CITY OF CAPE TOWN
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MEMORANDUM OF AGREEMENT

FOR THE

DESIGN-BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

MADE AND ENTERED INTO BETWEEN

CITY OF CAPE TOWN METROPOLITAN MUNICIPALITY

And

INENZO WATER (PTY) LTD

[redacted]

Contract No. 376Q/2018/19

[redacted]

PREAMBLE

WHEREAS Tender 376Q/2018/19 was awarded **Inenzo Water (Pty) Ltd**, in line with resolution **SCMB 54/05/22** dated **16 May 2022** for the **Design – Build of Mechanical and Electrical Works for the Refurbishment of the C-Works at the Athlone Wastewater Treatment Works**, for the contract period commencing on the date of commencement for a period of 51 months (including 12 months defects liability period), in the amount of R259 941 237.79 (excluding VAT) and R298 932 423.46 (including VAT).

AND WHEREAS it is recorded that this Contract will be governed by the **General Conditions** which form part of the **Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Works and for Building and Engineering Works Designed by the Contractor, First Edition 1999 (Yellow Book)** published by the International Federation of Consulting Engineers ("**FIDIC**"), read with the Particular Conditions annexed hereto marked "**PART C1.2: CONTRACT DATA**".

NOW THEREFORE THE PARTIES AGREE AS FOLLOWS:

1. PARTIES

The Parties to this Contract are:

1.1. **The City of Cape Town**, a metropolitan municipality, established in terms of the Local Government: Municipal Structures Act. 117 of 1998 read with the Province of the Western Cape: Provincial Gazette 5588 dated 22 September 2000, as amended ("**the Employer**"), herein represented by the **City Manager or his nominee** duly authorised hereto;

1.2. **Inenzo Water (Pty) Ltd**, a private company registered in terms of the laws of the Republic of South Africa with registration no: [redacted] with its principal place of business situated at [redacted] (the "**Contractor**"), herein represented by its duly authorised representative, [redacted] in his capacity as **Director**;

hereinafter jointly referred to as "Parties" and in singular, a "Party".

2. INTERPRETATION

2.1. In the event of any conflict between the provisions of this Contract, the FIDIC and any Part attached hereto, or any other document incorporated by reference to this Contract, save to the extent expressly stated to the contrary, such conflict will be resolved by giving precedence to such different parts of this Contract in the following order of precedence:

2.1.1 first, the terms and conditions of the Particular Conditions;

2.1.2 second, the terms and conditions of the FIDIC;

2.1.3 third, Parts and Annexures to this Contract; and

2.1.4 fourth, any other documents incorporated by reference.

[redacted]

2.2 The provisions of this Contract supersede and replace the provisions of any previous agreement entered into between the Parties relating to the same subject matter.

[redacted]

2.3 The T2.2 Returnable Schedules, including all attachments and references therein as submitted by the Contractor for tender 376Q/2018/19, are incorporated into this Contract by the mere reference thereto. Pertinent sections of the Returnable Schedules are included hereafter Parts to the MOA.

3 APPOINTMENT AND DURATION

3.1 The Employer hereby appoints the Contractor to perform the Scope of Work for the Employer from Date of Commencement as per Commencement Letter.

3.2 Unless terminated earlier in accordance with the provisions as set out in the FIDIC or any other provision in terms of this Contract, this Contract shall commence on the **date of commencement for a period of 51 months (including 12 months defects liability).**

4 MUTUAL GOOD FAITH / CO-OPERATION

4.1 The Parties represent and undertake to do all such things, perform all such acts and take all steps to procure the doing of all such things and the performance of all such acts, as may be necessary or incidental to give effect to the execution of this Contract.

4.2 The Parties shall at all times during the continuance of this Contract observe the principles of good faith towards one another in the performance of their obligations in terms of this Contract.

5 OBLIGATIONS OF THE EMPLOYER

5.1 The Employer, through the Principal Agent, undertakes to perform its obligations in accordance with the Contract, including but not limited to the Scope of Work (**PART C3: SCOPE OF WORK**), subject to the satisfactory fulfilment of the obligations by the Contractor as set out in this Contract.

5.2 The Employer, through the Principal Agent, shall monitor and evaluate the Contractor's performance in respect of the Scope of Work.

6 OBLIGATIONS OF THE CONTRACTOR

6.1 The Contractor hereby agrees and undertakes to perform the Services to the Employer as set out in Scope of Work (**PART C3: SCOPE OF WORK**).

6.2 The Contractor will perform the Works as expeditiously as possible and furthermore agrees and undertakes to perform the services in accordance with the Scope of Work.

6.3 The Contractor will ensure that the Works will be in accordance with the contract specifications.

6.4 The Contractor shall, ensure that its employees, agents, representatives, sub-contractors and suppliers comply with this Contract and all applicable Laws in the execution of the Works.

6.5 The Contractor will not conduct any activity of whatsoever nature which may be detrimental to the Employer's reputation and goodwill.

7 PRICING DATA

7.1 The Contract Price for the Works shall be as set out in the Pricing Data annexed marked "**PART C2: PRICING DATA**".

7.2 The Contractor shall not be entitled to any other consideration for the rendering of the Works other than as provided for in this Contract.

[redacted]

COMPULSORY ENTERPRISE QUESTIONNAIRE

CITY OF CAPE TOWN

WATER AND SANITATION: WASTEWATER

CONTRACT NO. 376Q/2018/19

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

SCHEDULE 1: COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise: [redacted]

Section 2: VAT registration number: [redacted]

Section 2a: National Treasury Central Supplier Database registration number: [redacted]

Section 2b: SARS Tax Compliance Status PIN: [redacted]

Section 3: CIDB registration number, if any: [redacted]

Section 4: Particulars of sole proprietors and partners in partnerships

** Complete only if sole proprietor or partnership and attach separate page if more than 3 partners*

Section 5: Particulars of companies and close corporations

Company registration number: [redacted]

Close corporation number: N/A

Tax reference number: [redacted]

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise:

i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;

ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004 or Database of Restricted Suppliers;

iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;

iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and

v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed [redacted] Date 24/07/2019

Name [redacted] Position Managing director

Enterprise name Inenzo Timber (Pty) Ltd

Refer to tender file - divider 2

PART C1 : AGREEMENTS AND CONTRACT DATA

Part C1.1: Offer and Acceptance

CITY OF CAPE TOWN

WATER AND SANITATION: WASTEWATER

CONTRACT NO. 376Q/2018/19
DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

C1.1 Form of Offer and Acceptance

Offer

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

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

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 liabilities of the contractor 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 IS:

Rand Two hundred and sixty-eight million, nine hundred and sixty-two thousand, four hundred and twenty three rand and cents zero (in words);

R 268 962 423,00 (in figures)

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 contractor in the conditions of contract identified in the contract data.

Signature(s) [redacted]

Name(s) [redacted]

Capacity Managing director

for the tenderer

(Name of organization/tenderer) Imvelo Inkwazi (Pty) Ltd

(Address of organization/tenderer) [redacted]

Name and signature of witness [redacted]

Date 7/07/2019

For official use

INITIALS OF CITY OFFICIALS AT TENDER OPENING		
1. [redacted]	2. [redacted]	3. [redacted]

[redacted]

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 contractor 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.

The terms of the contract are contained in:

Clause 1 to 7, and the sub-clauses therein, cited in pages 1 to 4 above;
Part C1: Agreements and contract data (which includes this agreement)
Part C2: Pricing data
Part C3: Scope of work
Part C4: Site information

and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable 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 form of offer and acceptance. 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 securities, 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 on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). The tenderer (now contractor) shall within five working days of the agreement coming into effect notify the employer in writing of any reason why he cannot accept the contents of this agreement as a complete and accurate memorandum thereof, failing which the agreement presented to the contractor shall constitute the binding contract between the parties.

Signature(s) [redacted] 2022-11-17

Name(s) [redacted]

Capacity Executive Director: Water And Sanitation

for the Employer CITY OF CAPE TOWN
8 Voortrekker Road, corner of
Mike Pienaar Boulevard
Private Bag X98, Bellville
CAPE TOWN
7535

Name and signature of witness [redacted]

Date 17/11/2022

[redacted]

Schedule of Deviations

Notes:

1. The extent of deviations from the tender documents issued by the employer before the tender closing date is limited to those permitted in terms of the conditions of tender.
2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the parties becomes an obligation of the contract shall also be recorded here.
4. Any change or addition to the tender documents arising from the above agreements and recorded here, shall also be incorporated into the final draft of the contract.

1 Subject . Notice to Tenderers No. 1 issued 3 July 2019. . . . . .

Details .As per attached copy. . . . . .

. . . . . .

2 Subject . Notice to Tenderers No. 2 issued 9 July 2019 . . . . . .

Details . .As per attached copy . . . . . .

. . . . . .

3 Subject . Notice to Tenderers No. 3. . . . . .

Details . .As per attached copy . . . . . .

. . . . . .

4 Subject. Notice to Tenderers No. 4 issued 30 July 2019 . . . . . .

Details As per attached copy. . . . . .

. . . . . .

5 Subject .Notice to Tenderers No. 5 issued 5 August 2019 . . . . . .

Details . As per attached copy. . . . . .

. . . . . .

. . . . . .

6 Subject .Clarification letter issued 29 October 2019 . . . . . .

Details . As per attached copy. . . . . .

. . . . . .

. . . . . .

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 returnable 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.

[redacted]

CITY OF CAPE TOWN
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FINANCE
SUPPLY CHAIN MANAGEMENT

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03 JULY 2019

NOTICE TO TENDERERS NO.1
(202 pages including the first page)

NOTICE TO TENDERER NO.1

TENDER NO: 376Q/2018/19

BOX NUMBER: 117

CLOSING DATE: 25 July 2019

DESCRIPTION: DESIGN-BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WWTW

Your attention is drawn to the following amendments in respect to the above tender. You will be deemed to have made any allowance necessary for the amendments contained in this Notice to Tenderers No.1

This 'Notice to Tenderers' is an integral part of the Tender. This form is to be signed by tenderers and attached to Schedule 24.

AMENDMENTS TO TENDER DOCUMENT

Tenderers should take note of the following:

1 **Copy of attendance register attached (site clarification meeting 21/06/2019):**
Refer to Attachment 01.

2 **Amendment to criterion no. 6 and 7 on page 13 of Volume 3:**
Tenderers should note that the Mechanical and Electrical Design Engineers should either be a full-time employee of the Main Contractor or the respective company offering the design services and must be in a Joint Venture or have a signed undertaking with the main Contractor.

3 **Choice whether to refurbish motor control centre (MCC) panels or to replace:**
Tenderers should follow the updated Engineer's scope of works below and as requested in the SoQ's. Note that it is not a decision for the tenderer to opt for an alternative solution. This alternative action may lead to the tenderer being declared non-responsive.

Load Centre	MCC Voltage Rating	Scope
Inlet Works Odour Control	400VAC	Remove existing and install 4 off new 5.5kW complete DOL motor starter circuits within an

		existing MCC cubicle – Refer SoQ Sect 16.1.2
PST Odour Control	400VAC	Remove existing and install 4 off new 5.5kW complete DOL motor starter circuits within an existing MCC cubicle – Refer SoQ Sect 16.1.3 Remove existing PLC and install an upgraded PLC as per SoQ Sect 16.9.7
SST	400VAC	Remove existing and install 1 off 30kW and 8 off 5.5kW complete DOL motor starter circuits within existing MCC cubicles – Refer SoQ Sect 16.1.7 Remove existing PLC and install an upgraded PLC as per SoQ Sect 16.9.4
Mixers	400VAC	Remove old MCC and install a new MCC as per Dwg: W1792-94003 – Refer SoQ Sect 16.1.4 Install an upgraded PLC as per SoQ Sect 16.9.1
DAF/WAS	400VAC	Remove old MCC and install a new MCC as per Dwg: W1792-94002 – Refer SoQ Sect 16.1.5 Install an upgraded PLC as per SoQ Sect 16.9.2
Treated Effluent	400VAC	Remove existing and install 1 off new 30kW DOL starter – Refer SoQ 16.1.6 Remove existing PLC and install an upgraded PLC as per SoQ Sect 16.9.3
East Pump Station	400VAC	Install 3 off new additional 55kW RAS VSD starters – Refer SoQ Sect 16.1.8 Remove existing PLC and install an upgraded PLC as per SoQ Sect 16.9.5
West Pump Station	400VAC	Remove old MCC and install a new MCC as per Dwg: W1792-94008 – Refer SoQ Sect 16.1.9 Install an upgraded PLC as per SoQ Sect 16.9.6
Blower Auxiliary Board	400VAC	Supply and install a new Blower Auxiliary Board as per Drw W1792-940012 – Refer SoQ Sect 16.1.10
Disinfection PLC	400VAC	Install 8 off new 32A double pole MCBs – Refer SoQ 16.1.11 Supply and install an upgraded PLC – Refer SoQ Sect 16.9.8.

4 **Similarly, to point 3 above related to the aeration mechanical piping and FBDA systems.** Although the Engineer has requested that certain tests be performed on the aeration mechanical piping and FBDA systems to confirm replacement, this does not absolve the tenderer from providing the full scope and cost as requested in the schedule of Quantities and detailed specification. Alternative cost options may lead to the tenderer being declared non-responsive.

5 **Civil contract completion and access dates:** Tenderers should note that the civil contract is due to complete 07 June 2021 and that the construction access date for the 376Q/2018/19 contractor is envisaged 08 June 2021. Only

dimensional checks may be accommodated from February 2021. These dates are programmed on a civil construction start date 17 September 2019.

6 **Local content in Schedule 22.1-22.5:**
Tenderers should note that the local content in Schedules 22.1 – 22.5 on pages 73 – 100 of Volume 3 should be completed in full as requested. Failure to complete the schedules in their entirety may lead to the tenderer being declared non-responsive. Should the tenderer or their respective suppliers encounter challenges or concerns; these matters should be raised directly by the tenderer with DTI outlining their respective particulars.

7 **Data sheets in PDF format on pages 111 -185 of Volume 3:**
Tenderers should note that as requested the data sheets have been forwarded in PDF format.
Refer to Attachment # 02.

8 **Clarification of sludge/ grit removal from the reactors A – F during the FBDA upgrade:**
Tenderers should note that the following SoQ items 13.1.1.2 (Vol. 3 page 261); 13.1.2.2 (Vol. 3 page 261); 13.1.3.2 (Vol. 3 page 262); 13.1.4.2 (Vol. 3 page 263); 13.1.5.2 (Vol. 3 page 263); 13.1.6.2 (Vol. 3 page 264), the word "sludge" is to be replaced with the word "grit". Furthermore, the costs should be allowed to remove the grit from the Athlone WWTW and transported to Vissershok municipal waste centre.

9 **Odour control system functionality scoring:**
The tenderers should note that functionality points will be awarded according to the tenderers and suppliers experience based on similar types of works relating to the fans, pumps and filters refurbishment and installations. Please refer to criterion 3 page 12 of Vol. 3

10 **The minimum score for Functionality:**
The tenderers should note that the minimum score for functionality has been reduced from 65 to 60 points. Refer to page 9 of Vol. 3.

11 **Tenderer's history of completed contracts of similar nature to the Works:**
The tenderers should note that functionality points will be awarded according to the tenderer's experience based on similar types of works relating to each aeration blower capacity exceeding a minimum of 18 000 m³/h. Please refer to criterion 1 page 10 of Vol. 3.

12 **Blower Manufacturer track record:**
The tenderers should note that the Blower Manufacturer track record should relate to the full aeration capacities as stated in the Volume 3A and be a MV electrical application. Please refer to criterion 1 page 10 of Vol. 3.

13 **Schedule 22.3 pages 88, 89 and 90 of Volume 3:**
The tenderers should note that the table in Annexure C has been amended due to the incorrect alignment of item numbers with the Schedule of Quantities and enhanced design considerations.
Refer to Attachment 03.

14 **Schedule of Quantity amendments related to item 13 above:**
The tenderers should note the following Schedule of Quantity amendments:
Items 3.1.1 and 3.1.2 have been split into items (a) and (b) respectively.
Delete item 6.1.16.
Refer to Attachment 04.

15 **Schedule 22.4 pages 94 and 95 of Volume 3:**
The tenderers should note that the table in Annexure C has been amended due to the

incorrect alignment of item numbers with the Schedule of Quantities and enhanced design considerations.
Refer to Attachment 05.

16 **Schedule of Quantity amendments related to item 15 above:**
The tenderers should note the following Schedule of Quantity amendments:
Delete items 6.1.9, 6.1.10 and 6.1.16
Delete items 7.1.7 and 7.1.8
Replace item 11.1.3 with manual knife gate valves 900 NB PN6

17 **Communications protocol:**
Tenderers should note that in all cases the communications protocol's order of priority is stipulated as below:

1. Modbus TCP/IP (Highest priority)
2. Modbus Serial RS485
3. 4-20mA (Lowest priority)

The Tenderers should always quote the instrument with the highest ranked communication protocol, i.e. if Modbus TCP/IP and Modbus RS485 is available Modbus TCP/IP should be offered.

18 **FBDA duties:**
Referring to Volume 3A: The tenderers should note that the below mentioned values should be amended in Table 5 (Aeration requirements and reactor details), under section A10.1.3 on page 32.

Replace the existing values:

Peak SOR per reactor ($kg\ O_2/h$)
2657
1594
1062

With:

Total Peak SOR Reactors A - F ($kg\ O_2/h$)
1968
1181
787

Please note the heading of the column should also be changed to **"Total Peak SOR: Reactors A – F: (kg O2/h)"**.

19 **Motors:**
The tenderers should note that in the second paragraph of item A5.13 on page 15 that the acronym "LV" to be replaced with "MV".

20 **Standard Electrical Specification:**
The tenderers should note that the Standard Electrical Specification included in the CD of Volume 4 (dated 2016) has been replaced with a new version (dated 2018).
Refer to Attachment # 06.

21 **Electrical Drawings revised:**
The tenderers should note that electrical drawings W1792-94003, 94007 and 96004 have been revised.

Refer to Attachments 07, 08 and 09.

a) Attachment 01: Attendance Register
b) Attachment 02: DATA SHEETS
c) Attachment 03: Schedule 22.3
d) Attachment 04: Schedule No.3
e) Attachment 05: Schedule 22.4
f) Attachment 06: STANDARD SPECIFICATION FOR ELECTRICAL WORK 2018-08-08_ ver1
g) Attachment 07: W1792-94003- Mixer Panel MCC Single Line Diagram
h) Attachment 08: W1792-94007- Proposed MV Single Line Diagram
i) Attachment 09: W1792-96004-4 Mixer MCC General Arrangement

[redacted]

CITY OF CAPE TOWN
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09 JULY 2019

NOTICE TO TENDERERS NO.2
(1 pages)

NOTICE TO TENDERER.NO.2

TENDER NO: 376Q/2018/19

BOX NUMBER: 117

CLOSING DATE: 25 July 2019

DESCRIPTION: DESIGN-BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WWTW

Your attention is drawn to the following amendments in respect to the above tender. You will be deemed to have made any allowance necessary for the amendments contained in this Notice to Tenderers No.2

This 'Notice to Tenderers' is an integral part of the Tender. This form is to be signed by tenderers and attached to Schedule 24.

AMENDMENTS TO TENDER DOCUMENT

Extension of closing date: 25 July 2019 at 10:00

Amendment 1: closing date has been extended to:

16 August 2019, instead of **25 July 2019**

Yours faithfully,

[redacted]

Director: Supply Chain Management

[redacted]

CITY OF CAPE TOWN
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STAD KAAPSTAD

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12 JULY 2019

NOTICE TO TENDERERS NO.3
(15 pages)

NOTICE TO TENDERER.NO.3

TENDER NO: 376Q/2018/19

BOX NUMBER: 117

CLOSING DATE: 16 August 2019

DESCRIPTION: DESIGN-BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WWTW

Your attention is drawn to the following amendments in respect to the above tender. You will be deemed to have made any allowance necessary for the amendments contained in this Notice to Tenderers No.3

This 'Notice to Tenderers' is an integral part of the Tender. This form is to be signed by tenderers and attached to Schedule 24.

AMENDMENTS TO TENDER DOCUMENT

1 **Extension of closing date:**
As per Addendum 02, tenderers should note that the closing date has been extended by 3 weeks to 16th August 2019 @ 10H00.

2 **Schedule of Quantity amendments related to Schedule 6 page 243, replace with page 243R attached.**
Remove item 6.1.5, 6.1.6, 6.1.7, 6.1.8 and 6.1.13 and replace with:

ITEM	DESCRIPTION	UNIT	QTY	PRICE R c	PRICE R c
6.1.5 a	Upgrade East RAS pipework: 700mm NB GRP Piping	m	30		
6.1.5 b	700mm GRP 90° elbows as required for 6.1.5a	No	6		
6.1.5 c	900mm x 700mm GRP T-pieces as required for 6.1.5a	No	3		
6.1.6 a	Upgrade East RAS pipework: 900mm NB GRP Piping	m	220		
6.1.6 b	900mm GRP 90° elbows as required for 6.1.6a	No	5		
6.1.7	Sludge suction and discharge isolation, manual knife gate valve, 700mm NB, with Ductile iron body with FBE coating, 304 stainless steel spindle and 304L stainless steel blade	No	6		
6.1.8	Swing check valve, 700mm NB, with Ductile iron body with FBE coating.	No	3		
6.1.13a	Upgrade West RAS pipework: 600mm NB GRP Piping	m	42		
6.1.13b	600mm GRP 90° elbows as required for 6.1.13a	No	6		

3 **EAST RAS Piping**
The 900mm diameter GRP piping from the EAST RAS pump station shall be buried 1m below ground as shown on Drawing W1792-85003-03 attached to this addendum. Note that only the section that crosses the road shall be buried.

4 **Schedule of Quantity amendments related to Schedule 6 page 244, replace with page 244R attached.**
Replace items 6.1.14 and 6.1.15 with:

ITEM	DESCRIPTION	UNIT	QTY	PRICE R c	PRICE R c
6.1.14	Sludge suction and discharge isolation, manual knife gate valve, 600mm NB, with Ductile iron body with FBE coating, 304 stainless steel spindle and 304L stainless steel blade	No	3		
6.1.15	Swing check valve, 600mm NB, with Ductile iron body with FBE coating.	No	3		

5 **Schedule of Quantity amendments related to Schedule 7 page 246, replace with page 246R attached.**
Remove item 7.1.4 and 7.1.10 and replace with:

ITEM	DESCRIPTION	UNIT	QTY	PRICE R c	PRICE R c
7.1.4 a	Upgrade WAS pipework: 150mm NB 316 Stainless Steel piping	m	30		
7.1.4 b	150mm NB 316 Stainless steel 90° elbows as required for 7.1.4a	No	6		
7.1.4 c	150mm x 150mm NB 316 Stainless steel T-pieces as required for 7.1.4a	No	2		
7.1.10a	Design, supply and install an interconnecting mixed liquor stainless steel piping (600mm NB) between the valve chamber and mixed liquor sump	m	50		
7.1.10b	600mm NB 316 Stainless steel 90° elbows as required for 7.1.10a	No	6		

6 **Knife-Gate Valve Actuator:**

The Tenderers should note that in addition to the specification included in item A9.6 on page 29 of Volume 3A, the following Materials of Construction shall apply. All Knife-Gate Valve Actuators coatings shall be suitable for marine environments.
Minimum 100 µm DFT for Aluminium components
Minimum 320 µm DFT for ferrous components

Note that the specified duty of the actuator shall be the modulating type as per Section A9.6 of volume 3A.

7 **Submersible Mixers:**
As stated in Volume 3A Section A11.9 (page 42), half of the mixers shall run continuously while the other half acts as standby. This means that each reactor has 6 mixers, but only 3 mixers (1 per zone) shall operate at any given time to achieve the process requirements.

Note that the although the specification provides an approximate motor size for the mixers, the responsibility for sizing the mixers lies with the contractor and performance testing will be conducted as specified in Section A11.7

8 **Schedule of Quantity amendments related to Schedule 10 page 252, replace with page 252R attached.**
Remove item 10.1.5, 10.1.6, 10.1.7 and 10.1.8 and replace with:

ITEM	DESCRIPTION	UNIT	QTY	PRICE R c	PRICE R c
10.1.5a	Inlet works recirculation pumps: Centrifugal pumps with base plate and electrical motor and safety guard. Pump capacity 8.2 m³/h @ 34.5m head	No	1		
10.1.5b	PSTs recirculation pumps: Centrifugal pumps with base plate and electrical motor and safety guard. Pump capacity 2.12m³/h @ 33.8m head	No	1		
10.1.6	Extraction fan serving the inlet works: Centrifugal fans with base plate and electrical motor and safety guard. Fan capacity 4000m³/h @ 2000 Pa	No	1		
10.1.7	Extraction fans serving the PST's: Centrifugal fan with base plate and electrical motor and safety guard. Fan capacity 750 m³/h @ 2000Pa	No	1		
10.1.8	Design, supply, install and commission of the nutrient tank agitators (0.37kW) serving the Biotrickling filters of the inlet works and PST's	No	2		

9 **Odour Control (Recirculation pump duties):**
The Tenderers should note that Table 9 (Section A15.3.3) on page 52 of Volume 3A should be replaced with the following table.

Table 9: Recirculation pump duties

Pump	Quantity	Flowrate (m³/h)	Head (m)
Recirculation pump (Inlet works)	1	8,2	34,5
Recirculation pump (PST's)	1	2.12	33.8

10 **Odour Control (extraction fan duties):**
The Tenderers should note that Table 10 (Section A15.4.3) on page 55 of Volume 3A should be replaced with the following table.

Table 10: Extraction fans duties

Fan	Quantity	Flowrate (m^3/h)	Static Pressure (Pa)
Inlet works fan	1	4000	2000
PST area fan	1	750	2000

11 **Schedule of Quantity amendments related to flowmeters.**
Items 22.1.2 and 22.1.3 have been updated on Schedule no.22 (page 302), therefore the existing page must be replaced with the attached revised page. (302R)

This change also affects the associated technical datasheet. The existing datasheet (page 153) shall be replaced with page 153R attached.

12 **Schedule of Quantity amendments related to control valves actuators.**
Item 22.4.1 and 22.4.2 have been updated on Schedule no.22 (page 304), therefore the existing page must be replaced with the attached revised page. (304R)

This change also affects the associated technical datasheet, the existing datasheet (page 185) shall be replaced with page 185R attached.

13 **Control valve list:**
Control valve diameters have been updated and are reflected on the revised control valve list (see attachment Control Valve List W1792-61002-03).

ITEM	DESCRIPTION	UNIT	QTY	PRICE R	PRICE C	AMOUNT R	AMOUNT c
	SCHEDULE NO. 6						
6.	RETURN ACTIVATED SLUDGE PUMPS, PIPING AND VALVES						
6.1	Allow for all costs and expenses in connection with the design, manufacture, quality management, painting, testing, supply, delivery, offloading and storage of the following materials and equipment, including quality assurance, setting out of works and checking work carried out by others:						
6.1.1	Remove existing East RAS pumps	No	3				
6.1.2	Remove existing West RAS pumps	No	3				
6.1.3	Modify East and West RAS sumps suction configuration to ensure that there are no leaks (i.e Blind off the sump outlets with a Stainless Steel Grade 316 plate).	Item	1				
6.1.4	East RAS centrifugal pumps with base plate and electrical motor and safety guard. Pump capacity 2521 m³/h @ 5m head	No	3				
6.1.5a	Upgrade East RAS pipework:700 mm NB GRP piping	m	30				
6.1.5b	700mm GRP 90° elbows as required for 6.1.5a	No	6				
6.1.5c	900mm x 700mm GRP T-pieces as required for 6.1.5a	No	3				
6.1.6a	Upgrade East RAS pipework:900 mm NB GRP piping	m	220				
6.1.6b	900mm GRP elbows as required for 6.1.6a	No	5				
6.1.7	Sludge suction and discharge isolation, manual knife gate valve, 700 mm NB, with Ductile Iron body with FBE coating, 304 stainless steel spindle and 304L stainless steel blade	No	6				
6.1.8	Swing check valve, 700 mm NB, with Ductile Iron body with FBE coating.	No	3				
6.1.9	Drain manual ball valve,25mm NB, full bore, stainless steel body, PTFE seat, lockable stainless steel handle	No	6				
6.1.10	Pressure gauge manual ball valve15mm NB, full bore, stainless steel body, PTFE seat, stainless steel handle	No	15				
6.1.11	All associated piping supports, flanges, platforms, cat ladders, grating, walkway chains and cascade clamps	Item	1				
6.1.12	West RAS centrifugal pumps with base plate and electrical motor and safety guard. Pump capacity 1704 m³/h @ 4m head	No	3				
6.1.13a	Upgrade West RAS pipework: 600 mm NB GRP piping	m	42				
6.1.13b	600mm GRP 90° elbows as required for 6.1.13a	No	6				
				CARRIED FORWARD	R		

ITEM	DESCRIPTION	UNIT	QTY	PRICE R C	AMOUNT R c
			BROUGHT FORWARD R		
6.1.14	Sludge discharge isolation, manual knife gate valve,600 mm NB, with Ductile Iron body with FBE coating, Stainless Steel Grade 304 spindle and Stainless Steel Grade 304L blade	No	3		
6.1.15	Swing check valve,600 mm NB, with Ductile Iron body with FBE coating.	No	3		
6.1.16	Drain manual ball valve,25mm NB, full bore, Stainless Steel body, PTFE seat, lockable stainless steel handle	No	3		
6.1.17	All associated piping supports, flanges, platforms, cat ladders, grating, walkway chains and cascade clamps	Item	1		
6.1.18	Provisional sum for work as directed by the Engineer	PC Sum			R150 000
6.1.19	**Spares and tools** All other plant and equipment items not included above but which are nevertheless necessary to meet the Scope of Work and/or are required for the proper, safe and effective operation of the plant (Specify):-	Item	1		
6.1.19.1	1).....	Item	1		
6.1.19.2	2).....	Item	1		
6.1.19.3	3).....	Item	1		
6.1.19.4	4).....	Item	1		
6.2	Allow for all costs and expenses, including double handling (if stored) and final painting (if applicable), in connection with the Site installation, testing, commissioning and upholding during the Trial Operation Period and Defects Notification Period of the following: -				
6.2.1	All pumps and associated equipment as described in the items under 6.1.1 to 6.1.19.4	Item	1		
6.2.2	Carrying out and documenting the results of performance tests on the installed equipment	Item	1		
6.2.3	Incidental repairs to concrete work and civil attecations to fit the equipment supplied	Item	1		
			CARRIED FORWARD R		

ITEM	DESCRIPTION	UNIT	QTY	PRICE R C	AMOUNT R c
	SCHEDULE 10				
10. 10.1	**ODOUR CONTROL** Allow for all costs and expenses in connection with the design, manufacture, quality management, painting, testing, supply, delivery, offloading and storage of the following materials and equipment, including quality assurance, setting out of works and checking work carried out by others: -				
10.1.1	Removal of the recirculation pumps serving the Biotrickling filters of the inlet works and PST's	No	2		
10.1.2	Removal of the fans serving the biotrickling filters of the inlet works and PST's	No	2		
10.1.3	Removal of the nutrient tanks agitators serving the inlet works and PST's	No	2		
10.1.4	Removal of spent filter media from the Biotrickling filters serving the inlet work and PST's	Item	1		
10.1.5a	Inlet works recirculation pumps: Centrifugal pumps with base plate and electrical motor and safety guard. Pump capacity 8.2 m³/h @ 34.5m head	No	1		
10.1.5b	PSTs recirculation pumps: Centrifugal pumps with base plate and electrical motor and safety guard. Pump capacity 2.12m³/h @ 33.8m head	No	1		
10.1.6	Extraction fan serving the inlet works: Centrifugal fans with base plate and electrical motor and safety guard. Fan capacity 4000m³/h @ 2000 Pa	No	1		
10.1.7	Extraction fans serving the PST's: Centrifugal fan with base plate and electrical motor and safety guard. Fan capacity 750 m³/h @ 2000Pa	No	1		
10.1.8	Design, supply, install and commission of the nutrient tank agitators (0.37kW) serving the Biotrickling filters of the inlet works and PST's	No	2		
10.1.9	Replenish the Biotrickling filters serving the inlet works with media filter	m³	15		
10.1.10	Replenish the Biotrickling filters serving PST's with media filter	m³	6		
10.1.11	Provisional sum for work as directed by the Engineer	PC Sum			R150 000
10.1.12	**Spares and tools** All other plant and equipment items not included above but which are nevertheless necessary to meet the Scope of Work and/or are required for the proper, safe and effective operation of the plant (Specify):-	Item	1		
10.1.12.1	1).....	Item	1		
10.1.12.2	2).....	Item	1		
			CARRIED FORWARD	R	

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R c
	SCHEDULE NO.22				
	ATHLONE ELECTRICAL WORKS				
22.	**Instrumentation**				
22.1	Supply and install the following Analog 4-20mA HART) and Digital (0-24VDC) instruments inclusive of necessary 316 stainless steel brackets, stands and fixing hardware as required, as detailed in the instrument list				
22.1.1	44FE01 Flow meter Type - Type - E&H Promag or equivalent Range - 0-150m³/h at 50°C Design Pressure - 400kPag Design Temperature - 50°C Pipeline Diameter - 150mm NB	No	1		
22.1.2	41FE01, 41FE04, 41FE07, 41FE10, 41FE13, 41FE16 Flow meter Type - E&H T-mass 65I or equivalent Range - 0-7000kg/h at 57°C and 55kPag Design Pressure - 100kPag Design Temperature - 80°C Pipeline Diameter - 300mm NB	No	6		
22.1.3	41FE02, 41FE03, 41FE05, 41FE06, 41FE08, 41FE09, 41FE11, 41FE12, 41FE14, 41FE15, 41FE17, 41FE18 Flow meter Type - E&H T-mass 65I or equivalent Range - 0-4000kg/h at 57°C and 55kPag Design Pressure - 100kPag Design Temperature - 80°C Pipeline Diameter - 200mm NB	No	12		
22.1.4	45PT01 Pressure Transmitter Type - E&H PMC51 or equivalent Normal Operating Pressure - 60kPag Design Pressure - 100kPag Design Temperature - 80°C	No	3		
22.1.5	45TE01 Temperature Transmitter complete with Thermowell Type - E&H RTD or equivalent Normal Operating Temperature - 100°C Design Pressure - 100kPag Design Temperature - 80°C Pipeline Diameter - 1200mm NB	No	1		
				CARRIED FORWARD R	

TECHNICAL DATA SHEET NO. E.10.1

FLOW TRANSMITTER – THERMAL FLOW - FT

DESCRIPTION	SPECIFICATION	FOR COMPLETION BY TENDERERS
		OFFERED
Make:	E&H or equivalent	
Model:	T-Mass 65i or equivalent	
Area Classification:	Non-hazardous	
Output	4-20mA HART	
Display	Local Display	
Operation	Push buttons	
Material	316 Stainless Steel	
Electrical Connection	M20 Gland	
IP Rating	IP67	
Sensor Range		
41FE01, 41FE04, 41FE07, 41FE10, 41FE13, 41FE16	0-7000kg/h at 57°C and 55kPag	
41FE02, 41FE03, 41FE05, 41FE06, 41FE08, 41FE09, 41FE11, 41FE12, 41FE14, 41FE15, 41FE17, 41FE18	0-4000kg/h at 57°C and 55kPag	
Process Connection	TBA	
Process Medium	Highly Corrosive Air including H_2S	
Design Pressure	100kPag	
Design Temperature	80°C	
Insertion tube	316 Stainless Steel	
Pipeline Diameter	100	
41FE01, 41FE04, 41FE07, 41FE10, 41FE13, 41FE16	300mm NB	
41FE02, 41FE03, 41FE05, 41FE06, 41FE08, 41FE09, 41FE11, 41FE12, 41FE14, 41FE15, 41FE17, 41FE18	200mm NB	

SIGNED ON BEHALF OF TENDERER: .....

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R c
	BROUGHT FORWARD R				
22.2.4	45T101 Temperature Gauge complete with Thermowell and contacts Type - Bimetal type, Ashcroft or equivalent Range - 0 - 100°C Design Pressure - 100kPag Design Temperature - 100°C Pipeline Diameter - 1200mm NB	No	1		
22.2.5	41T101, 41T102, 41T103 Temperature Gauge complete with Thermowell and contacts Type - Bimetal type, Ashcroft or equivalent Range - 0 - 100°C Design Pressure - 100kPag Design Temperature - 100°C Pipeline Diameter - 300mm NB	No	3		
22.3	Loop Checking, testing and commissioning of each instrument and control elements in conjunction with the Engineer and System Integrator	Sum	1		
22.4	Cable and Terminate the following Electrical Multi-turn Actuators communicating via Modbus TCP/IP as required, as detailed in the valve list.				
22.4.1	41FCV01, 41FCV04, 41FCV07, 41FCV10, 41FCV13, 41FCV16 Flow Control Valve Actuator complete with a Modbus TCP/IP communication interface Type - Electric Multi-turn Supply - 3 Phase 400VAC Design Temperature - 60°C Pipeline Diameter - 300mm NB	No	6		
22.4.2	41FCV02, 41FCV03, 41FCV05, 41FCV06, 41FCV08, 41FCV09, 41FCV11, 41FCV12, 41FCV14, 41FCV15, 41FCV17, 41FCV18 Flow Control Valve Actuator complete with a Modbus TCP/IP communication interface Type - Electric Multi-turn Supply - 3 Phase 400VAC Design Temperature - 60°C Pipeline Diameter - 200mm NB	No	12		
	CARRIED FORWARD R				

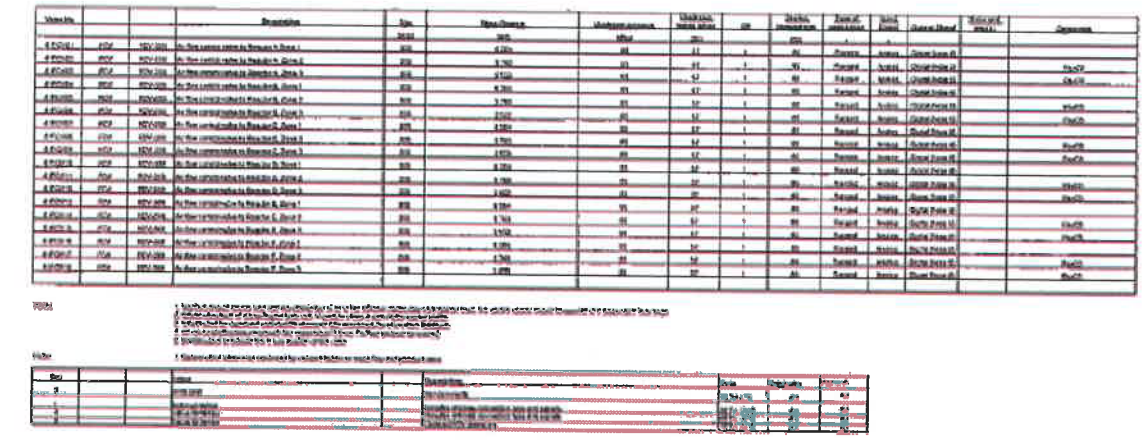
TECHNICAL DATA SHEET NO. E.30

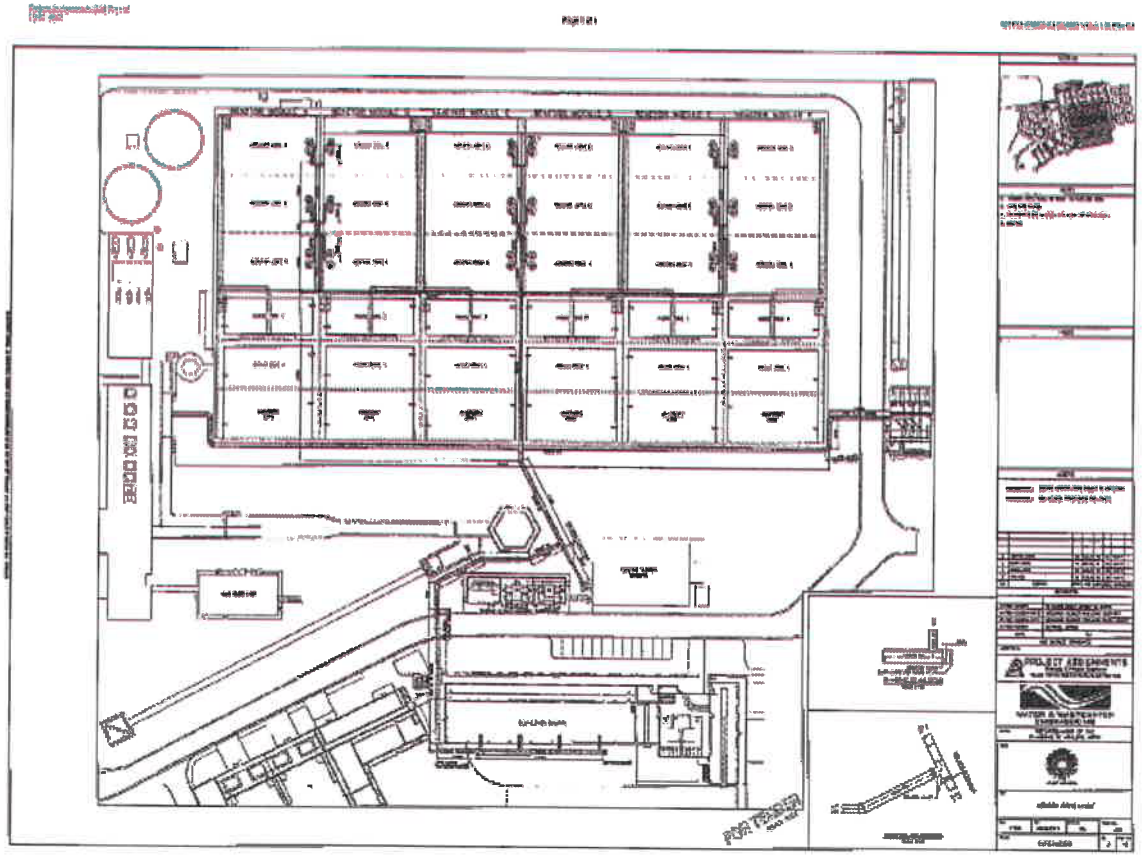
FLOW CONTROL VALVE ACTUATOR

DESCRIPTION	SPECIFICATION	FOR COMPLETION BY TENDERERS
		OFFERED
Make:	Rotork or equivalent	
Model:	Electrical Multi-turn	
Supply Voltage	400VAC 3 Phase	
Output	Positional Control 0 – 100%	
Accuracy	1%	
IP Rating	IP67	
Area Classification	Non-hazardous / Corrosive Environment	
Communications	Modbus TCP/IP	
Material	Aluminium or cast iron	
Electrical Connection	M20 gland	
Operation Temperature	-20°C to 70°C	
Pipeline Diameter		
41FCV01, 41FCV04, 41FCV07, 41FCV10, 41FCV13, 41FCV16	300mm NB	
41FCV02, 41FCV03, 41FCV05, 41FCV06, 41FCV08, 41FCV09, 41FCV11, 41FCV12, 41FCV14, 41FCV15, 41FCV17, 41FCV18	200mm NB	

SIGNED ON BEHALF OF TENDERER: .....

[redacted]





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30 JULY 2019

NOTICE TO TENDERERS NO.4

NOTICE TO TENDERER NO.4

TENDER NO: 376Q/2018/19

BOX NUMBER: 117

CLOSING DATE: 16 August 2019

DESCRIPTION: DESIGN-BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WWTW

Your attention is drawn to the following amendments in respect to the above tender. You will be deemed to have made any allowance necessary for the amendments contained in this Notice to Tenderers No.3

This 'Notice to Tenderers' is an integral part of the Tender. This form is to be signed by tenderers and attached to Schedule 24.

AMENDMENTS TO TENDER DOCUMENT

1

1 **Information regarding Electrical Generators:**
Diesel Fuel System P&ID drawing has been relabelled to W1792-45007 – At this Addendum. Refer to Attachment # 01.

Find attached Drawing L1003 – Electrical Building Ground Floor Plan which the floor plans of the Generator, Transformer, MV and DPFC rooms.
Refer to Attachment # 02.

2 **Information regarding Distribution Transformers:**
The Tenderer is requested to use the SOQ quantities as specified to provi on the following Transformers:

- 2x 5.0MVA DPFC Step-Down Transformers
- 1x 2.0MVA Generator Step-Up Transformer
- 2x 1.5MVA Generator Step-Up Transformers
- 1x 315kVA Blower House Aux supply Transformer

Note, the existing 2.5MVA Generator Step-Up Transformer is to be re-used the new 2MVA Generators.

The smaller 315kVA Transformer is to be a sealed unit, and larger Tr should be equipped with a conservator tank and a Buchholz relay.

The existing generator's Step-Up Transformer has a YNd11 vector groupi Step-Up Transformers between the generators and the MV Intake Panel

the same vector grouping.

The DPFC Step-Down Transformers' vector groups shall be Yyn0.

All Step-Down Transformers on the distribution side of the MV Panel apart from the DPFC units shall have a Dyn7 vector group.

3 **Busbar Trunking:**
A common busbar arrangement with a T-Section is preferred to join the DPFC units with the MV Intake Panel, depending on the type of DPFC system being used. Care should be taken to ensure the DPFC system's OEM busbar arrangement is compatible with the new busbars to be installed on site.

Tenderers are to use the busbar ratings as supplied in the SOQ Section 24.1.

4 **Dissolved Oxygen Transmitters:**
Dual-input Hach SC200 or equivalent controllers with Modbus RS485 communication are to be used for the Dissolved Oxygen Analysers.

5 **CCTV:**
Additional information to describe the required CCTV additions to the existing system are mentioned below:

- A typical example of a bullet camera is Avigilon model 8.0-H4A8O1-IR-B or equivalent
- A typical example of a dome camera is Avigilon model 5.0-H4A-DO1-IR-B or equivalent
- Concrete poles are to be 5m high above finished floor level and should be supplied and installed with appropriate stainless steel pole mount adaptors.
- SOQ Schedule 21.4.1 should include the following:
  - The necessary power and data cabling for the cameras and field network switch panels
  - Any network switches as required
  - Any UPS units as required
  - A redundant CCTV server with Network Video Recorder model HD-NVR3-VAL18TB-EU-1U or equivalent
  - Remote Workstation model HD-RMWS3-2MN-EU or equivalent including LED monitor
  - ACC 6 Enterprise license for 24 camera channels model 24C-ACC6-ENT or equivalent
  - Any trenching, conduit, sleeves and cable racking/supports as required
  - Any fibre splice boxes/trays as required
  - Any junction boxes as needed
  - Any fibre pigtails, fly leads as deemed necessary
  - Any transport or crane hire costs as required
  - Any surge protection and power distribution equipment as required.

6 **Electrical rooms floor coating SOQ Item 23.11:**
The coating specification for patching up the epoxy floor is the following:
Epoxy self-smoothing system: Two-part self-smoothing and broadcasting epoxy system. Applied approx. 2mm thick as per manufacturer's instructions in colour as per sample approved by architect and with gloss finish. (Sikafloor 263SL ZA or equivalent). Joints as recommended by manufacturer.

The Blower House Auxiliary MCC Room has a floor space area of 55m².

[redacted]

7 **Information regarding the MV Panel Equipment:**
The Rated Operating voltage of the MV Panel is 12kV
The Lightning Impulse withstand voltage (Basic Insulation Level) of the MV Panel is 75kV
The rated short circuit current of the MV Panel should be 31.5kA/3s
The rated internal arc withstand shall be 31.5kA/1s

8 **BTU - SOQ Item 23.5.1**
Tenderers should note that only 30V DC BTU is acceptable and multiple chargers may be required to achieve the standby time.

9 **UPS - SOQ Item 23.4.1**
UPS maximum rating shall be 10kVA and the single phase requirement as detailed shall be strictly enforced.

10 **Submersible Mixers**
Section A11.4 of volume 3A (Page 40) – the motor housing specification shall be changed to be in line with Section D50 of the Standard Specification for Mechanical Works.
The mixer body shall be of rugged cast iron or of stainless steel construction. Cast iron shall be coated with a heavy duty epoxy corrosion protection system at least 300µm thick.

11 **Knife Gate Valves – Local Content**
Note that the knife gate valves PN6 rating is not subject to local content – see attached for a new schedule 22.4 Table (replace with pages 94RR & 95RR, Refer to Attachment # 03) and updated SOQs for clarity (replace with pages 243RR, 244RR, 246RR, 254R. Refer to Attachment # 04).

12 **Civil Works – Buried Piping**
Civil works shall be by a separate civil contract – excavation, bedding and backfilling. All other required work shall be by the M&E contractor.

13 **Update to Page 84 of volume 3**
Replace with page 84R (Refer to Attachment # 05) attached to clarify the amendments implemented in Addendum 3 to the SOQ items 10.1.5a and 10.1.5b.

14 **BTU:**
With reference to the detailed specification Section B11.2.12 and SOQ Schedule 23.5, the following additional specifications have to be taken into account when pricing the Battery Trip Unit for the MV Panel:

- The current rating of the charger should be 3A DC continuous
- Input voltage is 230VAC single phase, output voltage is 30VDC
- Standing load: Combined current consumption of relays is 23.5A over 8 hours
- Standing Load backup time should be 8 hours
- Tripping Load: Each breaker consumes 200W with an operating time of 100ms.
- The charger is to be installed at a Waste Water Treatment Plant in an air conditioned sub-station in a corrosive environment.
- Vented NICAD batteries are to be used
- Battery capacity should be 250A/h min
- 2 battery sets required with the number of cells to match boost and float voltages - typically 34 and 37 respectively
- The colour is light grey – powder coated

- IP rating: IP20
- Dual charger is required, thus 2 battery sets and 2 chargers
- 26 off Breakers will be installed for now in MV panel, expandable to 30 off breakers maximum in total in the future
- SOQ Schedule 23.5.1 should indicate Qty 2 instead of Qty 1.

15 **General Specification Standard Drawings**
Refer to Attachment 06

[redacted]

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05 AUGUST 2019

NOTICE TO TENDERERS NO.5
(3 pages)

NOTICE TO TENDERER NO.5

TENDER NO: 376Q/2018/19

BOX NUMBER: 117

CLOSING DATE: 16 August 2019

DESCRIPTION: DESIGN-BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WWTW

Your attention is drawn to the following amendments in respect to the above tender. You will be deemed to have made any allowance necessary for the amendments contained in this Notice to Tenderers No.5

This 'Notice to Tenderers' is an integral part of the Tender. This form is to be signed by tenderers and attached to Schedule 24.

AMENDMENTS TO TENDER DOCUMENT

1 **Life Cycle Costs:**
The Tenderer should refer to the Life Cycle Costs under item 1. Functionality Criteria for Key Suppliers to Contractor – Aeration Blowers on page 10 of Volume 3.
Replace the "Life Cycle Cost" paragraph with the following:

"The total Aeration Blower system life cycle cost for a 20-year period will be calculated taking into consideration the capital cost, servicing, maintenance and running costs. All materials, labour and spare parts shall be included over this time.

Tenderers shall present a table in the following format to summarise the life cycle costs.

Life cycle costs (Total):
Capital costs
Service costs
Maintenance costs
Electrical running costs

A maximum of 5 points will be allocated to the lowest overall life cycle cost. Points to other bids will then be awarded on a pro-rata basis, in relation to their costs.

To assist with adjudication and understanding of the total cost, Tenderers shall

Itemise the service intervals and what is required in terms of labour and materials at each interval. The costs and rates for materials, labour and electricity shall not be escalated over the 20-year period; all costs shall be expressed in present day terms. The costs shall include **all expenses** related to servicing and maintenance, examples of these being (but not limited to) travel & accommodation for labour and any freight charges for parts.

In the calculation of Aeration Blower power costs, Tenderers shall assume the duty Aeration Blowers will run continuously at the "Total required capacity" and the "Required design discharge pressure" as per Table 1 of Volume 3A. For the life cycle cost calculations, it is furthermore suggested that the ambient conditions are taken as 101.325 kPa, 20°C and 0% humidity.

For electricity costs, Tenderers are to use the City of Cape Town's "Time of Use" MV standard tariff for High Demand Periods of approximately 128.32 c/kWh (excluding vat) (excluding daily charges or demand charges).

In the calculation of the servicing and maintenance costs, Tenderers shall base the figures on both the **duty and the standby** blowers, since each blower in the facility will be theoretically run for an equal number of hours per year and should therefore require the same degree of servicing. The corresponding expected annual number of running hours per blower shall be used to determine the required service intervals and therefore the expected overall annual servicing and maintenance costs."

2 **Air velocities in the main header:**
The Tenderer is requested to note the following in section A6 on page 27 and section A9 from page 28 in Volume 3A:

Certain tenderers have queried the air velocities in the main air header, referring to the Employer's flow velocity of 12 m/s maximum for compressed air above 10 kPa (fluid flow 100 to 500 l/s), as stated in Clause D20.5.2 of the Standard Specification for Mechanical Works. It is acknowledged that the flow velocity in the main header (and in the sub-headers) will exceed this value for the pipe sizes given in the Engineer's preliminary design drawings, but Tenderers are requested to price the piping, valves and fittings based on the sizes given, or the next largest standard size. The velocities as stated in the Standard Specification for Mechanical Works are to avoid excessive pressure drops, but preliminary calculations by the Engineer show that even with the higher velocities in this particular instance, the pressure drops are deemed acceptable. Moreover, the 12 m/s gas velocity limit holds for lines carrying only up to 500 l/s, which corresponds to flows in smaller bore piping systems. In larger diameter pipe sections, higher velocities are possible without excessive friction losses.

Tenderers should also note where the Engineer has listed non-standard pipe sizes, valves and fittings for the air header in his preliminary design. Tenderers are at liberty to select and price the next largest standard readily available sizes.

3 **SoQ Item 6.1.12:**
The Tenderer is requested to note that the tender item number 6.1.11 on page 83 of Volume 3 should change to correspond with 6.1.12 on page 243.

4 **SoQ Item 6.1.11:**
The Tenderer is requested to note that the tender item number 6.1.10 on page 89 of Volume 3 should change to correspond with 6.1.11 on page 243.

5 **SoQ items 7.1.7 and 7.1.8:**
The Tenderer is requested to note that although items 7.1.7 and 7.1.8 were indicated on page 246RR of Addendum 04; they remain deleted and removed as per Addendum 01.

Yours faithfully,

[redacted]

Director: Supply Chain Management

ACKNOWLEDGEMENT OF RECEIPT FOR AND ON BEHALF OF THE TENDERER: TENDER NO 376Q/2018/19

At [redacted] on this 05 Day of August 2019

Signature: [redacted]

Name of Signatory: [redacted]
(In ink and capitals)

TENDERER: Inzalo Water (Pty) Ltd.
(Name of firm in ink and capitals)

[redacted]

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

FINANCE
SUPPLY CHAIN MANAGEMENT

Vuyo Ninzi
Supply Chain Management

T: 021 400 3121
E: vuyo.ninzi@capetown.gov.za

29 October 2019

The Manager
Inenzo Water (Pty) Ltd
"P.O.Box 1381
Sanlamhof
7532"

Email: [redacted]

Dear Sir/Madam

Tender Number: 376Q/2018/19

Description: **Design-Build of Mechanical and Electrical Works for the refurbishment of the C-works at the Athlone Wastewater Treatment Works**

I refer to your tender submission for the above mentioned tender.

The City is currently busy with the evaluating process for the abovementioned tender. We have encountered matters requiring further clarification of submission. We request that you provide further information or clarification on the following:

1.Fine bubble diffused aeration (Datasheet 5)

a. The figures presented on the hand filled datasheet (Volume 3; page 118-119) are not in line with the supplier's datasheet provided in the supporting technical documentation. The tenderer is requested to clarify this discrepancy.

b. The tenderer offered uPVC dropper piping, whereas Volume 3A specifies SS316. The tenderer is requested to confirm that the required material can be offered at the same cost as per the bill of quantities. (Refer to Volume 3; item 5.5: page 119)

2.Knife gate valves (Datasheet 8)

a. Please confirm that the corrosion protection for the knife gate valve actuator has been included as per addendum 3 item 6.

3.WAS pumps (Datasheet 10)

Volume 3A specifies SS316 as the material of construction for the WAS pumps' impeller, however the tenderer has offered ductile iron. Tenderer to confirm if the required material of construction can be offered at the same cost as per the bill of quantity.

The required response must be submitted by no later than end of business day, **Friday 01 November 2019** to Lynne.dupreez@capetown.gov.za

Yours faithfully,

[redacted]

Director: Supply Chain Management

[redacted]

INENZO WATER

[redacted]

FACSIMILE

TO:	[redacted]	FROM:	[redacted]
COMPANY:	CITY OF CAPE TOWN	DATE:	30/10/2019
FAX NO:	BY EMAIL	OUR REF:	[redacted]
PROJECT:	376Q/2018/19		
SUBJECT:	REQUEST FOR CLARIFICATION NR 1		
PAGE:	1 OF 1 + ATTACHMENT		

Dear Sir,

In reply to your correspondence dated 29 Oct 2019 we wish to reply as follows:

1. Fine Bubble Diffused Aeration (Datasheet 5)

   a) Attached, please find the correct datasheets. (Explanation: At the time of tender we did a comparison between two FBDA suppliers and I have written the alternative supplier's data onto the same datasheet to compare values. My tender assistant incorrectly assumed that I have made corrections to the WTE Airtech datasheet and wrote in the comparison values of the other supplier by mistake). We apologise for this and have put measures in place to prevent this from happening again.
   b) We confirm that our costing sheet has allowed for SS316 dropper piping and SS316 dropper pining will be supplied at the rates tendered.

2. Knife Gate Valves (Datasheet 8)

   We confirm that the corrosion protection for the knife gate valve actuator has been included as per addendum 3 item 6.

3. WAS Pumps (Datasheet 10)

   We confirm that the impellor for the WAS pumps will be supplied in SS316 at the cost tendered.

Yours faithfully
INENZO WATER

[redacted]
Managing Director

[redacted]

[redacted]

ITEM	EQUIPMENT DESCRIPTION	FOR COMPLETION BY TENDERERS		
5.	FBDA system for Reactors A to F			
5.1	Diffuser details			
	Make and model	[illegible]		
	Type	[illegible]		
	Size	[illegible]		
	Country of manufacture	[illegible]		
		Zone 1	Zone 2	Zone 3
	Number of diffusers	[illegible]	[illegible]	[illegible]
	Diffuser density	[illegible]	[illegible]	[illegible]
5.2	Product Specification			
	Fluid	Air		
5.3	Operating Conditions	Zone 1	Zone 2	Zone 3
	Design (peak) Standard Oxygen Transfer Rate (SOTR) @ 20°C and 101.325 kPa(a) (kg/h)	[illegible]	[illegible]	[illegible]
	SOTR proportion per zone (%)	[illegible]	[illegible]	[illegible]
	Design (peak) air requirement @ 20°C, 101.325 kPa(a) and 0% RH to achieve SOR (m³/h)	[illegible]	[illegible]	[illegible]
	Basin depth (m)	[illegible]	[illegible]	[illegible]
	Minimum airflow required for mixing per unit floor area @ 20°C and 101.325 kPa(a) and 0% RH (m³/h/m²)	[illegible]	[illegible]	[illegible]
	Minimum airflow required for mixing @ 20°C and 101.325 kPa(a) and 0% RH (m³/h)	[illegible]	[illegible]	[illegible]
	Diffuser submergence (operating depth) (m)	[illegible]	[illegible]	[illegible]
	Orifice diameter (mm)	[illegible]	[illegible]	[illegible]
	Average header pressure in assembly at design airflow (kPa)	[illegible]	[illegible]	[illegible]
	Pressure loss in dropper at design airflow (kPa)	[illegible]	[illegible]	[illegible]
	Diffuser orifice pressure loss at design airflow (kPa)	[illegible]	[illegible]	[illegible]
	Diffuser Wet Pressure (DWP) at design airflow (kPa)	[illegible]	[illegible]	[illegible]
	Static pressure (kPa)	[illegible]	[illegible]	[illegible]
	Pressure required at top of dropper at design airflow (kPa)	[illegible]	[illegible]	[illegible]
	Drop leg air velocity at design airflow (m/s)	[illegible]	[illegible]	[illegible]
	Header air velocity at design airflow (m/s)	[illegible]	[illegible]	[illegible]
	Lateral air velocity at design airflow (m/s)	[illegible]	[illegible]	[illegible]
	Airflow per diffuser @ 20°C and 101.325 kPa(a) (m³/h)	[illegible]	[illegible]	[illegible]
	(continued)			

ITEM	EQUIPMENT DESCRIPTION	FOR COMPLETION BY TENDERERS		
5.3	Operating Conditions	Zone 1	Zone 2	Zone 3
	Guaranteed Standard Oxygen Transfer Efficiency (SOTE) at operating depth and design airflow (%)	26.%	25	26.6
	Guaranteed Standard Oxygen Transfer Efficiency (SOTE) per meter at operating depth and design airflow (%/m)	7.1	7.5	7.1
	Maximum allowable air temperature °C to diffusers	100	100	100
5.4	Physical data	Zone 1	Zone 2	Zone 3
	Number of grids per zone	2	1	1
	No of operating disc diffusers per grid	450	450	232
	Lateral piping count per grid	11	11	7
	Number of sub headers	1	0	0
	Floor width (m)	24.9	24.7	24.9
	Floor length (m)	14.7	14.7	14.7
	Vertical dropleg nominal bore (mm)	200	200	200
	Disc diameter (mm)	344	344	344
	Header piping nominal bore (mm)	200	200	300
	Sub header (at bottom of dropleg) nominal bore (mm)	200	N/A	N/A
	Lateral piping (from headers) nominal bore (mm)	110	110	110
	Header piping length (m)	1 x 7m	14	14
	Sub header piping length (m)	7	N/A	N/A
	Lateral piping length (m)	24.5	24.5	24.5
	Spacing between laterals (mm)	662	662	1062
	Spacing between diffusers on laterals (mm)	662	662	1062
	Number of condensate purge pipes	2	1	1
	Nominal bore of condensate release piping (mm)	25	25	25
5.5	Materials of construction			
	Dropper piping	PE 80		
	Header piping	U-PVC		
	Sub header piping	U-PVC		
	Laterals piping	U-PVC		
	Diffuser membranes	EPDM		
	Diffuser bodies	PP + 30% GF		
	Pipe supports	AISI 316		
	Condensate release piping	AISI 316		
5.6	General notes			

[redacted]

SIGNED ON BEHALF OF TENDERER: [redacted]

[redacted]

For the Tenderer:

Signature(s) [redacted]

Name(s) [redacted]

Capacity DIR.

(Name of organization/tenderer) INENZO WATER (PTY) LTD

(Address of organization/tenderer) [redacted]

Name and signature of witness [redacted]

Date 10/11/2022

For the Employer:

Signature(s) [redacted] 2022-11-17

Name(s) [redacted]

Capacity EXECUTIVE DIRECTOR: WATER & SANITATION

(Name and address of organization) CITY OF CAPE TOWN
8 Voortrekker Road, corner of
Mike Pienaar Boulevard
Private Bag X98, Bellville
CAPE TOWN
7535

Name and signature of witness [redacted]

Date 17/11/2022

[redacted]

Confirmation of Receipt

The tenderer, (now contractor), identified in the offer part of this agreement hereby confirms receipt from the employer, identified in the acceptance part of this agreement, of one fully completed original copy of this agreement, including the schedule of deviations (if any) today:

the 21 (day)

of November (month)

20 22 (year)

at [redacted] (place)

For the Contractor:

Signature(s) [redacted]

Name(s) [redacted]

Capacity Director

Signature and name of witness:

Signature [redacted]

Name

[redacted]

C1.2: Contract Data

GENERAL CONDITIONS OF CONTRACT

The following standardised General Conditions of Contract:

General Conditions which form part of the **Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Works and for Building and Engineering Works Designed by the Contractor, First Edition 1999 (Yellow Book)** published by the International Federation of Consulting Engineers (FIDIC).

Copies of these Conditions of Contract (Yellow Book) may be obtained from the South African Institution of Civil Engineering (SAICE) (tel 011 805 5947) or Consulting Engineers South Africa (CESA) (tel 011 463 2022).

Copies of the Conditions of Contract (Yellow Book) are also available for inspection and scrutiny at the offices of the Employer.

The Annexes and Forms bound in the Conditions of Contract (Yellow Book) shall not apply to this Contract and shall be replaced with the documentation bound into this Contract Document.

The General Conditions make reference to the Appendix to Tender and Particular Conditions (contained in the Contract Data) which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract.

The General Conditions shall be read in conjunction with the variations, amendments and additions set out in the Appendix to Tender and Particular Conditions below. Each item of data given below is cross-referenced to the Clause or Sub-Clause in the General Conditions to which it mainly applies.

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the sequence as stated in sub-clause 1.5 as amended in the Particular Conditions.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction

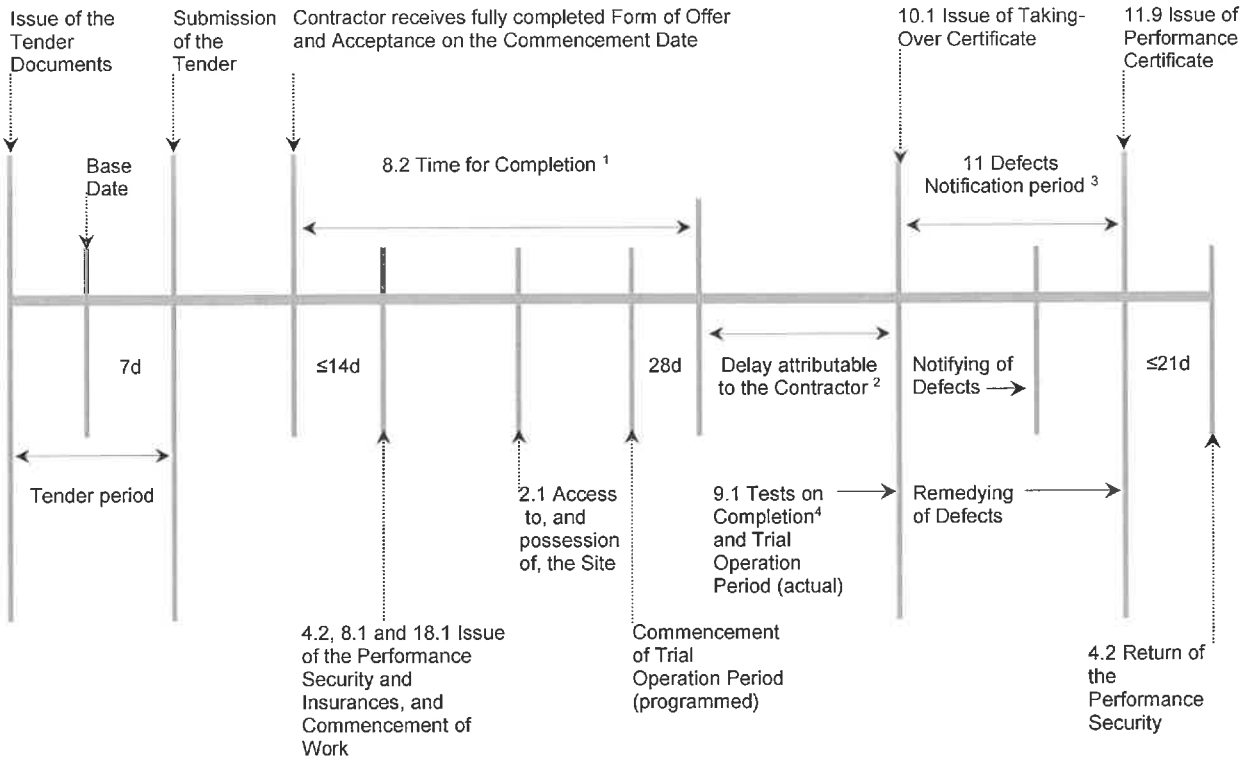
The Foreword to the Conditions of Contract (Yellow Book) concludes with the following:

"In order to clarify the sequence of Contract activities, reference may be made to the charts on the next two pages and to the Sub-Clauses listed below (some Sub-Clause numbers are also stated in the charts). The charts are illustrative and must not be taken into consideration in the interpretation of the Conditions of Contract.

1.1.3.1	&	13.7	Base Date
1.1.3.2	&	8.1	Commencement Date
1.1.6.6	&	4.2	Performance Security
1.1.4.7	&	14.3	Interim Payment Certificate
1.1.3.3	&	8.2	Time for Completion (as extended under 8.4)
1.1.3.4	&	9.1	Tests on Completion
1.1.3.5	&	10.1	Taking-Over Certificate
1.1.3.6	&	12.1	Tests after Completion (if any)
1.1.3.7	&	11.1	Defects Notification Period (as extended under 11.3)
1.1.3.8	&	11.9	Performance Certificate
1.1.4.4	&	14.13	Final Payment Certificate"

The charts referred to above are reproduced on the following two pages, amended and amplified where necessary to conform to the Particular Conditions for this Contract. The charts are illustrative and must not be taken into consideration in the interpretation of the Conditions of Contract.

[redacted]



Typical sequence of Principal Events during Contracts for Plant and Design-Build

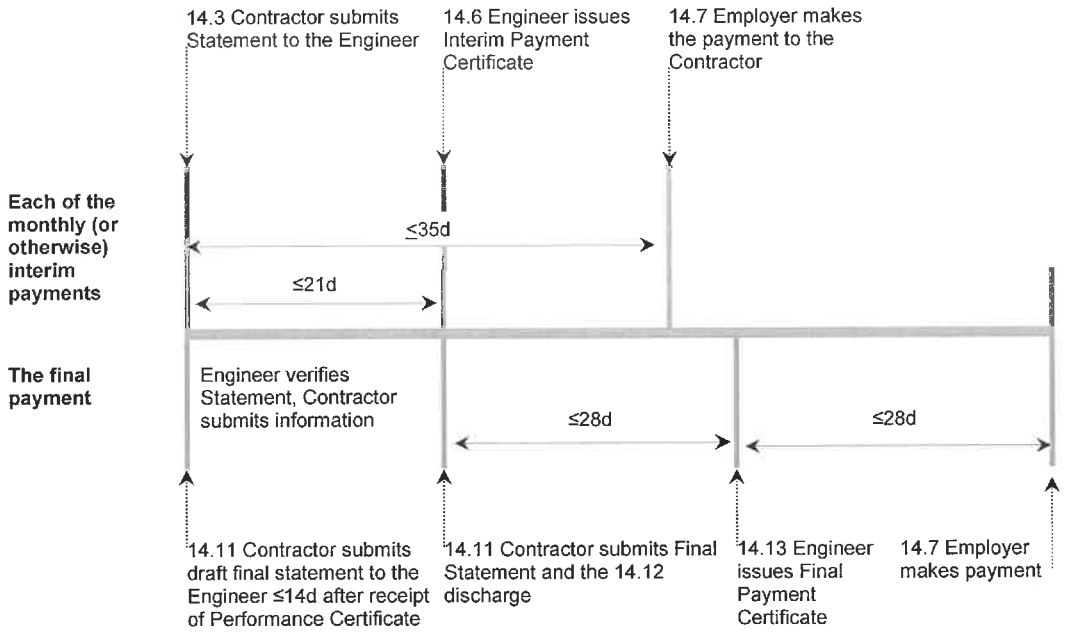
(Modified to suit this Contract)

1. The Time for Completion is stated (in the Appendix to Tender) as a number of days, to which is added any extensions of time under Sub-Clause 8.4.

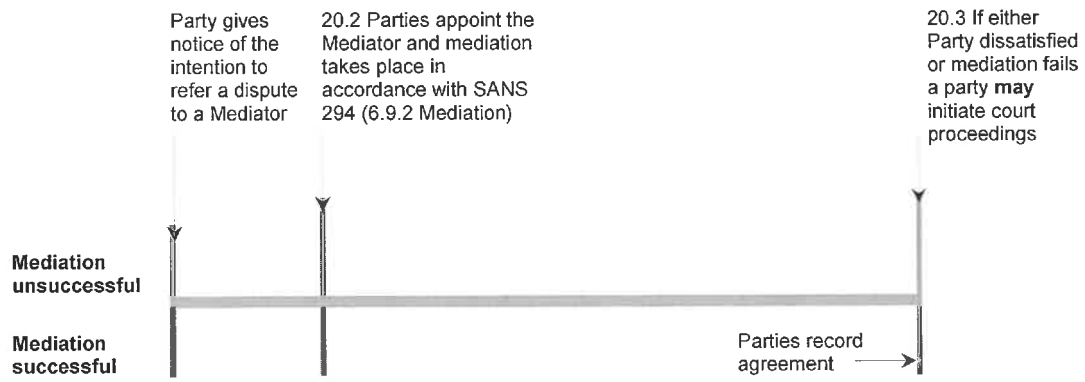
2. In order to indicate the sequence of events, the above diagram is based upon the example of the Contractor failing to comply with Sub-Clause 8.2.

3. The Defects Notification Period is stated (in the Appendix to Tender) as a number of days, to which is added any extensions under Sub-Clause 11.3.

4. Depending on the type of Works, Tests after Completion may also be required, if provided for in the Contract.



Typical Sequence of Payment Events Envisaged in Clause 14
(Modified to suit this Contract)



Typical Sequence of Dispute Events Envisaged in Clause 20
(Modified to suit this Contract)

APPENDIX TO TENDER

Part 1: Contract Data completed by the Employer

Item	Sub-Clause	Entry
Employer's name and address	1.1.2.2 & 1.3(b)	CITY OF CAPE TOWN, represented by the Director: Water and Sanitation: Wastewater, 8 Voortrekker Road, corner of Mike Pienaar Boulevard, Private Bag X98, Bellville, Cape Town, 7535 and/or such other person or persons duly authorised thereto by the Employer in writing; the Employer is referred to in this Contract Document by the terms "Employer", "City of Cape Town" or "Council" as the context provides.
Engineer's name and address	1.1.2.4 & 1.3(b)	[redacted]
Time for Completion of the Works	1.1.3.3 & 8.2	51 months (including 12 months defects liability)
Defects Notification Period.....	1.1.3.7	365 days
Electronic transmission systems.....	1.3(a).....	e-mail or facsimile
Governing Law.....	1.4	Republic of South Africa
Ruling language	1.4	English
Language for communications.....	1.4	English
Time for access to, and possession of, the Site	2.1*.....	7 Days from the Commencement Date

[redacted]

APPENDIX TO TENDER (CONTD)

Item	Sub-Clause	Entry
Amount of Performance Security	4.2	7 % of the Accepted Contract Amount
Period for notifying unforeseeable errors, faults and defects in the Employer's Requirements	5.1	Within 21 days
Normal working hours	6.5	Between 07h00 and 17h00 weekdays
Delay penalties for the Works	8.7* & 14.15(b).....*	R10 000,00 per day
Maximum amount of Delay penalties.....	8.7	No limit
Adjustments for Changes in Cost	13.8	This Contract shall be subject to Contract Price Adjustment in strict accordance with Sub-Clause 13.8 of the Particular Conditions. Variations in Rates of Exchange shall be for the Employer's account in accordance with Sub-Clause 13.8 of the Particular Conditions.

[redacted]

APPENDIX TO TENDER (CONTD)

Item	Sub-Clause	Entry
Total advance payment.....	14.2.....	20%
Percentage of retention.....	14.3(c)*.....	5% reducing to 2.5% upon the issue of a Taking-Over Certificate.
Limit of Retention Money	14.3(c)*.....	No limit
Plant and Materials Intended for the Works	14.5(b)	No payment for plant and materials upon shipment
Plant and materials for payment when delivered to the Site	14.5(c)	All plant and materials delivered to site will be subject to payment in terms of this clause
Minimum amount of Interim Payment Certificates	14.6	No minimum
Currency/currencies of payment	14.15.....	South African Rand, as named in that section of the Form of Offer and Acceptance called "Offer"
Periods for submission of insurance:		
(a) evidence of insurance.....	18.1*.....	14 days
(b) relevant policies.....	18.1	14 days
Maximum amount of deductibles for insurance of the Employer's risks	18.2(d).....	Not applicable
Minimum amount of third-party insurance	18.3	R20 000 000,00
The DAB shall be	20.2	One sole Member / adjudicator
Appointment (if not agreed) to be made by....	20.3	President of the South African Institution of Mechanical Engineers
Amicable Settlement will be conducted as....	20.5	Mediation
Appointment (if not agreed) to be made by....	20.5	President of the South African Institution of Mechanical Engineers
Litigation will be conducted in.....	20.6*	Applicable Court of Jurisdiction in Cape Town

* See Particular Conditions

[redacted]

APPENDIX TO TENDER (CONTD)

Part 2: Contract Data completed by the Contractor

Item	Sub-Clause	Entry
Contractor's name and address	1.1.2.3 & 1.3(b)	[redacted]
Contractor's Representative's name	4.3	[redacted]

The Tenderer shall complete the above Part 2 of the Appendix to Tender.

SIGNED ON BEHALF OF TENDERER [redacted]

PARTICULAR CONDITIONS

The Particular Conditions are:

1 General Provisions

Sub-Clause 1.1 Definitions

1.1.1 The Contract

1.1.1.1 is deleted and replaced by:

"**Contract**" means the Form of Offer and Acceptance, Contract Data, these General Conditions, the Employer's Requirements, the Drawings, the Schedules, and the further documents (if any) which are listed in the Form of Offer and Acceptance, and further includes drawings and documents or parts thereof which any of the aforesaid documents incorporate by reference.

1.1.1.2 is deleted and replaced by:

"**Contract Agreement**" means the document called "Form of Offer and Acceptance".

1.1.1.3 is deleted and replaced by:

"**Letter of Acceptance**" means that section of the Form of Offer and Acceptance called "Acceptance".

1.1.1.4 is deleted and replaced by:

"**Letter of Tender**" means that section of the Form of Offer and Acceptance called "Offer".

1.1.1.5 is deleted and replaced by:

"**Employer's Requirements**" means the document titled "Part C3: Scope of Work", as included in the Contract, and any additions and modifications to such document in accordance with the Contract. Such document specifies the purpose, scope, and/or design and/or other technical criteria, for the Works, and includes the Specifications.

1.1.1.6 is deleted and replaced by:

"**Schedules**" means the document(s) entitled schedules, completed by the Contractor and submitted with his tender offer, as included in the Contract. Such document(s) shall include the Returnable Schedules and the Schedules of Quantities, and may include data, lists and schedules of rates and/or prices.

1.1.1.7 is deleted and replaced by:

"**Contractor's Proposal**" means the information which the Contractor submitted with the Form of Offer and Acceptance, as included in the Contract. Such information shall include the information listed in Schedule 18 in Part T2.2 Returnable Schedules and may also include the Contractor's preliminary design.

1.1.1.8 is deleted and replaced by:

"**Tender**" means that section of the Form of Offer and Acceptance called "Offer" and all other documents which the Contractor submitted as Returnable Documents, as included in the Contract.

1.1.1.9 is deleted and replaced by:

"**Appendix to Tender**" means the completed section entitled appendix to tender included in the Contract Data.

Add the following Sub-Clause after Sub-Clause 1.1.1.10:

1.1.1.11
"**Returnable Schedules**" means the Schedules contained in Part T2.2 in the Tender Data and Part C2.1 in the Pricing Data, and **"Schedules of Quantities"** means the document entitled schedules of quantities contained in Part C2.2 in the Pricing Data.

[redacted]

1.1.2 Parties and Persons

1.1.2.3 is deleted and replaced by:

"**Contractor**" means the person(s) named as Contractor in that section of the Form of Offer called "Offer" accepted by the Employer and the legal successors in title to this person(s).

1.1.2.9 is deleted and replaced by:

"**Mediator**" means the person appointed under Sub-Clause 20.2 [*Mediation*] in the Contract Data.

1.1.3 Dates, Tests, Periods and Completion

1.1.3.1 is deleted and replaced by:

"**Base Date**" means the date 7 days prior to the closing date for the submission of the Tender.

1.1.3.2 is deleted and replaced by:

"**Commencement Date**" means the date the Contractor receives one fully completed original copy of the document

1.1.4 Money and Payments

1.1.4.1 is deleted and replaced by:

"**Accepted Contract Amount**" means the amount accepted in that section of the Form of Offer and Acceptance called "Acceptance" for the execution and completion of the Works and the remedying of any defects.

1.1.4.6 is deleted and replaced by:

"**Foreign Currency**" means a currency in which part (if any) of the Contract Price is payable, but not the Local Currency.

Add the following Sub-Clause after Sub-Clause 1.1.4.12:

1.1.4.13 "**Contract Price Adjustment**" means the adjustment to be included in the Contract Price for fluctuations in the Cost of Plant and Materials, Site Installation, General Items (comprising General Requirements and Conditions, Health and Safety, Environmental Management, Sundries, etc.), and Variations in Rates of Exchange, Customs Surcharge and Customs Duty, all as provided for in Sub-Clause 13.8 [*Adjustments for Changes in Cost*] in the Contract Data.

1.1.4.14 "**Reasonable Profit**" means an amount not exceeding 10% of the Cost of any item or activity

1.1.5 Works and Goods

1.1.5.6 is *deleted and replaced by:*

"**Section**" means a part of the Works specified in the Appendix to Tender as a Section (if any), or a part of the Works specified as a Section during the course of the Contract by the Employer (such Section may be an item of Plant).

1.1.6 Other Definitions

Add the following Sub-Clause after Sub-Clause 1.1.6.9:

1.1.6.10 "**Letter of Notification**" means the letter of formal notification, signed by the Employer, of the decision of the Supply Chain Management Bid Adjudication Committee sent to all tenderers. The notification of the decision does not form part of the Employer's Acceptance of the successful tenderer's Form of Offer and no rights shall accrue.

Sub-Clause 1.5 Priority of Documents

Deleted and replaced by:

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

(a) the Form of Offer and Acceptance,
(b) the Appendix to Tender within the Contract Data,
(c) the Particular Conditions within the Contract Data,
(d) these General Conditions,
(e) the Employer's Requirements,
(f) the Drawings, and
(g) the Schedules.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

Sub-Clause 1.6 Contract Agreement

Deleted and replaced by:

The Parties shall enter into a Contract Agreement after the Contractor is called upon to do so by the Employer. The Agreement shall be the fully completed Form of Offer and Acceptance contained in the Contract Document.

Sub-Clause 1.8 Care and Supply of Documents

Delete "six copies" in the second sentence of the first paragraph and replace with "three copies".

Sub-Clause 1.12 Confidential details

Insert the following after the first paragraph:

The Parties shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper elsewhere without the prior written consent of the other Party.

Sub-Clause 1.13 Compliance with Laws

Insert "deposits" after "taxes" in 1.13 b).

Add the following paragraph after 1.13 (b):

(c) Where the Contract Sum exceeds one hundred and thirty million Rand (R130 000 000), the Employer shall, in compliance with Regulation 3 of the Construction Regulations, read together with the exemptions published in Government Notice dated 7 July 2015, apply to the Provincial Director of the Department of Labour for a construction work permit to perform the intended construction work. The employer will apply for the construction work permit as soon as possible after its Bid Adjudication Committee has awarded the contract, and the period that the Department of labour requires to issue the permit will run concurrently with the appeal period.

2 The Employer

Sub-Clause 2.1 Right of Access to the Site

Add the following after the first sentence of the first paragraph:

Access to, and possession of the Site shall not take place until the issuing, by the Provincial Director of the Department of Labour, of a construction work permit to perform the intended construction work in terms of Clause 1.13 *[Compliance with Laws]*.

Add the following paragraph after 2.1 (b):

Should, however, the issuing of a construction work permit be delayed by the submission of a unacceptable draft Health and Safety Plan, in the opinion of either the Employer's Health and Safety Agent, or the Provincial Director of the Department of Labour, no claim for an extension of time will be entertained.

Sub-Clause 2.4 Employer's Financial Arrangements

Delete this Sub-Clause.

Sub-Clause 2.5 Employer's Claims

Insert "or by law" after "Contract" in the first sentence of the first paragraph.

3 The Engineer

Add the following at the end of the third paragraph:

The requirements for the Engineer to obtain the approval of the Employer before exercising a specified authority are:

(a) Clause 3.2: The delegation of duties to others
(b) Clause 4.24: The issuing of instructions for dealing with fossils and the like.
(c) Clause 6.5 (b): Giving consent for work to be carried out on days of rest or outside normal working hours.
(d) Clause 8.6: The approval of a revised programme and supporting report in order to expedite progress.
(e) Clause 8.8: Instruction to suspend the works
(f) Clause 13.1: The issuing of any variation that causes the contract price to exceed the accepted contract amount
(g) Clause 14.2: Agreeing to advance payment for deposits for items not listed in the Advance Payment Schedule.
(h) Other requirements

Sub-Clause 3.4 Replacement of the Engineer

Deleted and replaced by:

The Employer shall have the right to replace the Engineer.

4 The Contractor

Sub-Clause 4.2 Performance Security

Delete the first sentence of the second paragraph and replace with:

The Contractor shall deliver the Performance Security to the Employer within 14 days from the Commencement Date.

Add the following at the end of the second paragraph:

The form of Performance Security shall contain the precise wording of the document included in Part C1.3 of the Contract Data: **Form of Performance Guarantee,** and it shall be issued by a financial institution approved by the Employer at the date when the guarantee is issued. The list of approved financial institutions current at the date of tender is attached to the **Form of Performance Guarantee**.

Sub-Clause 4.3 Contractor's Representative

Delete "prior to the Commencement Date" in the first sentence of the second paragraph and replace with "within 14 days from the Commencement Date".

Sub-Clause 4.4 Subcontractors

Delete "28 days' notice" in sub-paragraph (c) and replace with "14 days' notice".

Add the following clause:

d) The Contractor shall supply the Employer with proof of all orders placed with sub-contractors upon request by the Engineer. Information is to be given on each sub-order sufficient to identify the material or equipment to which the sub-order relates and to notify the sub-contractor that the conditions of the Specification apply.

Sub-Clause 4.8 Safety Procedures

Add the following:

The Contractor's attention is also drawn to the Health and Safety Specification in the Employer's Requirements.

The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the Works in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014 promulgated thereunder.

An agreement is included in the Contract Document (Part C1.5 in Agreements and Contract Data) and shall be completed and submitted to the Employer together with a letter of good standing from the Compensation Commissioner (if not insured with a licenced compensation insurer) within fourteen (14) days after the Commencement Date. The Contractor shall ensure that any letter of good standing shall be timeously renewed in order that it remains in full force for the duration of the Contract.

Sub-Clause 4.10 Site Data

Add the following at the end of the first sentence:

"as contained in the Employer's Requirements, if applicable."

Sub-Clause 4.16 Transport of Goods

Delete "and" after sub-paragraph (b) and add the following to sub-paragraph(c):

In this regard the Contractor's attention is also drawn to Sub-Clause 18.2(f)(i) in the Particular Conditions; and

Add the following sub-paragraph:

(d) the Contractor shall provide all lifting facilities unless specified otherwise in the Detailed Mechanical Specification in the Employer's Requirements.

Sub-Clause 4.17 Contractor's Equipment

Add the following:

The Contractor shall provide all necessary storage facilities on Site.

Sub-Clause 4.18 Protection of the Environment

Add the following:

The Contractor's attention is also drawn to the Environmental Management Specification in the Employer's Requirements.

Sub-Clause 4.21 Progress Reports

Delete "in six copies" in the first sentence and replace with "electronically and one hard copy".

Sub-Clause 4.22 Security of the Site

Add the following sub-paragraph:

(c) The Contractor shall in connection with the Works provide and maintain at his own cost all lights, guards, fencing, watching and other appropriate security measures when and where necessary or required by the Engineer or by any competent statutory or other authority for the protection and security of the Works and the Contractor's Equipment, or for the safety and convenience of the public and for the protection of life and property.

Sub-Clause 4.23 Contractor's Operations on Site

Add the following:

The Contractor shall protect and cover up all works as may be required and take all other precautions necessary to avoid causing damage or soiling of new and existing plant, equipment, buildings and structures. This shall inter alia apply when activities such as abrasive blasting, painting, welding, grinding, sealing, lagging and so forth, must be performed on the Site. The Contractor shall, on completion, remove all covers and shall at his cost rectify all soiling and damage to finishes to the satisfaction of the Engineer.

6 Staff and Labour

Sub-Clause 6.10 Records of Contractor's Personnel and Equipment

Add the following:

The Contractor shall also submit the monthly returns as described in the Scope of Work, Part C3.5 Management, Clause 8.

8 Commencement, Delays and Suspension

Sub-Clause 8.1 Commencement of Work

Add the following at the end of the first paragraph:

[redacted]

Where the Contract Sum exceeds one hundred and thirty million Rand (R130 000 000), and a construction work permit from the Provincial Director of the Department of Labour is required, commencement of the Works shall not be deemed to take place until such construction work permit has been issued by the Provincial Director in terms of Clause 1.13 *[Compliance with Laws]*.

Delete the first paragraph.

Delete the words "the design and execution of the Works as soon as is reasonably practicable after" in the second paragraph and replace with "executing the Works within 14 days from".

The Contractor will not be given access to, and possession of the Site, until the following documentation has been submitted and approved by the Engineer:

(a) Health and Safety Plan (refer to Clause G8.3 in the Health and Safety Specification attached hereto / included in Volume 3A.

(b) Method Statements (refer to Clause H5.1 in the Environmental Management Specification in Volume Specification attached hereto / included in Volume 3A.)

(c) Proof of Registration / Letter of Good Standing with the relevant Bargaining Council

(d) Proof of inoculations to hepatitis and tetanus for all staff in accordance with Clause 1.9 in the Health and Safety Specification in Volume 3A.

Sub-Clause 8.3 Programme

Delete the first sentence of the first paragraph and replace with:

The Contractor shall submit a detailed time programme to the Engineer within 14 days from the Commencement Date.

Add the following after the first paragraph:

The Contractor shall incorporate any programming restrictions that may be specified in Sub-Clause 2.1 in the Particular Conditions into the programme.

Sub-Clause 8.4 Extension of Time for Completion

Add the following after par (e):

Regarding sub-paragraph (c), no extension of the Time for Completion will be granted in respect of any delays attributed to normal climatic conditions. Normal climatic conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed below for each month, then exceptionally adverse climatic conditions shall be deemed to exist, and an extension of the Time for Completion shall be granted in accordance with the provisions of this Sub-Clause.

The number of days quoted below shall be regarded as a fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where adverse weather prevents or disrupts critical work.

January	2 days
February	2 days
March	2 days
April	2 days
May	2 days
June	4 days
July	4 days
August	4 days
September	4 days
October	2 days
November	2 days
December	2 days

Sub-Clause 8.7 Delay Damages

Wherever the phrase "Delay Damages" occur in the Contract it should be replaced with the phrase "Delay Penalties".

Insert the following at the end of the second sentence in the first paragraph:

.... or, in the event of termination by the Employer under Sub-Clause 15.2 [*Termination by Employer*], the actual date of termination.

Sub-Clause 8.10 Payment for Plant and Materials in Event of Suspension

Replace sub-paragraph (b) with the following:

(b) the Contractor has provided an advance payment guarantee in accordance with Sub-Clause 14.2 in the Particular Conditions.

9 Tests on Completion

Sub-Clause 9.1 Contractor's Obligations

Delete "21 days" in the first sentence of the second paragraph and replace with "14 days".

10 Employer's Taking Over

Sub-Clause 10.1 Taking Over of the Works and Sections

Delete 28 days in the 3rd and final paragraph and replace with 14 days

11 Defects Liability

Sub Clause 11.3 Extension of Defects Notification Period

Delete the first paragraph and replace with:

The Employer shall be entitled subject to Sub-Clause 2.5 [*Employer's Claims*] to an extension of the relevant Defects Notification Period for the Works or a Section if and to the extent that the Works or Section (as the case may be, and after taking-over) cannot be used for the purposes for which they are intended by reason of a defect or damage. However, a Defects Notification Period shall not be extended by more than five years.

13 Variations and Adjustments

Sub-Clause 13.3 Variation Procedure

Delete "and the Schedule of Payments" in the last paragraph.

Sub-Clause 13.5 Provisional Sums

Add the following to the last paragraph:

The number of quotations shall be three (3). Quotations shall include full technical descriptions as well as a breakdown of prices.

Sub-Clause 13.7 Adjustments for Changes in Legislation

Add the following to the first paragraph:

Any increase or decrease in the amount of Value Added Tax inserted in the Schedules of Quantities due to a change in the percentage rates applicable shall be the subject of adjustment under this Sub-Clause.

[redacted]

Sub-Clause 13.8 Adjustments for Changes in Cost

Deleted and replaced by:

13.8.1 **General**

The Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of all other rises and falls in costs not covered by the provisions of this or other Clauses.

If provision has been made in the Appendix to Tender for prices to be subject to adjustment, such adjustments claimed by the Contractor shall be made in accordance with the Sub-Clauses referred to therein.

The following general provisions shall apply in all cases:

(a) The Base Date shall be as defined in Sub-Clause 1.1.3.1 in the Particular Conditions.

(b) Adjustments for changes in cost shall be calculated as if the Works are executed within the time for completion and no additional costs due to any work being executed outside the time for completion shall be payable unless the Engineer allows an extension of time in accordance with Sub-Clause 8.4 [*Extension of Time for Completion*] and Sub-Clause 8.4 in the Particular Conditions.

(c) Claims for adjustments for changes in cost shall be supported by such documentary evidence that may be required by the Engineer. Failure to render this information may result in the rejection of claims for price adjustment.

(d) The value of imported Plant and Materials shall be as defined in the sub-clause below.

(e) No claims for adjustments for changes in cost will be accepted which are submitted later than 28 days after the date of issue of the Taking-Over Certificate.

13.8.2 **Plant and Materials Manufactured in South Africa**

13.8.2.1 Permissible Adjustments

Adjustment to the Contract Price for the design, manufacture, painting, testing, supply, delivery, offloading and storage of Plant and Materials manufactured in the Republic of South Africa, shall be allowed **only** for variations in the cost of labour and material based on the indices published by the Steel and Engineering Industries Federation of South Africa (SEIFSA) using the method described in Sub-Clause 13.8.2.1.2.

The following SEIFSA tables shall be regarded as relevant to Mechanical and Electrical Works in this Contract:

Table C3	Index of actual labour cost
Table G	Statistics SA - production price index, Mechanical and Electrical Engineering Materials, as applicable
Table E -	**EX** Merchant Steel Price Index, Hot Rolled Sheets
Table Q -	**(A)** Index of stainless-steel flat products (excluding imports), Hot rolled steel
Table Q -	**1 (A)** Corrosion resisting steel 3CR12, Hot rolled plate
Table N	Ruling price of certain electrical cable manufacturing materials, Copper rod 7,90 mm

13.8.2.2 Method of Price Adjustment

Adjustment of the total values inserted in the Schedules of Quantities for the design, manufacture, painting, testing, supply, delivery, offloading and storage of Plant and Materials manufactured in the Republic of South Africa shall be based on the following:

(a) The estimated proportions (represented by the coefficients "b", "c", "d" and "e" in the formulae in sub-paragraph (b) below) of the total values shall be adjusted on the basis of the increase or decrease between the indices in the relevant tables at the Base Date and these indices at a date 42 days prior to the valuation date, for each month in which the Plant and Materials

are contractually delivered to Site, by multiplying the monthly values certified by the relevant Adjustment Factor in the formulae in sub-paragraph (b) below.

(b) the applicable formulae are:

Mechanical Plant and Materials

$$A = a + b\frac{Ln}{Lo} + c\frac{Mn}{Mo} + d\frac{Sn}{So} + e\frac{SSn}{SSo} - 1$$

where
A = Adjustment Factor rounded off to the sixth decimal place
a = 0.10 Fixed coefficient (non-adjustable portion)
b = 0.15)
c = 0.35) Coefficients (sum of these coefficients shall be 0,90)
d = 0.25)
e = 0.15)
Ln = Current labour index in Table C3
Lo = Base labour index in Table C3
Mn = Current mechanical engineering materials index in Table G
Mo = Base mechanical engineering materials index in Table G
Sn = Current steel price index in Table E-EX
So = Base steel price index in Table E-EX
SSn = Current stainless-steel index type 316 in Table Q-(A)
SSo = Base stainless-steel index type 316 in Table Q-(A)

(COMPILER NOTE: specify stainless steel type if not 316)

"Current" indices are those applicable 42 days prior to date of claim, as stated in sub-paragraph (a) above

"Base" indices are those applicable at Base Date, as stated in sub-paragraph (a) above

Electrical Plant and Materials

$$A = a + b\frac{Ln}{Lo} + c\frac{En}{Eo} + d\frac{CRn}{CRo} + e\frac{Cn}{Co} - 1$$

where
A = Adjustment Factor rounded off to the sixth decimal place
a = 0.10 Fixed coefficient (non-adjustable portion)
b = 0.10)
c = 0.30) Coefficients (sum of these coefficients shall be 0,90)
d = 0.20)
e = 0.30)
Ln = Current labour index in Table C3
Lo = Base labour index in Table C3
En = Current electrical engineering materials index in Table G
Eo = Base electrical engineering materials index in Table G
CRn = Current 3CR12 steel index in Table Q -1 (A)
CRo = Base 3CR12 steel index in Table Q -1 (A)
Cn = Current copper rod index in Table N
Co = Base copper rod index in Table N

"Current" indices are those applicable 42 days prior to date of claim, as stated in sub-paragraph (a) above

"Base" indices are those applicable at Base Date, as stated in sub-paragraph (a) above

(c) The value of any Plant and Materials imported from outside South Africa inserted on the schedule titled "**Price Basis for Imported Plant and Material**and subject to Sub-Clause 13.8.2.2.2(a) shall be deducted from the total values to be adjusted by the SEIFSA Index adjustment. Any Plant and Materials not inserted in Schedule 20 shall be deemed to be manufactured in South Africa for the purposes of Contract Price Adjustment.

13.8.3 **Plant and Materials Imported from Outside South Africa**

13.8.3.1 If price adjustment for variations in the cost of plant and materials imported from outside of South Africa is required, such adjustment shall be based on the information contained on the schedule

titled "**Price Basis for Imported Plant and Materials** and as below. For the purposes of this clause the Rand value of imported Plant and Materials inserted on the schedule titled "**Price Basis for Imported Plant and Materials** (column (F)) shall be the value in foreign currency (column (A)) converted to South African Rand (column (C)) by using the closing spot selling rate quoted by **Employer's** main banker, [redacted] on the Base Date (seven calendar days before tender closing date) rounded to the second decimal place (column(B)), to which shall be added any Customs Surcharge and Customs Duty applicable at that date (columns (D) and (E)).

13.8.3.1.1 Adjustment for variations in rates of exchange:

(a) The value in foreign currency inserted in column (A) shall be subject to clause (h) below when recalculating the Rand value.

(b) The rate of exchange inserted in column (B) shall be the closing spot selling rate quoted by Council's main banker, [redacted] on the Base Date, rounded to the second decimal place, subject to sub-paragraph (c) below.

(c) If the rate of exchange inserted by the Tenderer differs from the [redacted] rate referred to above, then the [redacted] rate shall apply and the Rand value in columns (C) and (F) shall be recalculated accordingly, without altering the price in the Schedules of Quantities for the relevant items.

(d) If a tender from a supplier or sub-contractor provides for variations in rates of exchange, the Contractor may **only** claim for variations in rates of exchange if he binds the supplier or sub-contractor to the same provision to take out forward cover as described in sub-paragraph (e) below.

(e) The Contractor (or supplier or sub-contractor) shall within five working days from the date of placing a firm order on an overseas supplier, cover or recover forward by way of a contract with a bank which is an authorised foreign exchange dealer, the foreign exchange component of the cost of any imported Plant and Materials inserted by the Tenderer on the schedule titled "**Price Basis for Imported Plant and Materials**.

(f) When the Contractor (or supplier or sub-contractor) so obtains forward cover, the Contractor shall immediately notify the Employer of the rate obtained and furnish the Employer with a copy of the foreign exchange contract note.

(g) Based on the evidence provided in sub-paragraph (f) above, the value in Rand inserted in column (C) of the schedule titled "**Price Basis for Imported Plant and Materials** shall be recalculated using the forward cover rate obtained, and any increase or decrease in the Rand value defined in this clause shall be adjusted accordingly, subject to sub-paragraph (h) below. Failure to provide such evidence shall result in no such recalculation shall be considered by the Employer.

(h) The adjustments shall be calculated upon the value in foreign currency in the Contractor's (or supplier's or sub-contractor's) **forward cover contract**, provided that, should this value exceed the value in foreign currency inserted in column (A) of Schedule 23, then the value in column (A) shall be used.

13.8.3.1.2 Adjustment for variations in customs surcharge and customs duty

(a) Any increase or decrease in the Rand value between the amounts of Customs Surcharge and Customs Duty inserted on the schedule titled "**Price Basis for Imported Plant and Materials** and those amounts actually paid to the Customs and Excise Authorities, which are due to changes in the percentage rates applicable or to the foreign exchange rate used by the authorities, shall be adjusted accordingly.

(b) The Tenderer shall state the Customs Duty Tariff Reference applicable to each item and the Contractor shall advise the Employer's Agent of any changes which occur.

13.8.3.1.3 Adjustment for variation in labour and material Costs

If the prices for imported Plant and Materials are not fixed, the Contractor shall in his Tender specify the formula for calculating Contract Price Adjustments normally used in the country of manufacture and the indices and relative proportions of labour and material on which his Tender prices are based. Evidence of the indices applicable shall be provided with each claim. The indices applicable 42 days before contractual dispatch date from the factory will be used for the purposes of Contract Price Adjustment.

Failure to specify a formula in the Tender shall mean that the prices are fixed or shall be deemed to be fixed.

[redacted]

13.8.2.3 **Site Installation and General Items**

For the purpose of this Sub-Clause, General Items (defined below) are included with Site Installation for the sake of convenience, and which otherwise have no relationship with each other.

General Items shall comprise General Requirements and Conditions, Health and Safety, Environmental Management, Sundries, and any other items so described or implied in the Schedules of Quantities to be adjusted under this Sub-Clause.

Adjustment of the total values inserted in the Schedules of Quantities for Site Installation and General Items, shall be based on the following:

(a) No Contract Price Adjustment shall be applied to the total values in respect of providing the Performance Security (Demand Guarantee under URDG 758) and Insurances.

(b) The estimated proportion (represented by the 0.90 coefficient in the formula in sub-paragraph (c) below) of the total values shall be adjusted on the basis of the increase or decrease between SEIFSA **Table C3(A)** Index of actual labour cost (field force) where subsistence allowance is paid, at the Base Date and this index at the valuation date, for each month in which the work is contractually executed, by multiplying the monthly values certified by the Adjustment Factor in the formula in sub-paragraph (c) below.

(c) the applicable formula is:

Site Installation and General Items

$$A = 0.10 + 0.90 \frac{Ln}{Lo} - 1$$

where
A = Adjustment Factor rounded off to the sixth decimal place
0.10 = Fixed coefficient (non-adjustable portion)
0.90 = Coefficient
Ln = Current labour index in Table C3(A)
Lo = Base labour index in Table C3(A)

"Current" index is that applicable at the valuation date, as stated in sub-paragraph (b) above

"Base" index is that applicable at Base Date, as stated in sub-paragraph (b) above

14 Contract Price and Payment

Sub-Clause 14.1 The Contract Price

Delete sub-paragraph (d) and replace with:

(d) Price data in any Schedule, will be used for calculating the value of completed works for the purpose of interim payments or for determining the value of changes, omissions and additions for variation instructions when in the opinion of the Engineer such prices are applicable.

Add the following at the end of the Sub-clause:

(e) Except as otherwise stated in the Contract all parts of the Works are to be measured and the value agreed or determined, in accordance with Sub-Clause 3.5. Measurement shall be made of the net actual quantities of those parts, notwithstanding local practice.

Whenever the Engineer requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:

(i) promptly either attend or send another qualified representative to assist the Engineer in making the measurement, and

(ii) supply any particulars requested by the Engineer.

If the Contractor fails to attend or send a representative, the measurement made by (or on behalf of) the Engineer shall be accepted as accurate.

(f) Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured by records, they shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend to examine and agree, these records shall be accepted as accurate.

If the Contractor examines and disagrees the records, and/or does not sign them as agreed, then the Contractor shall notify the Engineer of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Engineer shall review the records and either confirm or vary them. If the Contractor does not so notify the Engineer within 14 days after being requested to examine the records, they shall be accepted as accurate.

(g) All measurements of quantity, length and mass for the purpose of payment shall be to the nearest standard unit for which rates are given in the Schedules of Quantities or have been agreed by the Engineer and shall be taken from the actual work on Site.

(h) Surplus or waste material will not be taken over or paid for by the Employer except where at the time when it was reasonable for the material to be provided or manufacture to be put in hand it was not possible to determine the quantity of material required. The route lengths determined by the Contractor in accordance with the specification shall be used for the purposes of manufacture in place of the estimated route lengths and any surplus after completion arising therefrom will not be taken over or paid for by the Employer unless the Employer so decides.

Sub-Clause 14.2 Advance Payment

Deleted and replaced by:

Subject to sub-paragraphs (a) and (e) of Sub-Clause 14.3 in the Particular Conditions, and the Advance Payment Schedule, the Employer shall make an advance payment for Plant and Materials stored at places other than the Site, or in respect of which a deposit with order is required, only once the Contractor has submitted an advance payment guarantee in accordance with this Sub-Clause.

Unless and until the Employer receives this guarantee, the following paragraphs shall not apply.

The Engineer shall issue an Interim Payment Certificate for, or including, advance payment after receiving a Statement under Sub-Clause 14.3 [*Application for Interim Payment Certificates*] and after the Employer has received a guarantee in an amount equal to the advance payment requested. This guarantee shall be issued by a financial institution approved by the Employer, as listed in the Annexure in Part C1.3 of the Contract Data, and shall be in the form of and shall contain the precise wording of the document included in Part C1.4: **Form of Advance Payment Guarantee** and shall come into force, be administered and expire in terms thereof.

The Employer shall return the guarantee to the Contractor within 14 days after the expiry date.

The provision of the Advanced Payment Guarantee shall be at the Contractor's cost.

The term "deposit" or "deposit with order" used in the context of this Sub-Clause and elsewhere by reference to this Sub-Clause, means a sum payable by the Contractor to a manufacturer/supplier prior to the manufacture of an item of Plant or Material, required at the time of placing an order, the balance of the value of the item being payable later.

Sub-Clause 14.3 Application for Interim Payment Certificates

Delete "in six copies" in the first line of the first paragraph.

Sub-Clause 14.5 Plant and Materials intended for the Works

Add to (c)(ii):

or are ready to be delivered to site and the Engineer has instructed the Contractor to store the Plant and Materials until the site can accommodate their delivery, and are properly stored at the Contractor's or the sub-Contractor's Works, are protected against loss, damage or deterioration, and appear to be in accordance with the Contract and for which an advance payment guarantee has been provided in accordance with Sub-Clause 14.2 in the Particular Conditions. The advance payment guarantee shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration.

Sub-Clause 14.6 Issue of Interim Payment Certificates

Delete "within 28 days" in the second sentence of the first paragraph and replace with "within 21 days".

Sub-Clause 14.7 Payment

Delete sub-paragraphs (a) to (c) and replace with:

(a) the amount certified in each Interim Payment Certificate within 35 days after the Engineer receives the Statement and supporting documents; and

(b) the amount certified in the Final Payment Certificate within 28 days after the Employer receives this Payment Certificate.

Add the following paragraph:

Notwithstanding the above, the Engineer shall be empowered to withhold the delivery of a payment certificate until the Contractor has complied with his obligations to submit the monthly returns in terms of Sub-Clause 6.10 in the Particular Conditions and as described in the Employer's Requirements.

The Contractor may submit a fully motivated application regarding more frequent payment to the Engineer to be submitted to the Employer for consideration. Requests for more frequent payments will be considered at the sole discretion of the Employer and is not a right in terms of this contract.

Sub-Clause 14.9 Payment of Retention Money

Delete the last paragraph and replace with:

The relevant contract value for each Section shall be determined by the Engineer, based on the Schedules of Quantities and any variations and adjustments thereto.

Sub-Clause 14.10 Statement at Completion

Delete "Within 84 days" in the first paragraph and replace with "Within 28 days,".

Delete "six copies of" in the first paragraph.

Sub-Clause 14.11 Application for Final Payment Certificate

Delete "Within 56 days" in the first paragraph and replace with "Within 14 days".

Delete "six copies of" in the first paragraph.

Add the following new Sub-Clause after Sub-Clause 14.5:

Sub-Clause 14.16 Tax Invoices

Section 20(1) of the Value Added Tax Act, 89 of 1991 requires that a supplier (person supplying goods or services) who is registered as a VAT vendor issue to the recipient a tax invoice within 21 days of the date of a supply whether requested or not.

The Contractor shall provide a tax invoice (VAT invoice) which shall be included with each Payment Certificate and a Final Payment Certificate delivered to the Employer by the Engineer in terms of Sub-Clause 14.6 [*Issue of Interim Payment Certificates*] and Sub-Clause 14.6 in the Particular Conditions, and Sub-Clause 14.13 [*Issue of Final Payment Certificate*], respectively. Failure by the Contractor to provide a tax invoice (VAT invoice) timeously may delay delivery of the payment certificate by the Engineer and no interest shall accrue.

Tax invoices may only be dated on or after the date of the relevant Payment Certificate as issued by the Engineer.

15 Termination by Employer

Add the following additional Sub-Clause after Sub-Clause (f)

(a) who was a Sole Proprietor, or a sole member of a Close Corporation dies?

16 Suspension and Termination by Contractor

Sub-Clause 16.1 Contractor's Entitlement to Suspend Work

Delete "Sub-Clause 2.4 [*Employer's Financial Arrangements*] or" in the first paragraph.

Sub-Clause 16.2 Termination by Contractor

Delete the content of sub-paragraph (a)

17 Risk and Responsibility

Sub-Clause 17.3 Employer's Risks

(i) defects in the materials supplied by the Employer for incorporation in the Works,

(j) the confiscation, commandeering, nationalisation, requisition or destruction of or damage to property by an order of government, or any public or local authority, and

(k) the amounts by which the replacement value of free issue materials exceeds the values as specified in the tender document by the Employer.

18 Insurance

Sub-Clause 18.1 General Requirements for Insurances

Add the following at the end of the first paragraph:

Save as otherwise provided in the Contract, nothing herein contained shall oblige the Insuring Party to effect any insurance which is not generally obtainable from a registered insurer in South Africa.

Add the following at the end of the second last paragraph:

The Insuring Party shall be liable for the payment of all deductibles.

Add the following at the end of Sub-Clause (a) before the comma:

"or an insurance broker's warranty worded precisely as given in Part C1.7 Insurance Broker's Warranty".

Sub-Clause 18.2 Insurance for Works and Contractor's Equipment

Add the following at the end of the first paragraph:

In addition to and in terms of the same conditions as the rest of this clause, the Insuring Party shall further provide special risks / supplementary insurance issued by the South African Special Risks Insurance Association (SASRIA) in respect of civil commotion, riot and strike in the same value as the works insurance.

Delete "Sub-Clause 14.5 [(e) (i) and (ii) ".

Sub-clause 18.3 Insurance against Injury to Persons and Damage to Property

Add the following at the end of the first paragraph:

In addition to and in terms of the same conditions as the rest of this clause, the Insuring Party shall provide Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability Indemnity.

Sub-Clause 18.4 Insurance of Contractor's Personnel

Add the following at the end of the first paragraph:

This insurance shall be in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

20 Claims, Disputes and Arbitration

Sub-Clause 20.5 Amicable Settlement

Add the following after the first paragraph:

Any amicable settlement conducted in terms of this clause will be done by mediation in accordance with rules determined by the mediator. Where the parties fail to agree on a mediator, the mediator shall be appointed by the entity or official named in the Appendix to Tender.

Mediation shall be conducted without legal representation with the costs being borne equally by the parties.

The parties shall record any agreement reached in writing and thereafter they shall be bound by such agreement.

The mediator shall be authorized to end the mediation process whenever, in his opinion, further efforts at mediation would not contribute to a resolution of the dispute between the parties.

If the mediation fails, then either party may require that the dispute be settled by litigation.

Delete all references to "Arbitration" in the conditions and replace it with "Litigation"

Delete Sub-Clause 20.6 and replace with the following:

Sub-Clause 20.6 Litigation

Any unresolved dispute shall be finally determined by court proceedings in the Court as stated in the Appendix to Tender.

ADDITIONAL CONDITIONS OF CONTRACT

Clause 21 Protection of Personal Information

21.1 The Contractor acknowledges that, for the purposes of the service level agreement, they may come into contact with or have access to personal information and other information that may be classified or deemed as private or confidential and for which CCT is responsible in terms of POPIA. Such personal information may also be deemed or considered as private and confidential as it relates to POPIA.

21.2 The Contractor agrees that they will at all times comply with POPIA and CCT's Privacy Notice, and that it shall only collect, use and process personal information it comes into contact with pursuant to this agreement in a lawful manner, and only to the extent required to execute the services, or to provide the goods and to perform their obligations in terms of the service level agreement.

21.3 The Contractor agrees that it shall put in place, and at all times maintain, appropriate physical, technological and contractual security measures to ensure the protection and confidentiality of the personal information that it, or its employees, its contractors or other authorised individuals comes into contact in relation to the service level agreement.

21.4 The Contractor agrees that it shall notify CCT immediately where there are reasonable grounds to believe that the personal information of a data subject has been accessed or acquired by any unauthorised person.

21.5 Unless so required by law, the Contractor agrees that it shall treat the personal information as confidential and further not disclose any personal information as defined in POPIA to any third party without the prior written consent of CCT.

21.6 The Contractor hereby indemnifies and holds the CCT harmless against all claims, losses, damages and costs of whatsoever nature suffered by CCT arising from or in relation to the Contractor's (and/or its employees', agents' and sub-contractors') non-compliance with applicable data protection laws and/or other legislation.

21.7 The Contractor agrees that CCT may conduct regular data protection audits on the Contractor and undertakes to give its full co-operation in this regard.

Clause 22 Periodic Review and Performance Monitoring

22.1 This Agreement is valid for the duration of the contract. This Agreement shall be review once every three years; however, in lieu of a review during any period specified, the current Agreement will remain in effect. The purchaser reserves the right to reduce or increase the scope of works according to the dictates of the budget, to terminate this contract, and/or to review and terminate this contract as is contemplated in Section 116(1)(b)(iii) of the Local Government: Municipal Finance Management Act 56 of 2003, without adjustment to the agreed rates, sums or fees and without payment of any penalty or surcharge in this regard. The supplier shall however be entitled to pro-rata payment for all services carried out in terms of any adjustment to the Scope of Work or, in the case of termination, payment for good delivered.

22.2 As required by section 116(2)(b) of the *Local Government: Municipal Financial Management Act 56 of 2003,* the City shall monitor the performance of the contractor/supplier on at least a monthly basis, and the supplier agrees to provide the City with its full cooperation in this regard

[redacted]

ADVANCE PAYMENT SCHEDULE

This Advance Payment Schedule is to be read in conjunction with Sub-Clauses 14.2 and 14.3 (sub-paragraphs (a) and (e)) in the Particular Conditions. The purpose of this schedule is to itemise specific Plant and Materials not yet brought on to the Site for building into the Permanent Works and for which the Employer is prepared to make advance payments to the Contractor, subject to the conditions below.

The items of Plant and Materials which have been identified by the Employer as being suitable for advance payment in terms of the Contract are listed in the table below. Should an item or items be added to the list at tender stage by a tenderer, such item(s) will not be binding on the Employer.

Plant and Materials which have been manufactured and are stored at places other than the Site:	**Plant and Materials yet to be manufactured and for which a deposit with order is required from the Contractor by a manufacturer/supplier, and which may be stored at places other than the Site after manufacture:**
Electrical DB's, MCC's Transformers, MV Switchgear	Aeration Blower Mechanical piping
Mechanical piping and fittings	FBDA Equipment, CIP system and Diffuser network
FBDA Equipment, CIP system and Diffuser network	Diesel Generator Sets
Submersible Mixers	Dynamic Power Factor Correction Equipment
Diesel Generator Sets	Odour control system Equipment
Dynamic Power Factor Correction Equipment	Aeration Blower Equipment
Pumps	
Odour control system Equipment	
Aeration Blower Equipment	

Conditions:

1) The Contractor can only rely on advance payment being permitted by the Employer in respect of the Plant and Materials listed in the table above, and in respect of condition 5) below. The Employer may, however, permit advance payment for other Plant and Materials in exceptional circumstances and at its sole discretion, during the course of the Contract, and upon reasonable request from the Contractor.
2) Advance payment for the purposes of deposits will only be provided up to a limit of 20% of the value of any one item being claimed.
3) The Contractor shall provide the Employer with documentary evidence of the terms and conditions for which a deposit with order is required by a manufacturer/supplier, together with the advance payment guarantee.
4) The Contractor will also be permitted to obtain advance payment for the balance of the value of the Plant and Materials in respect of which he has paid a deposit, for an item which after manufacture is stored at a place other than the Site. The Contractor shall, in respect of such payment, provide an advance payment guarantee, either for such balance or, if the advance payment guarantee in respect of the deposit is to be returned by the Employer upon request, for the whole value of the item.
5) In the event of suspension in terms of Sub-Clause 8.10 in the General and Particular Conditions, as referred to in sub-paragraph (a) in Sub-Clause 14.3 in the Particular Conditions, the Employer shall also permit advance payment for Plant and Materials which have not been delivered to Site, subject also to the terms of Sub-Clause 14.2 in the Particular Conditions.

C1.3: Form of Performance Guarantee

PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Works and for Building and Engineering Works Designed by the Contractor, First Edition, 1999 (Yellow Book) published by the International Federation of Consulting Engineers (FIDIC).

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .....

"Physical address: .....

"Employer" means: The City of Cape Town, Water and Sanitation.

"Contractor" means: .....

"Engineer" means: .....

"Works" means: Contract No. and Title .....

"Site" means: The site as defined in Sub-Clause 1.1.6.7 of the General Conditions of Contract.

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Contract Sum" means: The accepted amount inclusive of tax of R .....

Amount in words: .....

"Guaranteed Sum" means: The maximum aggregate amount of R .....

Amount in words: .....

"Expiry Date" means: The date of issue by the Engineer of the Performance Certificate.

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Performance Certificate as defined in the Contract.

PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Performance Certificate has been issued.

3. The Guarantor hereby acknowledges that:

3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

3.2 its obligation under this Performance Guarantee is restricted to the payment of money.

4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing

such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) calendar days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;

4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

9. 9. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

10. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

11. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, whereafter no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

12. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

13. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at .....

Date .....

Guarantor's signatory (1) .....

Capacity .....

Guarantor's signatory (2) .....

Capacity .....

Witness signatory (1) .....

Witness signatory (2) .....

[redacted]

ANNEXURE

LIST OF APPROVED FINANCIAL INSTITUTIONS

The following financial institutions are currently (as at 12 October 2021) approved for issue of contract guarantees to the City:

National Banks:

[redacted]

International Banks (with branches in SA):

[redacted]

Insurance companies:

[redacted]

[redacted]

C1.4: Form of Advance Payment Guarantee

ADVANCE PAYMENT GUARANTEE

For use with the General Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Works and for Building and Engineering Works Designed by the Contractor, First Edition, 1999 (Yellow Book) published by the International Federation of Consulting Engineers (FIDIC).

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .....

"Physical address: .....

"Employer" means: The City of Cape Town, Water and Sanitation.

"Contractor" means: .....

"Engineer" means: .....

"Works" means: Contract No. and Title .....

"Site" means: The site as defined in Sub-Clause 1.1.6.7 of the General Conditions of Contract.

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Plant and Materials" means: The Plant and Materials stored at places other than the Site, or in respect of which an advance payment prior to manufacture is required, which the Employer has agreed may be subject to advance payment, such Plant and Materials being listed in the Schedule of Plant and Materials.

"Schedule of Plant and Materials" means: A list of Plant and Materials which shows the value thereof to be included in the Guaranteed Advance Payment Sum.

"Guaranteed Advance Payment Sum" means: The maximum aggregate amount of R .....

Amount in words: .....

"Expiry Date" means: The date of the payment certificate wherein the Plant and Materials have been certified by the Engineer as having been built into the Permanent Works.

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates and Final Payment Certificate.

ADVANCE PAYMENT GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Advance Payment Sum.

2. The Guarantor's period of liability shall be from and including the date of issue of this Advance Payment Guarantee and up to and including the Expiry Date or the date of payment in full of the Guaranteed Advanced Payment Sum, whichever occurs first.

3. The Guarantor hereby acknowledges that:

3.1 any reference in this Advance Payment Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

3.2 its obligation under this Advance Payment Guarantee is restricted to the payment of money.

4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) calendar days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;

4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Advance Payment Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Advance Payment Guarantee, such demand stating that:

5.1 the Contract has been terminated due to the Contractor's default and that this Advance Payment Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Advance Payment Guarantee is called up in terms of 5; and

5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

7. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

8. 8. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Advance Payment Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

9. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

10. This Advance Payment Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

11. This Advance Payment Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

12. Where this Advance Payment Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at .....

Date .....

Guarantor's signatory (1) .....

Capacity .....

Guarantor's signatory (2) .....

Capacity .....

Witness signatory (1) .....

Witness signatory (2) .....

Schedule of Plant and Materials

For use with Advance Payment Guarantees on contracts using the General Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Works and for Building and Engineering Works Designed by the Contractor, First Edition, 1999 (Yellow Book) published by the International Federation of Consulting Engineers (FIDIC).

Employer The City of Cape Town, Water and Sanitation: Wastewater

Contractor .....

Works Contract No. and Title.....

Payment Certificate No. .....

Advance payment is requested in respect of the following items of Plant and Materials, which have been manufactured and are stored at places other than the Site, or in respect of which a deposit with order is required from the Contractor by a manufacturer/supplier:

Schedule of Quantities item no.	Description of Plant and Materials	Deposit with order required (Y/N)	Place of storage (or manufacture, if deposit with order is required)	Unit	Quantity	Unit price R c	Total Price R c
Total Value of Plant and Materials to be included in Guaranteed Advance Payment Sum						R	

Signed at ..... on the .....day of.....20.....

.....
for the Contractor

.....
As witness

.....
Approved by Engineer

[redacted]

C1.5: Occupational Health and Safety Agreement

AGREEMENT MADE AND ENTERED INTO BETWEEN THE CITY OF CAPE TOWN (HEREINAFTER CALLED THE "EMPLOYER") AND

INENZO WATER (PTY) LTD ,
(Contractor/Mandatary/Company/CC Name)

IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 85 OF 1993 AS AMENDED.

I, [redacted] , representing

[redacted] , as an employer
in its own right, do hereby undertake to ensure, as far as is reasonably practicable, that all work will be performed, and all equipment, machinery or plant used in such a manner as to comply with the provisions of the Occupational Health and Safety Act (OHSA) and the Regulations promulgated thereunder.

I furthermore confirm that I am/we are registered with the Compensation Commissioner and that all registration and assessment monies due to the Compensation Commissioner have been fully paid or that I/We are insured with an approved licensed compensation insurer.

COID ACT Registration Number: .....

OR Compensation Insurer: [redacted] Policy No.: [redacted]

I undertake to appoint, where required, suitable competent persons, in writing, in terms of the requirements of OHSA and the Regulations and to charge him/them with the duty of ensuring that the provisions of OHSA and Regulations as well as the Council's Special Conditions of Contract, Way Leave, Lock-Out and Work Permit Procedures are adhered to as far as reasonably practicable.

I further undertake to ensure that any subcontractors employed by me will enter into an occupational health and safety agreement separately, and that such subcontractors comply with the conditions set.

I hereby declare that I have read and understand the Occupational Health and Safety Specifications contained in this tender and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan submitted and approved in terms thereof.

Signed at [redacted] on the 16TH day of NOVEMBER 2022

[redacted]
Mandatary

Signed at [redacted] on the 10 day of November 2022

[redacted]
Witness

[redacted]
for and on behalf of
City of Cape Town

[redacted]

[redacted]

C1.6: Protection of the Environment Declaration

PROTECTION OF THE ENVIRONMENT DECLARATION

The Contractor will not be given right of access to the Site until this form has been signed

CONTRACT NO.:

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

I/ we, INENZO WATER (PTY) LTD {Contractor} record as follows:

1. I/ we, the undersigned, do hereby declare that I/ we am/ are aware of the increasing requirement by society that construction activities shall be carried out with due regard to their impact on the environment.

2. In view of this requirement of society and a corresponding requirement by the Employer with regard to this Contract, I/ we will, in addition to complying with the letter of the terms of the Contract dealing with protection of the environment, also take into consideration the spirit of such requirements and will, in selecting appropriate employees, plant, materials and methods of construction, in-so-far as I/ we have the choice, include in the analysis not only the technical and economic (both financial and with regard to time) aspects but also the impact on the environment of the options. In this regard, I/ we recognise and accept the need to abide by the "precautionary principle" which aims to ensure the protection of the environment by the adoption of the most environmentally sensitive construction approach in the face of uncertainty with regard to the environmental implications of construction.

3. I/ we declare that I/ we have read and understood the contents of the Environmental Management Programme (which is comprised of the Environmental Management Specification and its Annexures) for this Contract, and that I/ we understand my/our responsibilities in terms of enforcing and implementing the Environmental Management Programme. I/ we also declare that I/ we have made appropriate provision in my/ our pricing of the Schedules of Quantities items for the Environmental Management Programme.

4. I/ we acknowledge and accept the right of the Employer to deduct, should he so wish, from any amounts due to me/ us, such amounts (hereinafter referred to as fines) as the Engineer shall certify as being warranted in view of my/ our failure to comply with the terms of the Contract dealing with protection of the environment, subject to the following:

4.1 The Engineer, in determining the amount of such fine, shall take into account, *inter alia*, the nature of the offence, the seriousness of its impact on the environment, the degree of prior compliance/non-compliance, the extent of the Contractor's overall compliance with environmental protection requirements and, in particular, the extent to which he considers it necessary to impose a sanction in order to eliminate/reduce future occurrences

4.2 The Engineer shall, with respect to any fine imposed, provide me/ us with a written statement giving details of the offence, the facts on which the Engineer has based his assessment and the terms of the Contract (by reference to the specific clause) which has been contravened.

Signed [redacted] Date 10/11/2022
CONTRACTOR

[redacted]

C1.7: Insurance Broker's Warranty

Pro Forma

Logo

Letterhead of Contractor's Insurance Broker

Date _____

CITY OF CAPE TOWN
City Manager
Civic Centre
12 Hertzog Boulevard
Cape Town
8001

Dear Sir

CONTRACT NO.:

CONTRACT TITLE: DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

NAME OF CONTRACTOR: _____

I, the undersigned, do hereby confirm and warrant that all the insurances required in terms of the abovementioned contract have been issued and/or in the case of blanket/umbrella policies, have been endorsed to reflect the interests of the CITY OF CAPE TOWN with regard to the abovementioned contract, and that all the insurances and endorsements, etc., are all in accordance with the requirements of the contract.

I furthermore confirm that all premiums in the above regard have been paid.

Yours faithfully

Signed: _____

For: _____

PART C2: PRICING DATA

C2.1: Pricing Assumptions

Pricing Assumptions mean the criteria as set out below, read together with all Parts of this contract document, which it will be assumed in the contract that the tenderer has taken into account when developing his prices.

1. The method of measurement published by the South African Bureau of Standards in clause 8 of the Standardised Specifications for Civil Engineering Construction is applicable, subject to the variations and amendments contained in the section "Applicable SANS 1200 standardised specifications".

2. Descriptions in the Schedules of Quantities are abbreviated and comply generally with those in the Standardised Specifications. The applicable clause of each Standardised Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Schedule, the requirements of the Standardised Specification or Scope of Work, as applicable, shall prevail.

3. The measurement and payment clauses in a specification in which further information regarding the scheduled items is given, are referenced under "Item" (pay items) in the Schedules of Quantities. The referenced clauses are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the digits which follow SANS in the SANS 1200 series of specifications, e.g. G for SANS 1200 G.

4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

5. The quantities set out in the Schedules of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Employer's Agent from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

6. The prices and rates to be inserted in the Schedule of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

7. A price or rate should be entered against each item in the Schedules of Quantities, whether the quantities are stated or not. An item against which no price (in any format) or a nil rate is entered will be considered to be covered by the other prices or rates in the Schedules of Quantities, and that there is no charge for that particular item (even should the quantity subsequently increase).

8. Except where rates only are required, insert all amounts to be included in the total tendered price in the "Amount" column and show the corresponding total tendered price.

9. Items have been provided where any further items considered necessary by the Tenderer can be priced. The Tenderer must provide full details of what has been allowed for with his Tender under these items.

10. The units of measurement described in the Schedule of Quantities are metric units. Abbreviations which may be used in these Schedule of Quantities are as follows:

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1000 kg)
m2	=	square metre	No.	=	number
m2.pass	=	square metre-pass	sum	=	lump sum
ha	=	hectare	MN	=	meganewton
m3	=	cubic metre	MN.m	=	meganewton-metre
m3.km	=	cubic metre-kilometre	P C sum	=	Prime Cost sum
l	=	litre	Prov sum	=	Provisional sum
kl	=	kilolitre	%	=	per cent
MPa	=	megapascal	kW	=	kilowatt
Days	=	"Day" as defined in the Conditions of Contract			

11. Where fractions of a cent occur in calculations of prices and amounts, they shall be rounded up/down to the nearest whole cent.

12. The Tenderer is referred to F2.24 in Part T1.2 Tender Data regarding the pricing of Deviations and/or Qualifications.

11. Clause F.2.13.11 c) in Part T1.2 Tender Data shall be applicable to the submission of Schedules of Quantities which have been priced electronically, and which the Tenderer wishes to submit as a printed version with his/her tender in the place of handwritten priced Schedule of Quantities.

    If there is found to be any variance between the printed version and the original issued document, the original shall stand. However, where Addenda have been issued which amend the Schedules of Quantities, then the printed Schedules of Quantities shall take these into account.

    The pages of the issued Schedules of Quantities should not be removed from the tender document.

12. Tenderers are referred to Clause 8 Measurement and Payment in the Environmental Management (EM) Specification in Part C3.5 in the Scope of Work for the basic principles of measurement and pricing of the EM Specification.

13. All descriptions or clauses where trade names or proprietary products are specified, are deemed to include the phrase "or equal approved"

14. Tenderers are referred to Sub-Clause 13.8 in the Appendix to Tender in Part C1.2 Contract Data regarding contract price adjustment.

The following schedules in Part C2.2 Schedules of Quantities are deemed applicable to the following categories for the purposes of Contract Price Adjustment:

NO.	SCHEDULE	CPA CATEGORY
1.	General Requirements & Conditions	To be proportioned
2.	Athlone Aeration Blowers & Associated Equipment	
3.	Athlone Aeration Main Header Modifications	
4.	Athlone Aeration Blowers HVAC	
5.	Athlone Aeration Blower-House Gantry Crane	
6.	Athlone RAS Pumps, Piping and Valves	
7.	Athlone WAS Pumps, Piping and Valves	
8.	Athlone A-Recycle Pumps, Piping and Valves	
9.	Athlone Submersible Mixers	
10.	Athlone Odour Control	
11.	Athlone Aeration Network Modifications	
12.	Athlone FBDA Equipment, Piping and Fittings, Materials and Equipment	
13.	Athlone FBDA Equipment, Piping and Fittings: Preparation for Installation	
14.	Athlone FBDA Equipment, Piping and Fittings: Preparation for Installation, Testing, Commissioning, Upholding	
15.	Athlone Electrical Works (P&G's)	
16.	Athlone Electrical Works (LV MCC)	
17.	Athlone Electrical Works (Cabling & Terminations)	
18.	Athlone Electrical Works (Cable Supports)	
19.	Athlone Electrical Works Earthing & Bonding	
20.	Athlone Electrical Works (Civil Works)	
21.	Athlone Electrical Works (Ancillary Equipment)	
22.	Athlone Electrical Works (Instrumentation)	
23.	Athlone Electrical Works (MV Voltage)	
24.	Athlone Electrical Works (Busbar)	
25.	Athlone Electrical Works (Generator Set)	

26.	Athlone Electrical Works (Dynamic PFC equipment)	
27.	Health & Safety	
28.	Environmental Management	
29.	Management & Inspection	
30.	Sundries	
31	Contingencies	

15. Design of the Works, Contractor's Documents (including "as built" drawings and Manual), and design for the manufacture of materials and equipment, must be priced and will be paid for as follows:

a) An item is provided in the Schedules of Quantities (Schedule No. 1, General Requirements and Conditions) for Design of the Works and submission of Contractor's Documents – this item includes *inter alia* the Contractor's obligations under Clause 2 in Part C3.2 Engineering, up to Sub-Clause 2.3.

b) Items are provided in the Schedules of Quantities (Schedule No. 21, Sundries) for Providing "as built" drawings, and draft and final copies of the Installation, Operation and Maintenance Manuals – these items cover the Contractor's obligations under Clause 2 in Part C3.2 Engineering, Sub-Clauses 2.4 and 2.5.

c) Items of materials and equipment are provided in the Schedules of Quantities under headings containing the words "design, manufacture, painting, testing, supply, delivery, offloading and storage" – "design" in these items will usually only be paid upon supply of the materials and equipment, but may be paid for separately at the discretion of the Engineer.

[redacted]

C2.2 Schedules of Quantities

CONTENTS

SCHEDULE NO.1	GENERAL REQUIREMENTS AND CONDITIONS
SCHEDULE NO.2	ATHLONE AERATION BLOWERS AND ASSOCIATED EQUIPMENT
SCHEDULE NO.3	ATHLONE AERATION MAIN HEADER MODIFICATIONS
SCHEDULE NO.4	ATHLONE AERATION BLOWERS HVAC
SCHEDULE NO.5	ATHLONE BLOWER-HOUSE GANTRY CRANE
SCHEDULE NO.6	ATHLONE RAS PUMPS, PIPING AND VALVES
SCHEDULE NO.7	ATHLONE WAS PUMPS, PIPING AND VALVES
SCHEDULE NO.8	ATHLONE A-RECYCLE PUMPS, PIPING AND VALVES
SCHEDULE NO.9	ATHLONE SUBMERSIBLE MIXERS
SCHEDULE NO.10	ATHLONE ODOUR CONTROL
SCHEDULE NO.11	ATHLONE AERATION NETWORK MODIFICATIONS
SCHEDULE NO.12	ATHLONE FBDA EQUIPMENT – PIPING & FITTINGS: MATERIALS AND EQUIPMENT
SCHEDULE NO.13	ATHLONE FBDA EQUIPMENT – PIPING & FITTINGS: PREPARATION FOR INSTALLATION
SCHEDULE NO.14	ATHLONE FBDA EQUIPMENT – PIPING & FITTINGS: INSTALLATION, COMMISSIONING, UPHOLDING
SCHEDULE NO.15	ATHLONE ELECTRICAL WORKS (PRELIMINARY AND GENERAL)
SCHEDULE NO.16	ATHLONE ELECTRICAL WORKS (LV – MCC)
SCHEDULE NO.17	ATHLONE ELECTRICAL WORKS (CABLING AND TERMINATIONS)
SCHEDULE NO.18	ATHLONE ELECTRICAL WORKS (CABLE SUPPORTS)
SCHEDULE NO.19	ATHLONE ELECTRICAL WORKS (EARTHING AND BONDING
SCHEDULE NO.20	ATHLONE ELECTRICAL WORKS (CIVILS ELECTRICAL WORK)
SCHEDULE NO.21	ATHLONE ELECTRICAL WORKS (ANCILLIARY EQUIPMENT)
SCHEDULE NO.22	ATHLONE ELECTRICAL WORKS (INSTRUMENTATION)
SCHEDULE NO.23	ATHLONE ELECTRICAL WORKS (MEDIUM VOLTAGE)
SCHEDULE NO.24	ATHLONE ELECTRICAL WORKS (BUSBAR)
SCHEDULE NO.25	ATHLONE ELECTRICAL WORKS (GENERATOR SET)
SCHEDULE NO.26	ATHLONE ELECTRICAL WORKS (DYNAMIC PFC)
SCHEDULE NO.27	HEALTH AND SAFETY
SCHEDULE NO.28	ENVIRONMENTAL MANAGEMENT
SCHEDULE NO.29	MANAGEMENT AND INSPECTION

SCHEDULE NO.30 SUNDRIES

SUMMARY

SCHEDULE NO.31 CONTINGIENCIES

DECLARATION

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

ITEM	DESCRIPTION	UNIT	QTY	PRICE R C	AMOUNT R c
	SCHEDULE NO. 1				
1.	**GENERAL REQUIREMENTS AND CONDITIONS**				
1.1	***Allow for all costs and expenses in connection with the following:-***				
1.1.1	Providing Performance Security (Demand Guarantee under URDG 758)	Item	1	1 530 000,00	1 530 000,00
1.1.2	Providing Insurances including Professional Indemnity Insurance	Item	1	5 553 000,00	5 553 000,00
1.1.3	Design of the Works and submission of Contractor's Documents	Item	1	1 230 500,00	1 230 500,00
1.1.4	Establishment /disestablishment on Site	Item	1	132 250,00	132 250,00
1.1.5	Chairing and minuting a HAZOP	Item	1	51 600,00	51 600,00
1.1.6	Site Security	Item	1	584 500,00	584 500,00
1.1.7	General expenses incurred in complying with the requirements of T1.2 Tender Data, not included above	Item	1	3 011 514,84	3 011 514,84
1.1.8	General expenses incurred in complying with the requirements of C1.2 Contract Data, not included above	Item	1	2 155 000,00	2 155 000,00
1.1.9	Cost for advance payment guarantee	Item	1	-	No cash payment required
1.1.10	Signage board for the site displaying client, contractor and professional team information	Item	1	23 000,00	23 000,00
1.1.11	Professional surveying: Allow costs to conduct detailed dimensional survey of existing and new civil and structural infrastructure prior to finalising the design of new pumps, mixers, piping and instrumentation	Item	1	51 500,00	51 500,00
1.1.12	Expense incurred in testing the integrity of the diffusers shall include but not limited to the following items: a) Emptying of one reactor b) Labour for removal of diffusers (includes blinding off spots where diffusers are removed) c) Conducting the tests d) Generating a report	Item	1	115 743,00	115 743,00
1.1.13	Other General expenses incurred in complying with the requirements of the Scope of Work not included above (Specify):- a) Civil fixed designs b) Civil bay related designs	Item	1 1 1	- 457 100,00 104 291,60	- 457 100,00 104 291,60
	TOTAL AMOUNT OF SCHEDULE NO. 1 CARRIED TO SUMMARY ON PAGE 325				23 046 741,84

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

ITEM	DESCRIPTION	UNIT	QTY	PRICE R c	AMOUNT R c
	SCHEDULE NO. 2				
2.	**ATHLONE AERATION BLOWERS AND ASSOCIATED EQUIPMENT**				
2.1	***Allow for all costs and expenses in connection with the design, manufacture, quality management, painting, testing, supply, delivery, offloading and storage of the following materials and equipment, including quality assurance, setting out of works and checking work carried out by others: -***				
2.1.1	New centrifugal blower equipment complete with: main drive motor (air-cooled), gearbox, Inlet Guide Vanes (IGV's), Variable Vane Diffusers (VVD's), associated instrumentation including vibration monitoring on both the motor and gearbox, controls, baseplate with vibration dampers, lubrication system and local Control Panel (LCP) to monitor and control blower operation, vane positions, start/stop sequence and emergency situations.	No	4	[illegible]	[illegible]
2.1.2	Inlet filter/silencer arrangement including housing, access doors and differential pressure monitoring	No	4	[illegible]	[illegible]
2.1.3	Discharge cone diffusers incorporating integral silencers to extend through the blower-house wall at high level and to integrate with the new discharge piping route including the associated Wafer type and isolation flow regulators	No	4	[illegible]	[illegible]
2.1.4	Common silencer on discharge piping	No	1	[illegible]	[illegible]
2.1.5	Discharge expansion compensator	No	4	[illegible]	[illegible]
2.1.6	Acoustic enclosure covering full skid; 2 x access doors; equipped with suitable extraction fan(s) for ventilation; removable roof and side panels	No	4	[illegible]	[illegible]
2.1.7	Blow-off valve flow regulator silencer, including actuator and limit switches as well as piping to safe location.	No	4	[illegible]	[illegible]
2.1.8	Sub header piping and fittings from discharge cone flange up to and including isolation valve and wafer-type check valve (located in the blower-house); extending through the blower-house wall at high level to integrate with the new outside discharge piping main manifold flange. This includes all piping/ equipment supports.	Item	1	[illegible]	[illegible]
				CARRIED FORWARD R	[illegible]

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

ITEM	DESCRIPTION	UNIT	QTY	PRICE R C	AMOUNT R C
			BROUGHT FORWARD R		30 [illegible]
2.1.9	Piping lagging up to the common silencer as per drawing W1792-85002.	Item	1	240 000,00	240 000,00
2.1.10	Master Control Panel (MCP) for blowers, including HMI, software and factory testing	Item	1	[illegible]	[illegible]
2.1.11	New oil cooler system complete with pumps, reservoir tank, instruments, piping, valves, controls, ventilation fan and mechanical supports for the lubrication circuit. To include necessary acoustic, weatherproof enclosures for the fans designed for < 85dBA. Fans to be located outside the building as per drawing W1792-85002.	No	4	[illegible]	[illegible]
2.1.12	Factory testing of aeration blowers and control systems witnessed by the Engineer and Employer	Item	1	[illegible]	[illegible]
2.1.13	Allowance for 4 (four) representatives (Client; Project/Mechanical engineer; Process engineer; Electrical engineer) subsistence and travel disbursements related to 2.1.12	Item	1	[illegible]	[illegible]
2.1.14	Factory testing of blower LV motors	Item	1	[illegible]	[illegible]
2.1.15	Provisional sum for work as directed by the Engineer	PC Sum	1		R150 000
2.1.16	Spares and tools				
	All other plant and equipment items not included above but which are nevertheless necessary to meet the Scope of Work and/or are required for the proper, safe and effective operation of the plant (Specify):-	Item	1	-	-
2.1.16.1	1) [illegible]	Item	1	[illegible]	[illegible]
2.1.16.2	2).....	Item	1	-	-
2.1.16.3	3).....	Item	1	-	-
2.1.16.4	4).....	Item	1	-	-
2.2	Allow for all costs and expenses, including double handling (if stored) and final painting (if applicable), in connection with the Site installation, testing, commissioning and upholding during the Trial Operation Period and Defects Notification Period of the following: -				
2.2.1	All blower and associated equipment as described in the items under 2.1.1 to 2.1.16.4	Item	1	[illegible]	[illegible]
2.2.2	Carrying out and documenting the results of performance tests on the installed equipment	Item	1	[illegible]	[illegible]
			CARRIED FORWARD R		[illegible]

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

ITEM	DESCRIPTION	UNIT	QTY	PRICE R C	AMOUNT R C
	BROUGHT FORWARD R				[illegible]
2.2.3	Incidental repairs to concrete work and civil alterations to fit the equipment supplied; these include core drillings for electrical cables; apertures for louvres; apertures for filters; plinths for blower discharge piping or oil reticulation piping supports.	Item	1	[illegible]	[illegible]
2.2.4	All other site installation and general items not included above but which are nevertheless necessary to meet the Scope of Work and/or are required for the proper, safe and effective operation of the plant (Specify):-				
2.2.4.1	1) [illegible]	Item	1	[illegible]	[illegible]
2.2.4.2	2) [illegible]	Item	1	[illegible]	[illegible]
2.2.4.3	3).....	Item	1	-	-
2.2.4.4	4).....	Item	1	-	-
	TOTAL AMOUNT OF SCHEDULE NO. 2 CARRIED TO SUMMARY ON PAGE 328				[illegible]

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

ITEM	DESCRIPTION	UNIT	QTY	PRICE R c	AMOUNT R c
	SCHEDULE NO. 3				
3.	ATHLONE AERATION MAIN HEADER MODIFICATIONS				
3.1	Allow for all costs and expenses in connection with the design, manufacture, quality management, painting, testing, supply, delivery, offloading and storage of the following materials and equipment, including quality assurance, setting out of works and checking work carried out by others: -				
3.1.1(a)	Inclusion of a new main header aeration piping 316 stainless steel system exceeding from the new blower-house manifold tie-in flange to connect to the existing discharge pipework arrangement from the old Brit I	Item	1	[illegible]	[illegible]
3.1.1(b)	Includes all associated piping supports, platforms, cat ladders, gratings, VJ couplings, walkway chains and cascade clamps. The buried 316 stainless steel piping shall be flanged every 12 metres and Denso-wrapped.	Item	Lot	[illegible]	[illegible]
3.1.2(a)	Costs for replacing all existing C-works aeration piping in 316 stainless steel in line with drawing W1792-88003.	Item	1	[illegible]	[illegible]
3.1.2(b)	Includes all associated piping supports, platforms, cat ladders, floor grating, VJ coupings, walkway chains and cascade clamps (Contractor shall assess the integrity of the piping on site once the contract is awarded according to Vol 3A).	Item	Lot	[illegible]	[illegible]
3.1.3	Expense incurred in testing the integrity of the C-work aeration piping shall include the following items: (a) Conducting tests & generating a repot	Item	1	[illegible]	[illegible]
3.1.4	Mechanical materials and fittings to accommodate installation of various items of instrumentation as per the Instrument Lists in Volume 4 of this tender.	Item	1	-	[illegible]
3.1.5	Incidental repairs to existing mechanical piping to fit the new mechanical piping supplied	Item	1	[illegible]	[illegible]
3.1.6	To make good any apertures, penetrations and holes	Item	1	[illegible]	[illegible]
3.1.7	Removal of the existing 4 (Four) aeration blowers, associated equipment including aeration piping (up to tie-in point), supports, oil lubrication piping, filter frames, filters, HVAC fans, pumps and any other redundant materials from site. Including Electrical Disconnection.	Item	1	[illegible]	[illegible]
3.1.8	Asbestos removal requirements to interface with the old blower-house.	Item		-	[illegible]
3.1.9	Provisional sum for work as directed by the Engineer	PC Sum			R150 000
				BROUGHT FORWARD R	[illegible]

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

ITEM	DESCRIPTION	UNIT	QTY	PRICE R	PRICE C	AMOUNT R	AMOUNT c
	SCHEDULE NO. 3						
3.	ATHLONE AERATION MAIN HEADER MODIFICATIONS						
3.1	Allow for all costs and expenses in connection with the design, manufacture, quality management, painting, testing, supply, delivery, offloading and storage of the following materials and equipment, including quality assurance, setting out of works and checking work carried out by others: -						
3.1.1	Inclusion of a new main header aeration piping 316 stainless steel system extending from the new blower-house manifold tie-in flange to connect to the existing discharge pipework arrangement from the old blower-house; this includes all associated piping supports, platforms, cat ladders, gratings, VJ couplings, walkway chains and cascade clamps. The buried 316 stainless steel piping shall be flanged every 12 metres and Denso-wrapped.	Item	1				
3.1.2	Costs for replacing all existing C-works aeration piping in 316 stainless steel in line with drawing WI 792-86003; this includes all associated piping supports, platforms, cat ladders, floor grating, VJ couplings, walkway chains and cascade clamps (Contractor shall assess the integrity of the piping on site once the contract is awarded according to Vol 3A).	Item	1				
3.1.3	Expense incurred in testing the integrity of the C-work aeration piping shall include the following items: (a) Conducting tests & generating a report	Item	1				
3.1.4	Mechanical materials and fittings to accommodate installation of various items of instrumentation as per the Instrument Lists in Volume 4 of this tender.	Item	1				
3.1.5	Incidental repairs to existing mechanical piping to fit the new mechanical piping supplied	Item	1				
3.1.6	To make good any apertures, penetrations and holes	Item	1				
3.1.7	Removal of the existing 4 (Four) aeration blowers, associated equipment including aeration piping (up to tie-in point), supports, oil lubrication piping, filter frames, filters, HVAC fans, pumps and any other redundant materials from site. Including Electrical Disconnection.	Item	1				
3.1.8	Asbestos removal requirements to interface with the old blower-house.	Item					
3.1.9	Provisional sum for work as directed by the Engineer	PC Sum					R150 000
				BROUGHT FORWARD	R		

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

ITEM	DESCRIPTION	UNIT	QTY	PRICE R C	AMOUNT R C
			CARRIED FORWARD	R	[redacted]
3.1.10	**Spares and tools**	Item	1	–	–
3.1.10.1	1).....	Item	1	–	–
3.1.10.2	2).....	Item	1	–	–
3.1.10.3	3).....	Item	1	–	–
3.1.10.4	4).....	Item	1	–	–
3.2	Allow for all costs and expenses, including double handling (if stored) and final painting (if applicable), in connection with the Site installation, testing, commissioning and upholding during the Trial Operation Period and Defects Notification Period of the following:-				
3.2.1	All piping and associated equipment as described in the items under 3.1.1 to 3.1.10.4	Item	1	[redacted]	[redacted]
3.2.2	Carrying out and documenting the results of performance tests on the installed equipment	Item	1	[redacted]	[redacted]
3.2.3	Incidental repairs to concrete work and civil alterations to fit the piping equipment supplied.	Item	1	[redacted]	[redacted]
3.2.4	All other site installation and general items not included above but which are nevertheless necessary to meet the Scope of Work and/or are required for the proper, safe and effective operation of the plant (Specify):-				
3.2.4.1	1).....	Item	1	–	–
3.2.4.2	2).....	Item	1	–	–
3.2.4.3	3).....	Item	1	–	–
3.2.4.4	4).....	Item	1	–	–
	TOTAL AMOUNT OF SCHEDULE NO. 3 CARRIED TO SUMMARY ON PAGE 328				[redacted]

DESIGN – BUILD OF MECHANICAL AND ELECTRICAL WORKS FOR THE REFURBISHMENT OF THE C-WORKS AT THE ATHLONE WASTEWATER TREATMENT WORKS

ITEM	DESCRIPTION	UNIT	QTY	PRICE R : C	AMOUNT R c
	SCHEDULE NO. 4				
4.	ATHLONE BLOWERS AERATION HVAC				
4.1	Allow for all costs and expenses in connection with the design, manufacture, quality management, painting, testing, supply, delivery, offloading and storage of the following materials and equipment, including quality assurance, setting out of works and checking work carried out by others: -				
4.1.1	New inlet acoustic louvres (1980x2040mm) introduced in the blower-house (including civil apertures).	No	8	25 875,00	207 000,00
4.1.2	New standard discharge louvres (550x1870mm) introduced in the blower-house external wall at high level on the opposite side to the inlet air louvres.	No	9	1 755,12	15 796,08
4.1.3	Include the necessary exhaust ducting arrangement (mild steel galvanised) c/w supports extending from each blower hood enclosure to the outside wall at high level on the same side as the discharge louvers. To include weather-proof/ bird proof discharge louvres	No	4	21 937,50	87 750,00
4.1.4	To include weather-proof bird proof discharge louvres for the blow-off piping extending through the external wall at high level	No	4	-	Incl
4.1.5	Inlet Primary Filter housing arrangement complete with filters, air pressure differential manometers located in the purpose-built plenum chamber. Each housing to include 10m² pleated filters	No.	4	55 430,00	221 720,00
4.1.6	Ventilation fan c/w controls, weather-proof / bird proof acoustic discharge louvres required for cooling the transformer room. To include the necessary inlet louvres, complete with weather-proofing / bird proofing in the opposite side doors.	PC Sum	1	-	R75 000
4.1.7	Axial flow HVAC fans located in the air plenum chamber to pressurize the blower room (<85dBA)	No	4	58 352,25	233 410,00
4.1.8	Provisional sum for work as directed by the Engineer	PC Sum	1	-	R150 000
				BROUGHT FORWARD: R	1 213 516,08