 500.00
The penalty amount per day for failing to complete section 3 of the Works is:	R 500.00
The penalty amount per day for failing to complete section 4 of the Works is:	R 500.00
The penalty amount per day for failing to complete section 5 of the Works is:	R 500.00
The penalty amount per day for failing to complete section 6 of the Works is:	R 500.00
The penalty amount per day for failing to complete the whole of the Works, if applicable, is:	R 500.00
Penalty amount per calendar day for late Completion [5.14.4, 5.13]: To be calculated at Thirty percent (30%) of penalty / calendar day to complete the section, excluding VAT	
Penalty amount per calendar day for late Final Completion (Issuing of Final Approval Certificate) [5.16, 5.13]: To be calculated at Fifteen percent (15%) of penalty / calendar day to complete the section, excluding VAT	

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

Criteria to achieve Practical Completion not covered in the definition of practical completion	
13.1	Obtain Occupation Certificate from the relevant authority prior to issuing the Practical Completion certificate
13.2	All relevant CoCs
13.3	All guarantees
13.4	Training on electrical, security and mechanical installations if contractually required
13.5	Maintenance / operating manuals
13.6	CPG and cidb BUILD programme achievement certificates submitted with substatiating documentation
13.7	
13.8	
13.9	
13.10	

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B 12.0 Defects liability period [5.16]

Defects liability period: Refer B10.1

Applicable	If applicable, description of applicable elements

14.1	All civil works (e.g. roads, storm water system, paving, sewer and water lines, etc.)
14.2	Mechanical equipment (e.g. pumps including switchgear, etc.)
14.3	Landscaping including automated systems (irrigation)
14.4	Electrical equipment (e.g. emergency generators, electronic switchgear,etc..)
14.5	Security system/s (e.g. Access control, Intruder alarm, etc.)
14.6	Air conditioning system and plant
14.7	
14.8	
14.9	
14.10	

B 13.0 Payment [6.10]

Date of month for issue of regular payment certificates Refer [6.10.1]	*n/a*
Contract price adjustment / cost fluctuations [6.8.2]	Not Applicable
If yes, method to calculate [6.8.2 [CD]]	Contract price adjustment factor
Employer shall pay the contractor within: Refer [6.10.4 [CD]]	Thirty (30) calendar days

B 14.0 Dispute resolution [10.5 [CD]]

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

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

CONTRACT SPECIFIC DATA	
The following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition (2015) are applicable to this Contract:	
CLAUSES	COMPULSORY DATA
1.1.1.5	Amend Clause 1.1.1.5 as follows: 'Commencement Date' means the date of possession of site by the contractor.
1.1.1.8	Amend Clause 1.1.1.8 to include the word "rights" to read as follows: "Contract Data" means the specific data which, together with these General Conditions of Contract, collectively describe the rights, risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract.
1.1.1.13	Amend Clause 1.1.1.13 as follows, clarify when the defects liability period starts: "Defects Liability Period" means the period stated in the Contract Data, commencing on the date indicated on the Certificate of Completion for the works as a whole or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works, during which the Contractor has both the right and the obligation to make good defects in the materials, Plant and workmanship covered by the Contract.
	Defects Liability Period is: 12 months. The Defects Liability Period for the works shall commence on the calendar day following the date of the Certificate of Completion for the works as a whole or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works and end at midnight (00:00) three hundred and sixty five days (365) calendar days from the date of the Certificate of Completion.
1.1.1.15	The name of the Employer's Project Manager as appointed from time to time: Refer to A3.2
1.1.1.21.A	NEW CLAUSE INTEREST: The interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999) as amended, calculated as simple interest, in respect of debts owing to the State, and will be the rate as published by the Minister of Justice and Correctional Services from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975) as amended, calculated as simple interest, in respect of debts owing by the State
1.1.1.27	This Pricing Strategy is a: Re-measurement Contract.
1.1.1.31	No Clause.
1.1.1.35	Insert the definition of "Value of Works" as Clause 1.1.1.35: "Value of Works" means the value of the Works certified by the Employer's Agent as having been satisfactorily executed and shall include the value of the works done, the value of the materials and/or plant and Contract Price Adjustments.

1.1.1.36	Insert the definition of "Latent and Patent Defects" as Clause 1.1.1.36: A 'latent defect' is a material defect, which was not visible after 'reasonable' inspection. The latent defect period commences at the date of Final Approval Certificate and ends 5 years [after that date [5.16.3]. A patent defect is a flaw that is not hidden and ought to be easily identified upon reasonable inspection.
1.1.1.37	Contract participation goal documentation are as indicated in the tender data document DPW 03 (EC): TENDER DATA.
1.2.3.	Replace Clause 1.2.3. with the following: The Employer's Agent is as indicated in clause B 5.0 and shall have the authority to act on behalf of the employer as indicated in the contract document read with the contract data. [3.2.3].
1.3.4	Not applicable to this Contract.
1.3.5	Replace Clause 1.3.5 with the following:

	The Employer will become the owner of the information, documents, advice, recommendation and reports collected, furnished and/or compiled by the Contractor during the course of, and for the purposes of executing this Contract, all of which will be handed over to the Employer on request during the contract, but in any event on completion of contract, the termination and/or cancellation of this Contract for whatever reason. The Contractor relinquishes its lien / retention or any other rights thereon to which it may be entitled. (b) The copyright of all documents, recommendations and reports compiled by the Contractor during the course of and for the purposes of finalizing the Works will vest in the Employer, and may not be reproduced or distributed or made available to any person outside the Employer's service, or to any institution in any way, without the prior written consent of the Employer. The Employer shall have the right to use such material for any other purpose without the approval of information or payment to the Contractor. (c) The copyright of all electronic aids, software programmes etc. prepared or developed in terms of the Contract shall vest in the Employer, who shall have the right to use such material for any other purpose without the approval of, information or payment to the Contractor.
	(d) In case of the Contractor providing documents, electronic aids, software programs or like material to the Employer, the development of which has not been at the expense of the Employer, copyright shall not vest in the Employer. The Contractor shall be required to indicate to which documents, electronic aids, software programs or like material this provision applies. (e) The Contractor hereby indemnifies the Employer against any action, claim, damages or legal cost that may be instituted against the Employer on the grounds of an alleged infringement of any copyright, patents or any other intellectual property right in connection with the Works outlined in this Contract. (f) All information, documents, recommendations, programs and reports collected or compiled must be regarded as confidential and may not be communicated or made available to any person outside the Employer's service and may not be published either during the currency of this Contract or after termination thereof without the prior written consent of the Employer.

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1.3.7	Replace Clause 1.3.7 with the following By entering into this contract, the Contractor waives any lien that he may have or acquire, notwithstanding any other condition/s in this contract.
3.2.3	1. The Employer's Principal Agent's authority to act and/or to execute functions or duties or to issue instructions are expressly excluded in respect of the following, unless same has been approved by the employer: (a) Appointment of Sub-contractors – clause 4.4.4; (b) Granting of an extension of time and/or ruling on claims associated with claims for extension of time – clauses 5.12, 10.1.5; (c) Rulings on claims and disputes – clauses 10.1.5, 10.2.3 and 10.3.3; (d) Suspension of the Works – clause 5.11.2; (e) Final Payment Certificate – clause 6.10.9; (f) Issuing of *mora* notices to the Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1; (g) Cancellation of the contract between the Employer and Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1. (h) Any variation orders – clause 6.3.1 2. In order to be legally binding and have legal bearing and consequence, any ruling in respect of the above matters (a) to (h) must be on an official document, signed and issued by the Employer to the Contractor. 3. The Contractor must submit claims, demands, notices, notifications, updated particulars and reports in writing, as well as any other supporting documentation pertaining thereto, in respect of any of the above listed matters (a) to (h), to the Employer's Agent within the time periods and in the format(s) as determined in the relevant clauses of the Conditions of Contract.

	Failing to deliver such to the Employer's Agent and in the correct format will invalidate any claim and the consequences of such failure will *mutatis mutandis* be as stated in clause 10.1.4. 4. Clauses 6.10.9 and 10.1.5 shall be amended as follows to indicate the limitation on the Employer's Agent authority in respect thereof: Clause 6.10.9 – Amend to read as follows: Within 14 days of the date of final approval as stated in the Final Approval Certificate, the Contractor shall deliver to the Employer's Agent a final statement claiming final settlement of all moneys due to him (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11, and not yet resolved). The Employer's Agent shall within 14 days issue to the Contractor a Final Payment Certificate the amount of which shall be paid to the Contractor within 30 days of the date of such certificate, after which no further payments shall be due to the Contractor (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11 and not yet resolved). Clause 10.1.5 – Amend to read as follows: Unless otherwise provided in the Contract, the Employer shall, within 28 days after the Contractor has delivered his claim in terms of Clause 10.1.1 as read with Clause 10.1.2, deliver to the Contractor his written and adequately reasoned ruling on the claim (referring specifically to this Clause). The amount thereof, if any, allowed by the Employer shall be included to the credit of the Contractor in the next payment certificate. If no ruling has been made within the 28 days, as referred to in clause 10.1.5. or any extension thereof as agreed to by the parties, the claim shall be regarded as rejected by the Employer.

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	5. Insert the following under 3.2.3: Provided that, notwithstanding any provisions to the contrary in the Contract, the Employer shall have the right to reverse and, should it deem it necessary, to amend any certificate, instruction, decision or valuation of the Employer's Agent and to issue a new one, and such certificate instruction, decisions or valuations shall for the purposes of the Contract be deemed to be issued by the Employer's Agent, provided that the Contractor shall be remunerated in the normal manner for work executed in good faith in terms of an instruction issued by the Employer's Agent and which has subsequently been rescinded.
3.3.2.1	Amend Clause 3.3.2.1 to insert the word "plant" to read as follows: Observe how the Works are carried out, examine and test materials, plant and workmanship, and receive from the Contractor such information as he shall reasonably require.
3.3.3.2	Amend Clause 3.3.3.2 to insert the word "plant" to reads as follows: Notwithstanding any authority assigned to him in terms of Clauses 3.3.2 and 3.3.4, failure by the ~~E~~ Employer's Agent's Representative to disapprove of any work, workmanship, plant or materials shall not prejudice the power of the Employer's Agent's thereafter to disapprove thereof and exercise any of his powers in terms of the Contract in respect of thereof.
3.3.2.2.3 3.3.2.2.4	Add to Clause 3.3.2.2.3 and 3.3.2.2.4 the following: All oral communication must be reduced into writing to be binding on the parties.
4.4.4	Ref Clause 3.2.3
4.8.2.1	Amend Clause 4.8.2.1 to include the word "person", as follows: Makes available to the Employer, or to any such contractor, person or authority, any roads or ways for the maintenance of which the Contractor is responsible, or
4.8.2.2	Amend Clause 4.8.2.2 to include "Employer" and "contractors", as follows: Provides any other facility or service of whatsoever nature o the Employer or to any of the said contractors, persons or authorities,
4.12.3	Add to Clause 4.12.3 the following: All oral communication must be reduced into writing to be binding on the parties.
5.3.1	The documentation required before commencement with Works execution are: Health and Safety Plan to be provided within 14 calendar days from award (Ref Clause 4.3) Initial programme to be provided within 21 calendar days of handing over the site to the contractor (Ref Clause 5.6) Security (Ref Clause 6.2) Insurance (Ref Clause 8.6) *insert other requirements* insert other requirements insert other requirements
5.3.2	The time to submit the documentation required before commencement with Works execution is: 21 days.

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5.4.2	The access to, and possession of, the Site referred to in Clause 5.4.1 shall be *enter "exclusive" or "not exlcusive"* to the Contractor. In the event of access to, and possession of, the Site is not exclusive to the Contractor, the following limitations apply: *Insert an exposition of limitation.*
5.8.1	The non-working days are: Saturdays and Sundays
	The special non-working days are: Public Holidays; The year-end break annually published by the BCCEI (Bargaining Council for the Civil Engineering Industry)
5.9.1	Amend Clause 5.9.1 as follows: On the Commencement Date, the Engineer shall deliver to the Contractor three (3) copies, at no cost to the Contractor, of the drawings and any instructions required for the commencement of the Works. The cost of any additional copies of such drawings and/or instructions, as may be required by the Contractor, will be for the account of the Contractor.
5.11.1	No Clause
5.11.2	Ref Clause 3.2.3
5.11.5	No Clause
5.11.6	No Clause
5.12	Ref Clause 3.2.3
5.12.2.2	Add the following to Clause 5.12.2.2 to read: “Abnormal climatic conditions means any weather conditions i.e. rain, wind, snow, frost, temperature (cold or heat) that are not in the norm for the area where the construction takes place and during which no work is possible on site”
5.13.1	Add the following to Clause 5.13.1: The penalty for failing to complete the Works: Refer to B10 CD
5.14.1	Amend the second paragraph of Clause 5.14.1 as follows: When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Employer’s Agent shall, within 14 days after receiving such request, issue to the Contractor a written list setting out the work to be completed to justify Practical Completion. Should the Employer’s Agent not issue such a list within the 14 days, the Contractor shall notify the Employer accordingly. Should the Employer not issue such a list within
	7 days of receipt of such notice, Practical Completion shall be deemed to have been achieved on the 14th day after the contractor requested the Certificate of Practical Completion.
5.14.4	Add the following to Clause 5.14.4: Penalty for late due completion date will be 30% of penalty / calendar day. Penalty for late completion date will be 15% of penalty / calendar day.

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5.16.1	Amend Clause 5.16.1 by deleting the provision in the third paragraph of this clause.
5.16.2	Amend Clause 5.16.2 as follows: No certificate other than the Final Approval Certificate referred to in Clause 5.16.1 shall be deemed to constitute approval of the Works or shall be taken as an admission of the due performance of the Contract or any part thereof, nor of the accuracy of any claim made by the

	Contractor, nor shall any other certificate exclude or prejudice any of the powers of the Employer's Agent and/or the Employer.
5.16.3	The latent defect period for all works is: 5 years
6.2.1	The type of security for the due performance of the Contract, as selected by the Contractor in the Contract Data, must be delivered to the Employer.
6.2.3	Amend Clause 6.2.3 as follows: If the Contractor has selected a performance guarantee as security, he shall ensure that it remains valid and enforceable as required in terms of the Contract.
6.3.1	Add the following to the last paragraph "subject to obtaining approval from the Employer" (3.2.3)
6.5.1.2.3	The percentage allowance to cover overhead charges is: 33%, except on material cost where the percentage allowance is 10%.
6.8.2	When Contract Price Adjustment is applicable [B13] the value of payment certificates is to be adjusted by a Contract Price Adjustment Factor (CPAF): The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Factor with the following values: The value of "x" is 0.15. The values of the coefficients are: a = 0.25. (Labour) b = 0.3 (Contractor's equipment) c = 0.3 (Material) d = 0.15 (Fuel) The values of the coefficients for "Repair and Maintenance Project" (RAMP) contracts are: a = 0.35 (Labour) b = 0.20 (Contractor's equipment) c = 0.35 (Material) d = 0.10 (Fuel) The urban area nearest the Site is *insert name of urban area*. *(Select urban area from Statistical News Release, P0141, Table A)* The applicable industry for the Construction Material Price Index for materials / plant is *insert name of industry*. *(Select the applicable industry from Statistical News Release, P0151.1, Tables 2,4,5)* The area for the Producer Price Index for fuel is *insert name of area*. *(Select the area from Statistical News Release, P0142.1, Table 1.)* The base month is *insert month insert year. (The month prior to the closing of the tender.)*
6.8.3	Price adjustments for variations in the costs of special materials are not allowed.

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6.9.1	Replace Clause 6.9.1 with the following: "Plant and materials will only be certified and paid for upon furnishing proof of ownership by the contractor. Once paid, material and goods shall become the property of the Employer and shall not be removed from site without the written authority of the Employers Agent.
6.10.1	Add at end of Clause 6.10.1 The contractor shall provide the Employer's Agent every month, on dates as agreed between parties / instructed by the Principal Agent, with the following information: Monthly Local content report, EPWP / NYS payment register, labour reports and certified ID document of EPWP/ NYS beneficiaries, Contract between Contractor and EPWP/ NYS beneficiaries, attendance register. (if applicable)

	Tax Invoice Labour intensive report Contract participation goal reports
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is: 85 %.
6.10.3	The limit of retention money is dependent on the security to be provided by the Contractor in terms of Clause 6.2.1.
6.10.4	Replace "28 days" with "30 days" provided all required documents have been submitted and are correct in all respects.
6.10.5	Replace Clause 6.10.5 with the following: In respect of contracts up to R2 million and in respect of contracts above R2 million where the Contractor elects a security by means of a 10% retention, 50% of the retention shall be released to the Contractor when the Employer's Agent issues the Certificate of Completion in terms of clause 5.14.4. The remaining 50% of the retention shall be released in accordance with the provisions of the conditions of contract and will become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate. In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or fixed guarantee of 5% of the Contract Sum (excl. VAT) and a 5% retention of the Value of the Works (excl. VAT), the cash deposit or fixed guarantee, whichever is applicable, shall be refunded to the Contractor or return to the guarantor, respectively, when the Employer's Agent issues the Certificate of Completion in terms of Clause 5.14.4. The 5% retention of the Value of the Works (excl. VAT) shall become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate. In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or a variable guarantee of 10% of the Contract Sum (excl. VAT), the cash deposit or the variable guarantee, whichever is applicable, will be reduced to 5% of the Value of the Works (excl. VAT) when the Employer's Agent issues the Certificate of Completion in terms of Clause 5.14.4. The balance of the cash deposit shall become due and payable or the variable guarantee shall expire when the Contractor becomes entitled in terms of Clause 5.16.1 to receive the Final Approval Certificate.
6.10.6.2	Replace Clause 6.10.6.2 with the following: "In the event of failure by the Employer to make the payment by the due date, he shall pay to the Contractor interest, at the rate as published by the Minister of Justice and Correctional Services from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975) as amended, calculated as simple interest, in respect of debts owing by the State". (1.1.1.21.A).
6.10.9	Ref Clause 3.2.3.

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7.2.1	The last sentence to read "Failing requirements or instructions, the Plant, workmanship and materials of the respective kinds shall be suitable for the intended purpose provided that materials procured for the works are from South African manufactures and suppliers. Imported materials shall only be considered under exceptional circumstances, based on compelling technical justifications, and subject to the approval by the DPWI. Failing to comply, unless specified or approval granted will result in a ten percent (10%) penalty of the value of imported material used without approval.
7.5.3	Add the following to Clause 7.5.3 "Should the work inspected by the Employer's Agent be rejected, all consultant's fees / costs pertaining to the unsuccessful inspection shall be recovered from the contractor".
7.9.1	Insert the following at the end of Clause 7.9.1: Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due

	to or that may become due to the Contractor under this or any other previous or subsequent contract between the Contractor and the Employer.
8.2.2.1	Insert the following as a second paragraph to Clause 8.2.2.1: The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, failing which the Employer may cause same to be done and recover the reasonable costs associated therewith from the Contractor.
8.3.1.10	Replace Clause 8.3.1.10 with the following: “Ionising, radiation, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuels, excluding leakages of any radioactive material / gases / corrosive liquids/chemicals, which are harmful to the environment and biological life, brought on to site for installation or used in the Works prior to final approval”.
8.4.3	Add the following as Clause 8.4.3: Where the Contractor has caused damage to property (moveable and immovable), of any person, the Employer or third parties, the Contractor shall on receiving a written instruction from the Employer’s Agent immediately proceed at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the Works.
8.6.1	Replace Clause 8.6.1 with the following: Except if provided otherwise in the Contract Data, the Contractor, without limiting his obligations in terms of the Contract, shall effect and keep the respective insurances [CD] in force, in favour of the employer as beneficiary, from the date of possession of the site until the issue of the certificate of practical completion and with an extension to cover the contractors obligations after the date of practical completion [8.2.1]
8.6.1.1.1	Ref B6.0 CD for value of insurance.
8.6.1.1.2	Ref B6.0 CD for value of insurance.
8.6.1.1.3	Ref B6.0 CD for value of insurance.
8.6.1.3	Amend Clause 8.6.1.3 to delete reference to limit of indemnity, to read as follows: Liability insurance that covers the Contractor against liability for the death of, or injury to any person, or loss of, or damage to any property (other than property while it is insured in terms of Clause 8.6.1.1) arising from or in the course of the fulfilment of the Contract, from the Commencement Date to the date of the end of the Defects Liability Period, if applicable, or otherwise to the issue of the Certificate of Completion.
8.6.4	Omit clause

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8.6.6	Replace Clause 8.6.6 with the following: Without limiting the contractor’s obligations in terms of the contract, the contractor shall, within twenty-one (21) calendar days of the date of letter of acceptance, but before commencement of the works, submit to the employer all the policies by which the insurances are effected and due proof of upfront payment of all premiums thereunder to keep the policies effective from the Commencement Date to the date of the end of the Defects Liability Period, if applicable, or otherwise to the issue of the Certificate of Completion.
8.6.7	Replace Clause 8.6.7 with the following: If the Contractor fails to effect and keep in force any of the insurances referred to in Clause 8.6.1, the Employer may cancel the Contract in terms of Clause 9.2.
8.6.8	Add the following as Clause 8.6.8. HIGH RISK INSURANCE

	In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply: (1) Damage to the Works The Contractor shall, from the date of Commencement of the Works until the date of the Certificate of Completion, bear the full risk of and hereby indemnifies and holds harmless the Employer against any damage to and/or destruction of the Works consequent upon a catastrophic ground movement as mentioned above. The Contractor shall take such precautions and security measures and other steps for the protection of the Works as he may deem necessary. When so instructed to do so by the Employer's Agent, the Contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, at the Contractor's own costs. (2) Injury to Persons or Loss of or damage to Properties The Contractor shall be liable for and hereby indemnifies and holds harmless the Employer against any liability, loss, claim or proceeding arising during the Contract Period whether arising in common law or by Statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above. The Contractor shall be liable for and hereby indemnifies the Employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the Site, whether belonging to or under the control of the Employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the Contract Period. (3) It is the responsibility of the Contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in Clauses 8.6.8(1) and 8.6.8 (2) above. Without limiting his obligations in terms of the Contract, the Contractor shall, within 21 days of the Commencement Date and before Commencement of the Works, submit to the Employer proof of such insurance policy, if requested to do so. (4) The Employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the Contractor's default of his obligations as

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	set out in Clauses 8.6.8 (1), 8.6.8 (2) and 8.6.8 (3). Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other existing or subsequent contract between the Contractor and the Employer.
9.1.1	Ref Clause 3.2.3
9.1.2.1	Ref Clause 3.2.3
9.1.4	Replace the first paragraph of Clause 9.1.4 with the following: "In the circumstances referred to in Clauses 9.1.1, 9.1.2 or 9.1.3 (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents), and whether or not the Contract is terminated under the provisions of this Clause, the Contractor shall be entitled on proof of payment of any increased cost of or incidental to the execution of the Works which is specifically attributable to, or consequent upon the circumstances defined in Clauses 9.1.1, 9.1.2 or 9.1.3; …….. necessary changes"
9.1.5	Replace the first paragraph of Clause 9.1.5 with the following: If the Contract is terminated on any account in terms of this Clause (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents) , the Contractor shall be paid by the Employer (insofar as such amounts or items have not

	already been covered by payments on account made to the Contractor) for all measured work executed prior to the date of termination, the amount (without retention), payable in terms of the Contract and, in addition: ”
9.1.5.5	No Clause
9.1.6	No Clause
9.2.1	Ref Clause 3.2.3
9.2.1.3.9	Add the following as Clause 9.2.1.3.9: Has failed to effect and keep in force any of the insurances referred to in Clause 8.6.1.
9.2.4	Add the following as Clause 9.2.4: In the case where a contract is terminated by the Employer by no fault by any party, the contractor shall be entitled to no other compensation than for work done and materials on site as certified by the Principal Agent at the date of termination.
9.3.2.2	Replace Clause 9.3.2.2 with the following: All Plant and Construction Equipment, Temporary Works and unused materials brought onto the Site by the Contractor, and where ownership has not been transferred to the Employer (see Clause 6.9.1), shall be removed from the Site on termination of the contract by any party.
9.3.2.3	No Clause
9.3.3	Add the following at the end of Clause 9.3.3 After cancellation of the Contract by the Contractor, the Contractor, when requested by the Employer to do so, shall not be entitled to refuse to withdraw from the Works on the grounds of any lien or a right of retention or on the grounds of any other right whatsoever. Nothing in this Clause shall prejudice the right of the Contractor to exercise, either in lieu of or in addition to the Contractor rights and remedies specified in this Clause, any other rights or remedies to which the Contractor may be entitled under the Contract or common law.

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10.1.3.1	Replace Clause 10.1.3.1 with the following: All facts and circumstances relating to the claims shall be investigated as and when they occur or arise. For this purpose, the Contractor shall deliver to the Employer’s Agent, records in a form approved by the Employer’s Agent, of all the facts and circumstances which the Contractor considers relevant and wishes to rely upon in support of his claims, including details of all construction equipment, plant, labour, and materials relevant to each claim. Such records shall be submitted promptly after the occurrence of the event giving rise to the claim.
10.1.4	Ref Clause 3.2.3.
10.1.5	Ref Clause 3.2.3.
10.1.6	Add the following as Clause 10.1.6: If the Employer fails to give his ruling within the period referred to in Clause 10.1.5 he shall be deemed to have given a ruling dismissing the claim.
10.2.1	Replace Clause 10.2.1 with the following: In respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer shall have the right to deliver a written dissatisfaction claim to the Employer’s Agent. This written claim shall be supported by particulars and substantiated.
10.2.2	Replace Clause 10.2.2 with the following: If, in respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer fails to submit a claim within 28 days after the cause of dissatisfaction, he shall have no further right to raise any dissatisfaction on such matter.
10.2.3	Ref clause 3.2.3.

10.3.2	Replace Clause 10.3.2 with the following: If either party shall have given notice in compliance with Clause 10.3.1, the dispute shall be referred immediately to mediation under Clause 10.5, unless amicable settlement is contemplated.
10.3.3	Replace Clause 10.3.3with the following:: In respect of a ruling given by the Employer (Ref clause 3.2.3), and although the parties may have delivered a Dispute Notice, the ruling shall be in full force and carried into effect unless and until otherwise agreed by both parties, or in terms of a mediation decision or court judgement.
10.4.2	Replace Clause 10.4.2 with the following: If the other party rejects the invitation to amicable settlement in writing, or does not respond in writing to the invitation within 14 days, or amicable settlement is unsuccessful, referral to mediation shall follow immediately. Should mediation be unsuccessful, the dispute shall be resolved by Litigation.
10.4.4	Replace Clause 10.4.4 with the following: Save for reference to any portion of any settlement, or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf of either party in any subsequent court proceedings, to any outcome of an amicable settlement, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of the amicable settlement.

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10.5	Replace Clause 10.5 with the following: The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event: 10.5.1 The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties. 10.5.2 Regardless of the outcome of a mediation the parties shall bear their own costs concerning the Mediation and equally share the costs of the mediator and related expenses.
10.6	No Clause
10.7	No Clause
10.10.3	Replace Clause 10.10.3 with the following: The court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Employer's Agent and Employer and neither party shall be limited in such proceedings before such court to the evidence or arguments put before the Employer's Agent or Employer for the purpose of obtaining his ruling.

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

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

(a)	Minimum Targeted Local Manufacturers of Material Contract Participation Goal, in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	*Select*

(b)	Minimum Targeted Local Building Material Suppliers Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	*Select*
(c)	Minimum Targeted Local Labour Skills Development Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	*Select*
(d)	cidb BUILD Programme: Minimum Targeted Enterprise Development Contract Participation Goal in accordance with the cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	*Select*

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(e)	cidb BUILD Programme: Minimum Targeted Contract Skills Development Goal in accordance with the cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 48491 of 28 April 2023. and the cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	*Select*
(f)	DPWI National Youth Service training and development programme (NYS) – Condition of Contract.	*Select*
(g)	Labour Intensive Works – Condition of Contract.	*Select*
(h)		*Select*
(i)		*Select*

PART 2: CONTRACT DATA COMPLETED BY THE TENDERER:

C TENDERER'S SELECTIONS

C 1.0 Securities [11.0]

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

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

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

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

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

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

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C 2.0 Payment of preliminaries [25.0]

Contractor's selection

Select Option A or B	B

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

Payment methods

Option A	The preliminaries shall be paid in accordance with an amount prorated to the value of the works executed in the same ratio as the amount of the preliminaries to the contract sum, which contract sum shall exclude the amount of preliminaries. Contingency sum(s) and any provision for cost fluctuations shall be excluded for the calculation of the aforesaid ratio

Option B	The preliminaries shall be paid in accordance with an amount agreed by the principal agent and the contractor in terms of the priced document to identify an initial establishment charge, a time-related charge and a final dis-establishment charge. Payment of the time-related charge shall be assessed by the principal agent and adjusted from time to time as may be necessary to take into account the rate of progress of the works

Lump sum contract

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

C 3.0 Adjustment of preliminaries [26.9.4]

Lump sum contract

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

Contractor's selection

Select Option A or B	

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

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

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

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

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

Failure to provide particulars within the period stated

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

TESTIMONIAL TEMPLATE NO. 1

Please note: This testimonial must be completed by client/ Employer on behalf of the bidder

1. **Testimonial for** (name of bidder) _____
2. **Name of Client/ Employer:** _____
3. **Project description** _____
   _____
4. **Contract start date** _____
5. **Contract end date or Practical Completion date:** _____
6. **Contract duration** _____
7. **Contract Sum** _____
8. **Client contact number** _____
9. **Client physical address** _____
   _____
10. **Client e-mail address** _____
11. **Performance rating of the bidder in respect of 1) quality, 2) time and 3) adherence to Contractual obligations (complete table below)**

Description	Rating of Bidder's performance				
	Rating: 1 Unacceptable performance	Rating: 2 Performance not unacceptable, but needs Improvement	Rating: 3 Satisfactory Performance	Rating: 4 Above Satisfactory performance	Rating: 5 Excellent performance
1. Quality of work					
2. Time					
3. Adherence					

12. **Client signature** _____
13. **Date of testimonial** _____

Client Stamp here

TESTIMONIAL TEMPLATE NO. 2

Please note: This testimonial must be completed by client/ Employer on behalf of the bidder

1. **Testimonial for** (name of bidder) _____
2. **Name of Client/ Employer:** _____
3. **Project description** _____
   _____
4. **Contract start date** _____
5. **Contract end date or Practical Completion date:** _____
6. **Contract duration** _____
7. **Contract Sum** _____
8. **Client contact number** _____
9. **Client physical address** _____
   _____
10. **Client e-mail address** _____
11. **Performance rating of the bidder in respect of 1) quality, 2) time and 3) adherence to Contractual obligations (complete table below)**

Description	Rating of Bidder's performance				
	Rating: 1 Unacceptable performance	Rating: 2 Performance not unacceptable, but needs Improvement	Rating: 3 Satisfactory Performance	Rating: 4 Above Satisfactory performance	Rating: 5 Excellent performance
1. Quality of work					
2. Time					
3. Adherence					

12. **Client signature** _____
13. **Date of testimonial** _____

Client Stamp here

TESTIMONIAL TEMPLATE NO. 3

Please note: This testimonial must be completed by client/ Employer on behalf of the bidder

1. **Testimonial for** (name of bidder) _____
2. **Name of Client/ Employer:** _____
3. **Project description** _____
   _____
4. **Contract start date** _____
5. **Contract end date or Practical Completion date:** _____
6. **Contract duration** _____
7. **Contract Sum** _____
8. **Client contact number** _____
9. **Client physical address** _____
   _____
10. **Client e-mail address** _____
11. **Performance rating of the bidder in respect of 1) quality, 2) time and 3) adherence to Contractual obligations (complete table below)**

Description	Rating of Bidder's performance				
	Rating: 1 Unacceptable performance	Rating: 2 Performance not unacceptable, but needs Improvement	Rating: 3 Satisfactory Performance	Rating: 4 Above Satisfactory performance	Rating: 5 Excellent performance
1. Quality of work					
2. Time					
3. Adherence					

12. **Client signature** _____
13. **Date of testimonial** _____

Client Stamp here

TESTIMONIAL TEMPLATE NO. 4

Please note: This testimonial must be completed by client/ Employer on behalf of the bidder

1. **Testimonial for** (name of bidder) _____
2. **Name of Client/ Employer:** _____
3. **Project description** _____
   _____
4. **Contract start date** _____
5. **Contract end date or Practical Completion date:** _____
6. **Contract duration** _____
7. **Contract Sum** _____
8. **Client contact number** _____
9. **Client physical address** _____
   _____
10. **Client e-mail address** _____
11. **Performance rating of the bidder in respect of 1) quality, 2) time and 3) adherence to Contractual obligations (complete table below)**

Description	Rating of Bidder's performance				
	Rating: 1 Unacceptable performance	Rating: 2 Performance not unacceptable, but needs Improvement	Rating: 3 Satisfactory Performance	Rating: 4 Above Satisfactory performance	Rating: 5 Excellent performance
1. Quality of work					
2. Time					
3. Adherence					

12. **Client signature** _____
13. **Date of testimonial** _____

Client Stamp here

TESTIMONIAL TEMPLATE NO. 5

Please note: This testimonial must be completed by client/ Employer on behalf of the bidder

1. **Testimonial for** (name of bidder) _____
2. **Name of Client/ Employer:** _____
3. **Project description** _____
   _____
4. **Contract start date** _____
5. **Contract end date or Practical Completion date:** _____
6. **Contract duration** _____
7. **Contract Sum** _____
8. **Client contact number** _____
9. **Client physical address** _____
   _____
10. **Client e-mail address** _____
11. **Performance rating of the bidder in respect of 1) quality, 2) time and 3) adherence to Contractual obligations (complete table below)**

Description	Rating of Bidder's performance				
	Rating: 1 Unacceptable performance	Rating: 2 Performance not unacceptable, but needs Improvement	Rating: 3 Satisfactory Performance	Rating: 4 Above Satisfactory performance	Rating: 5 Excellent performance
1. Quality of work					
2. Time					
3. Adherence					

12. **Client signature** _____
13. **Date of testimonial** _____

Client Stamp here

TESTIMONIAL TEMPLATE NO. 6

Please note: This testimonial must be completed by client/ Employer on behalf of the bidder

1. **Testimonial for** (name of bidder) _____
2. **Name of Client/ Employer:** _____
3. **Project description** _____
   _____
4. **Contract start date** _____
5. **Contract end date or Practical Completion date:** _____
6. **Contract duration** _____
7. **Contract Sum** _____
8. **Client contact number** _____
9. **Client physical address** _____
   _____
10. **Client e-mail address** _____
11. **Performance rating of the bidder in respect of 1) quality, 2) time and 3) adherence to Contractual obligations (complete table below)**

Description	Rating of Bidder's performance				
	Rating: 1 Unacceptable performance	Rating: 2 Performance not unacceptable, but needs Improvement	Rating: 3 Satisfactory Performance	Rating: 4 Above Satisfactory performance	Rating: 5 Excellent performance
1. Quality of work					
2. Time					
3. Adherence					

12. **Client signature** _____
13. **Date of testimonial** _____

Client Stamp here

TESTIMONIAL TEMPLATE NO. 7

Please note: This testimonial must be completed by client/ Employer on behalf of the bidder

1. **Testimonial for** (name of bidder) _____
2. **Name of Client/ Employer:** _____
3. **Project description** _____
   _____
4. **Contract start date** _____
5. **Contract end date or Practical Completion date:** _____
6. **Contract duration** _____
7. **Contract Sum** _____
8. **Client contact number** _____
9. **Client physical address** _____
   _____
10. **Client e-mail address** _____
11. **Performance rating of the bidder in respect of 1) quality, 2) time and 3) adherence to Contractual obligations (complete table below)**

Description	Rating of Bidder's performance				
	Rating: 1 Unacceptable performance	Rating: 2 Performance not unacceptable, but needs Improvement	Rating: 3 Satisfactory Performance	Rating: 4 Above Satisfactory performance	Rating: 5 Excellent performance
1. Quality of work					
2. Time					
3. Adherence					

12. **Client signature** _____
13. **Date of testimonial** _____

Client Stamp here