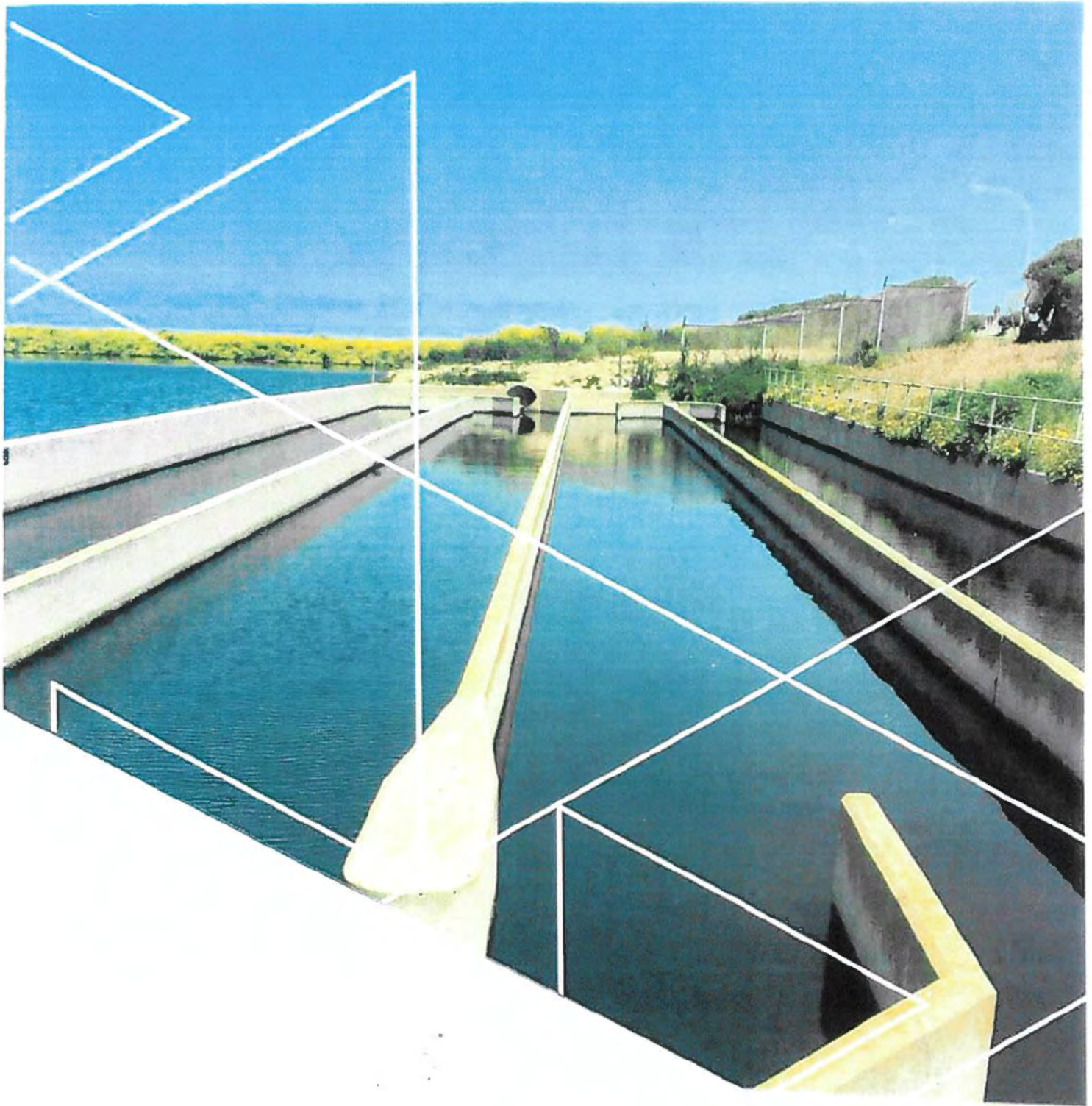




Stellenbosch WWTW:

- Award Letter
- Client Reference Letter



STELLENBOSCH MUNICIPALITY
STELLENBOSCH · PNIEL · FRANSCHHOEK

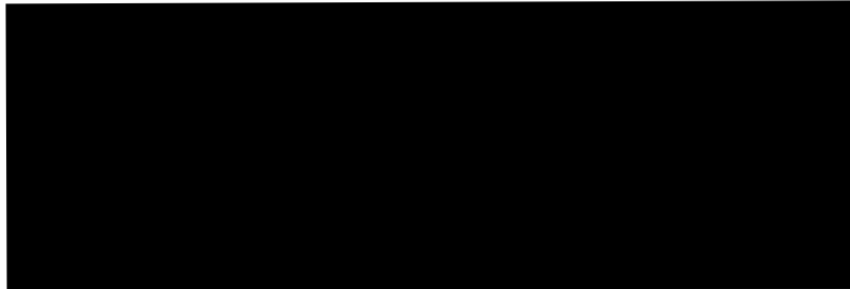
MUNISIPALITEIT · UMASIPALA · MUNICIPALITY

☎ 021-808 8202
☎ 021-843 9874

Department: Engineering Services
Departement: Ingenieursdienste

epos@email
vincenth@stellenbosch.org

29 November 2013



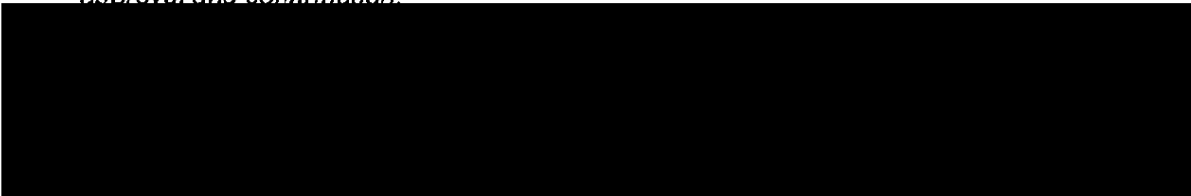
LETTER OF APPOINTMENT: B/SM 13/14: TENDER FOR THE APPOINTMENT OF CONSULTING ENGINEERS TO RENDER PROFESSIONAL ENGINEERING SERVICES FOR THE EXTENSION OF THE STELLENBOSCH WASTEWATER TREATMENT AND ASSOCIATED WORKS.

With reference to our letter dated 19 October 2013 (Ref: 6/1/1) and your letter dated 25 October 2013.

It is our pleasure to inform you that Aurecon (Pty) Ltd has been appointed as service provider to **RENDER PROFESSIONAL ENGINEERING SERVICES FOR THE EXTENSION OF THE STELLENBOSCH WASTEWATER TREATMENT AND ASSOCIATED WORKS IN TERMS OF TENDER B/SM 13/14** and that you may commence with the project.

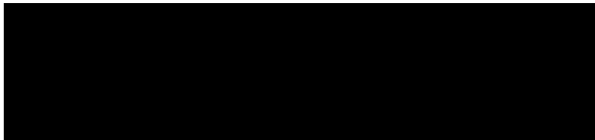


the entire project the appointment is subject to the budget provision of the Employer. The Service Provider may not proceed with any phase of the contract without the written instruction of the Employer to proceed. It should be noted that while the Employer has every intention of completing the full Scope of Work making full use of the budget provision, the Employer budget is subject to periodic review and annual approval and confirmation."



It is anticipated that a successful, co-operative working relationship will be established between Aurecon and the Stellenbosch Municipality on this very challenging project to ensure the delivery of a successful project that will benefit all the people of the greater Stellenbosch.

Yours faithfully



Director: Engineering Services





STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

☎ 021-808 8283
☎ 021-883 9874

Directorate: Infrastructure Services
Direktoraat: Infrastruktuurdienste

epos/email:
james.beukes@stellenbosch.gov.za

Your Ref: Zutari

Our Ref: MBR Technology

02 April 2025

TO WHOM IT MAY CONCERN

COMPANY EXPERIENCE IN MEMBRANE TECHNOLOGY FOR WATER TREATMENT PURPOSE

Client Name	Stellenbosch Municipality		
Client Representative Name			
Location of Plant	Stellenbosch WWTW, Stellenbosch Municipality		
Plant Size	27 Ml/d Ultrafiltration Membrane Biological Reactor		
Type of Technology and treatment purpose. Example Membrane filtration Reverse Osmosis or ultrafiltration or microfiltration (Membrane distillation, Membrane Permeation.	Zutari was responsible for the planning, design, procurement, construction administration and monitoring for the upgrade of the existing Stellenbosch wastewater treatment works (WWTW) and associated infrastructure from a capacity of 20.4 Ml/d to 35 Ml/d in terms of Average Dry Weather Flow. The WWTW comprised of an 8 Ml/d activated sludge lane and a 27 Ml/d membrane bioreactor (MBR) lane. The MBR lane uses ultra-filtration membrane for solid-liquid separation in the MBR.		
Consultant Project Manager Name			
Contact details Client	Email, Phone and Address		
Completion Certificate	Yes	No	
Was the project completed in the required time and cost	Yes	No	
Why was the project not completed in the time cost – Example budget constraints	N/A		





STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

Is the Plant still operational	Yes	No	
Problems associated with the operation of this plant	N/A		

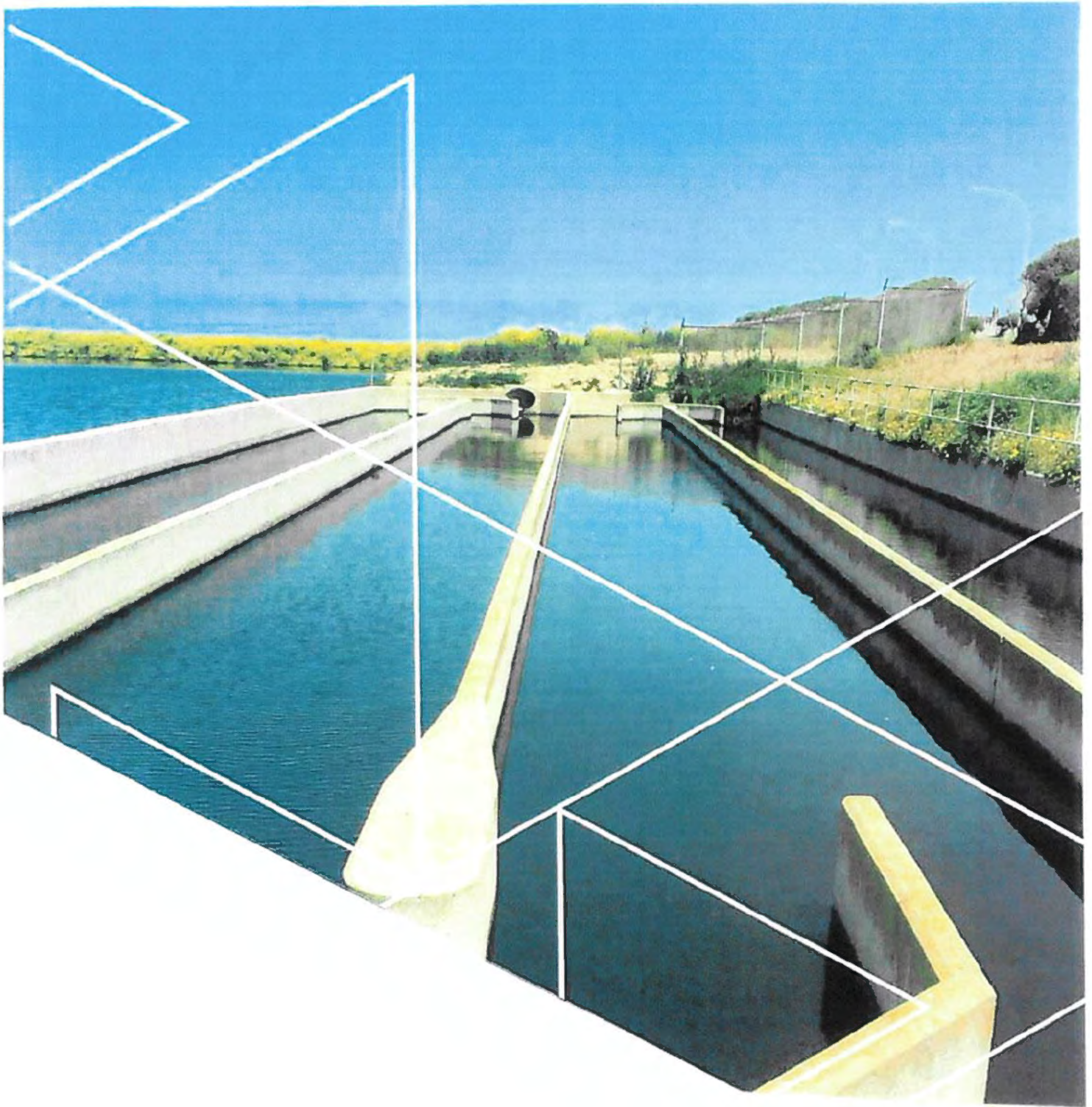
Should you require additional information, please do not hesitate to contact me.

Yours faithfully



MANAGER WASTEWATER TREATMENT





Zandvliet WWTW:

- Award Letter
- Client Reference Letter



EST 1918 CAPS 2014 | BUKHOLE KHAYELISA | 2014 KAPENTU

THIS CITY WORKS FOR YOU

OFFICE OF THE DIRECTOR: SUPPLY CHAIN MANAGEMENT

21 October 2013

Attention:

Dear Sir/Ms/Mr:

TENDER NUMBER: 387C/2012/13: PROVISION OF PROFESSIONAL ENGINEERING CONSULTANCY SERVICES: ZANDVLIET WASTEWATER TREATMENT WORKS, 18MLD CAPACITY EXTENSION AND ASSOCIATED INFRASTRUCTURE REFURBISHMENT

The Supply Chain Management Bid Adjudication Committee of the City of Cape Town, on 14 October 2013, considered your offer for the abovementioned tender. I have the pleasure of advising you that your offer was successful and that the tender was awarded, subject to the conclusion of the section 33 process, as follows:

A ZANDVLIET WASTEWATER TREATMENT WORKS/ BLACKHEATH-MACASSAR SCREENINGS STATION/ MACASSAR PUMPSTATION

NORMAL SERVICES

Item No 1: Normal Services

Item No.	Activity Description	Unit	Unit Rate (Excl VAT) R
1.1	Provide hourly rates for the following resources:		
	- Project leader	Hour	650.00
	- Process Engineer	Hour	400.00
	- Mechanical Engineer	Hour	620.00
	- Civil/Structural Engineer	Hour	610.00
	- Electrical Engineer	Hour	600.00
	- Civil/Mechanical/Electrical Designer	Hour	550.00
	- CAD Operator	Hour	150.00
	- Environmental Officer	Hour	530.00

THIS CITY WORKS FOR YOU | EST SOLEKO SISEBENZELA WENA | HIERDIE STAD WERK VIR JOU

4:51 CoCT TENDERS & CONTRACTS

1/6

ADDITIONAL SERVICES**Item No 2: Additional Services**

Item No.	Activity Description	Unit	Unit Rate (Excl. VAT) R
2.1	Additional Services pertaining to all stages of the Project.	Sum	1 000.00
2.1.1	Applying for wayleave conditions and approvals from all services authorities	Sum	3 600.00
2.1.2	Services related to targeted procurement	Sum	4 000.00
2.2	Provide a level 4 construction monitoring service as described in the Scope of Work. This rate makes provision for a staff complement of a minimum of 3 sites.	Month	150 000.00
2.3	The Tenderer shall provide training to Engineer in the following areas namely:		
	Stage 1 – Inception	Sum	900.00
	Stage 2 – Concept and Viability	Sum	3 600.00
	Stage 3 – Design Development (Detail Design)	Sum	3 600.00
	Stage 4 – Documentation and Procurement	Sum	1 800.00
	Stage 5 – Contract Administration and Inspection	Sum	3 600.00
	Stage 6 – Close-Out	Sum	900.00
2.4	Act as Employers agent in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and the Construction Regulations, 2003.	Month	4 416.67

Item No 3: Recoverable Expenses (Disbursements)

Item No.	Description	Unit	Unit Rate (Excl VAT) R
3.1	Recoverable expenses in respect of printing/copying as specified below:		
	Printing: size A0	Each	40.00
	Printing: size A1	Each	30.00
	Printing: size A2,	Each	18.00
	Printing/copying: size A4 (reports and tender documents only),	Each	0.38
	Compilation and binding of reports/tender documents, books of drawings.	Each	20.00
	Electronic Data provided on Compact Disks	Each	10.00
3.2	Recoverable expenses in respect of travelling.	Provisional Sum	45 000.00
3.3.1	Other costs incurred on behalf of and with the approval of the Employer.	Contingency Sum	250 000.00
3.4.2	Extra over item 3.3.1 above in respect of all other costs, overhead charges and profit.	%	5%

B BLACKHEATH-MACASSAR SEWER**Item No 1: Planning, Studies, Investigations and Assessments**

Item No.	Activity Description	Unit	Unit Rate (Excl VAT) R
1.1	Inspection of existing bulk sewer pipes	Sum	131 640.00
1.2	Review and evaluate inspection information, video footage and pipe wall samples	Sum	166 560.00
1.3	Planning and Preliminary Design: Rehabilitation of bulk sewer pipes	Sum	77 290.00
1.4	Preparation of report	Sum	68 880.00

Item No 2: Normal Services

Item No.	Activity Description	Tendered Percentage Fee (excluding VAT)	
		Estimated Contract Value (engineering component) inclusive of contingencies but exclusive of VAT (Construction Cost)	Tendered % fee as a percentage of the estimated contract value
2.1	Provide engineering services as described in the Scope of Work in respect of: Planning, Studies, Investigations and Assessments, Stage 1 – Inception Stage 2 – Concept and Viability Stage 3 – Design Development Stage 4 – Documentation and Procurement Stage 5 – Contract Administration and Inspection Stage 6 – Close-Out	R15 000 000	3.25%

Item No 3: Additional Services

Item No.	Activity Description	Unit	Unit Rate (Excl. VAT) R
3.1	Additional Services pertaining to all stages of the Project	-	-
3.1.1	Applying for wayleave conditions and approvals from all services authorities	Sum	37 850.00
3.1.2	Services related to targeted procurement	Sum	5 000.00
3.2	Provide a level 4 construction monitoring service as described in the Scope of Work	Month	100 000.00
3.3	The Tenderer shall provide training to Engineer in the following areas namely:		
	Stage 1 – Inception	Sum	1 000.00
	Stage 2 – Concept and Viability	Sum	1 000.00
	Stage 3 – Design Development (Detail Design)	Sum	1 000.00
	Stage 4 – Documentation and Procurement	Sum	1 000.00
	Stage 5 – Contract Administration and Inspection	Sum	1 000.00
	Stage 6 – Close-Out	Sum	1 000.00

Item No.	Activity Description	Tendered Percentage Fee (excluding VAT)	
		Estimated Contract Value (engineering component) inclusive of contingencies but exclusive of VAT (Construction Cost)	Tendered % fee as a percentage of the estimated contract value
3.4	Act as Employers agent in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and the Construction Regulations, 2003.	R15 000 000	0.55%

Item No 4: Recoverable Expenses (Disbursements)

Item No.	Description	Unit	Unit Rate (Excl. VAT) R
4.1	Recoverable expenses in respect of printing/copying as specified below:		
	Printing: size A0	Each	40.00
	Printing: size A1	Each	30.00
	Printing: size A2	Each	18.00
	Printing/copying: size A4 (reports and tender documents only)	Each	0.38
	Compilation and binding of reports/tender documents, books of drawings.	Each	20.00
	Electronic Data provided on Compact Disks	Each	5.00
4.2	Recoverable expenses in respect of travelling.	Provisional Sum	45 000.00
4.3.1	Other costs incurred on behalf of and with the approval of the Employer.	Provisional Sum	250 000.00
4.3.2	Extra over item 4.3.1 above in respect of all other costs, overhead charges and profit.	%	5%

Please note that the award of this tender is subject to a 21 day appeal period in terms of the Municipal Systems Act. You will be duly notified after this period whether or not any appeals have been lodged against the award and the subsequent commencement date of the contract.

It must be noted that no rights will accrue until appeals (if any) have been finalised.

Any objection may be submitted in writing to the Director: Supply Chain

Yours faithfully,

Director: Supply Chain Management



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

WATER AND SANITATION DEPARTMENT
WATER AND WASTE DIRECTORATE

20/08/2021

Dear Sir/ Madam

We hereby confirm that your firm (individually or in association with another) was legally contracted for the following project: **Upgrade of Zandvliet Wastewater Treatment Works (WWTW).**

Consultant(s)	Brief description of the Project	Start Date	End Date	Construction Value
Zutari	The capacity extension of Zandvliet WWTW from 72 Ml/d upgraded to 90 Ml/d. The project also included the refurbishment of the existing MBR and conventional activated sludge treatment lanes. To date the construction of the Black-Mac screening station and the Macassar pumpstation as well as the Black-Mac sewer outfall have been completed (construction value of R400 million). Phase 1: New 150 Ml/d inlet works, 4No PSTs, sludge dewatering and handling facilities, 120 Ml/d MBR lift pumpstation and demolition works (construction value of R 600 million).	2014	Ongoing	R 1,4 billion

WATER & SANITATION HEAD OFFICE

8 VOORTREKKER ROAD, CNR OF MIKE PIENAAR BOULEVARD, BELLVILLE 7535 PRIVATE BAG X98, BELLVILLE, 7535
www.capetown.gov.za/thinkwater

Reference No. 266C/2024/25

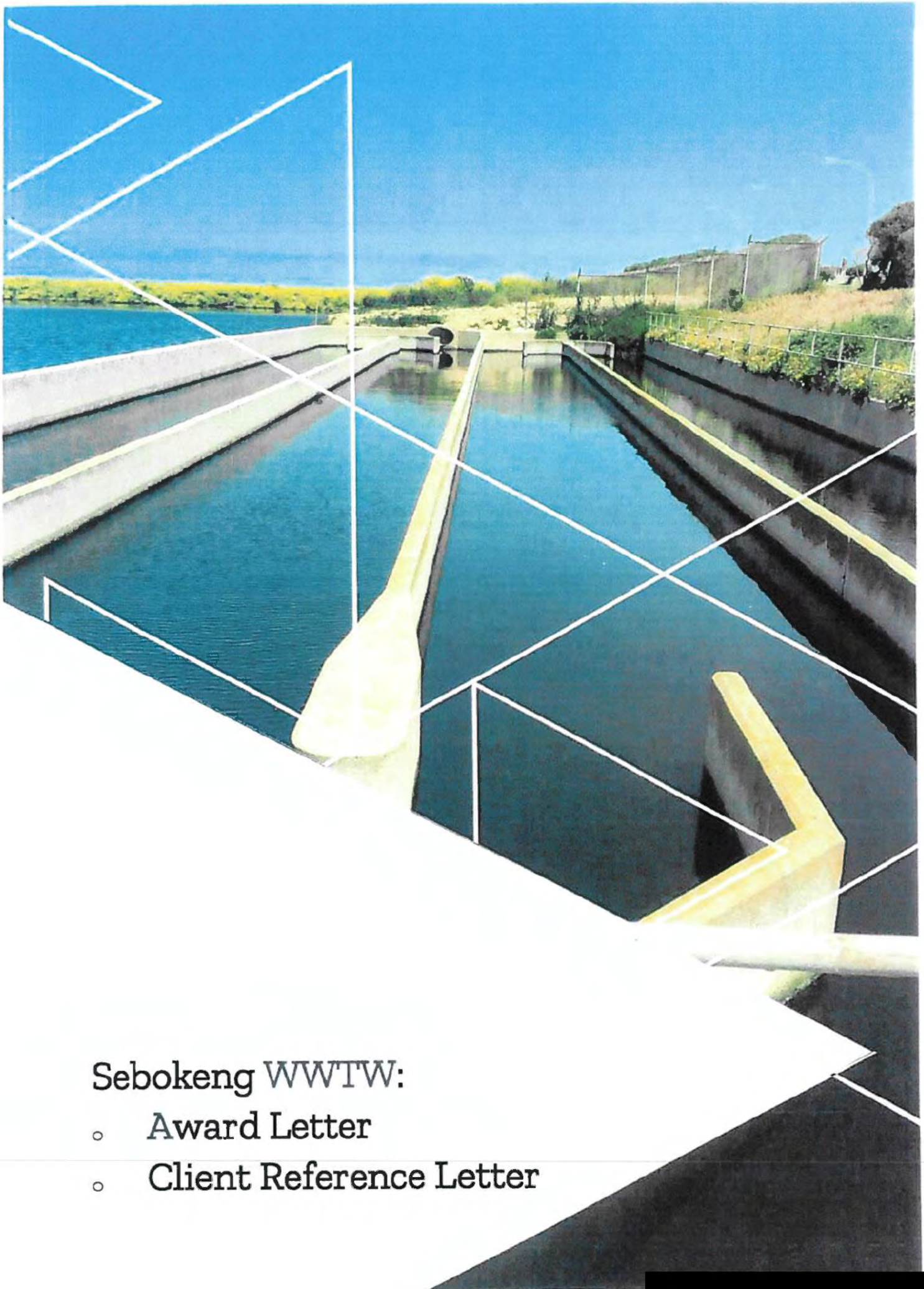
Making progress possible. Together.

	Phase 2: New 27 Ml/d MBR Plant and Infrastructure refurbishment for the existing CAS Plant (54 Ml/d) and existing MBR Plant (18 Ml/d) (construction value of R 800 million).			
--	--	--	--	--

We confirm that the project is ongoing.

Yours sincerely,





Sebokeng WWTW:

- Award Letter
- Client Reference Letter



CLUSTER : FINANCIAL SERVICES

SUPPLY CHAIN MANAGEMENT UNIT

[REDACTED]

15 November 2010

[REDACTED]

**APPOINTMENT FOR THE ENGINEERING DESIGN AND FEASIBILITY STUDY
OF THE EXTENSIONS TO THE SEBOKENG WASTEWATER TREATMENT
WORKS**

I have the pleasure to inform you that your tender dated 13 September 2010 has been accepted by the Tender Adjudication Committee on 5 November 2010. You are hereby appointed for the Engineering Design and Feasibility Study of the Extensions to the Sebokeng Wastewater Treatment Works as per the resolution attached as Annexure A

Your appointment is in accordance with the Municipality's Specifications and Conditions of tender and your tender

[REDACTED]

Emfuleni Local Municipality kindly requests that you forward within 10 working days of the receipt of this letter your written acceptance accompanied by your terms of reference for facilitating the conclusion and signing of the contract. Please take note that upon acceptance of this letter Aurecon South Africa (Pty) Ltd shall be expected to commence duty immediately.

[Redacted]

Acceptance of this tender will be highly appreciated and hope that you will find this in order

Yours sincerely,

[Redacted]

MUNICIPAL MANAGER

[Redacted]

ANNEXURE A

08/2011: REQUEST FOR PORPOSALS FOR THE ENGINEERING DESIGN AND FEASIBILITY STUDY OF THE "EXTENSIONS TO THE SEBOKENG WASTEWATER TREATMENT WORKS"

RESOLUTION BY THE TENDER ADJUDICATION COMMITTEE ON 5 NOVEMBER 2010:

- A That subject to the conditions set out below, Aurecon South Africa (Pty) Ltd (Reg. 1997/003711/07) be appointed for TENDER 08/2011: REQUEST FOR PORPOSALS FOR THE ENGINEERING DESIGN AND FEASIBILITY STUDY OF THE "EXTENSIONS TO THE SEBOKENG WASTEWATER TREATMENT WORKS" an estimated corrected total tender amount of R 49 432 614 (Forty nine million four hundred and thirty two thousand six hundred and fourteen rand) (excluding 10% contingencies and VAT and contract price adjustment) (This tender amount includes discounts consisting of 40% for Civil Engineering Fees and 35% for Mechanical Engineering Fees).
- B That Messrs Lyon & Partners, a local Consulting Engineering Practice be appointed by Aurecon as a sub-consultant for the Electrical and Electronic Engineering Design of the Works.
- C That local Empowered Consulting Engineering Practices be appointed as Sub-consultants for the balance of the required 30 % of the contract value.
- D That the existing Project Management Office be appointed by Aurecon for the project management of the design works and the tender evaluation

In accordance with the Municipality's Specification and Conditions of tender and their tender, subject to the following suspensive conditions:

- 1.1 That the final professional fees in terms of this competitive tender be determined once the consultant has completed and finalised their investigations and designs, the contract(s) is awarded to a successful contractor(s) and the final contract amount(s), contract period(s), safety agent fees and final disbursement costs and expenses are known
- 1.2 That the remuneration of Aurecon South Africa (Pty) Ltd be made in accordance with the standard fee structure as determined by the Engineering Council of South Africa (ECSA) and other statutory fees and applicable fees as indicated in the tender report (CB197/2007) and its Amendments no1 and 2
- 1.3 That an amount calculated at the rate of 10% of the final professional fees estimated at R4 900 000 (Four million nine hundred thousand) (excluding 14% VAT), subject to Items 1.1 and 1.2 above, be provided for possible contingencies, due to unforeseen expenses on the Contract 08/2011. This amount is not included in the total figure shown in Item 1 above


MUNICIPAL MANAGER



RAND WATER

Dear Sir/ Madam

CLIENT REFERENCE LETTER:

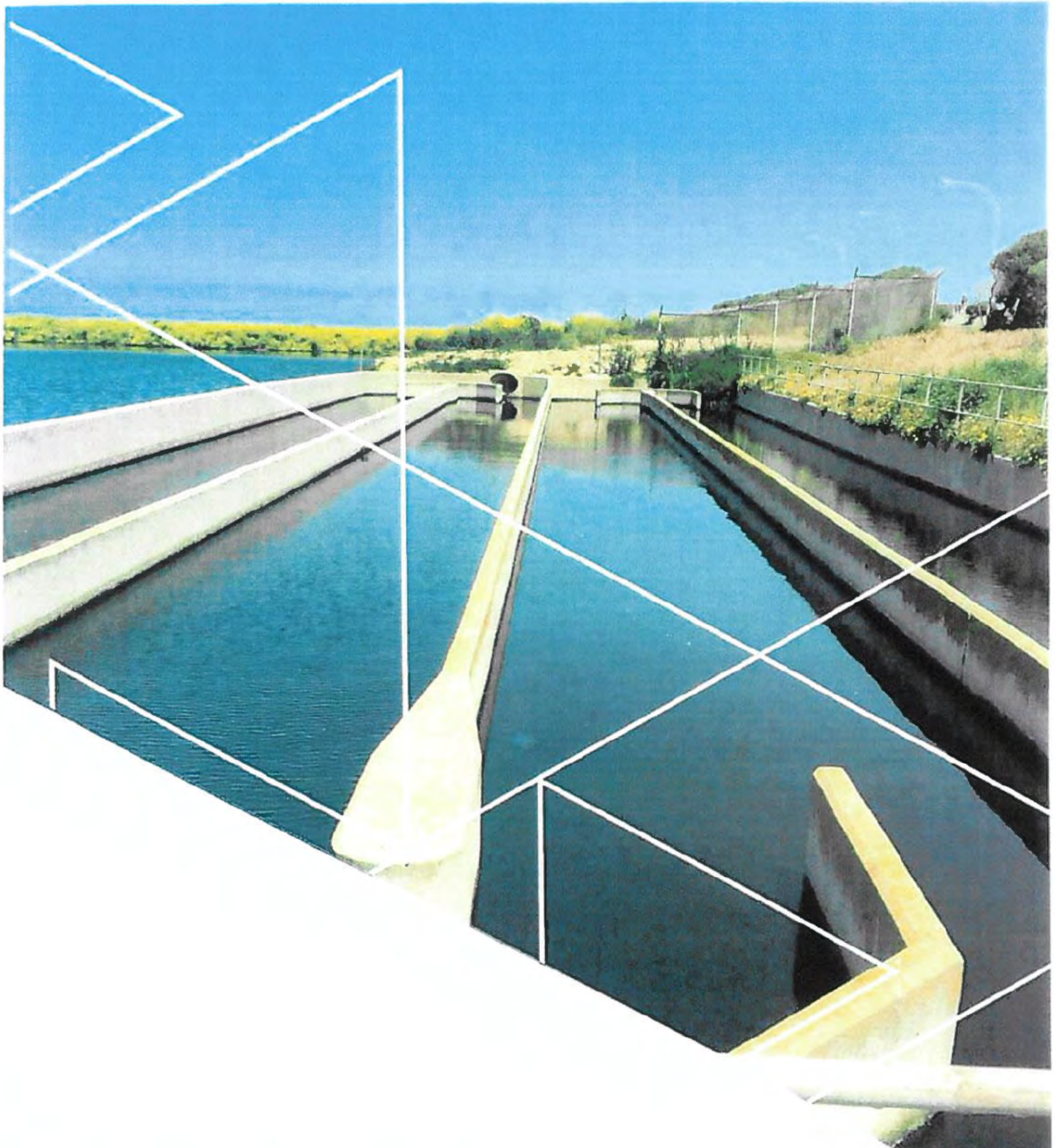
We hereby confirm that your firm (individually or in association with another) was legally contracted for the following project: **Sebokeng Wastewater Treatment Works (WWTW).**

Consultant(s)	Brief description of the Project	Start Date	End Date	Construction Value
Zutari	Design, Supervision & Monitoring for the construction of the wastewater treatment works, Sebokeng. The scope of the infrastructure comprised of a new inlet works, 4nr x primary settling tank, two 50 Mℓ/d biological nutrient removal activated sludge units (100 Mℓ/d of total capacity), 4nr x clarifiers, disinfection, sludge treatment and disposal for the complete facility.	2013	2020	R 755 million

We confirm that the first phase (50 Mℓ/day) of the project comprising new inlet works for 100 Mℓ/d,

2nr x primary settling tanks, 1 x 50 M³/d, 3nr x final clarifiers, disinfection as well as sludge dewatering plant was successfully completed in 2020.





New North Eastern WWTW:

- Award Letter
- Client Reference Letter



MANGAUNG

Supply Chain Management

[Redacted]

Your Ref:

Cell:

Date: 1 August 2014

[Redacted]

Dear Sir/Madam

TENDER BID100-2013/2014 (S1201) : PROVISION OF PROFESSIONAL ENGINEERING SERVICES FOR A SPECIFIC PROJECT : DESIGN, DOCUMENTATION & SUPERVISION OF BULK WATER & SANITATION PROJECTS ON THE 2014/2015 CAPITAL BUDGET : NE WWTW PHASE 2

CONTRACT NUMBER : C273/PP5

You are hereby informed that you are appointed for the above project in accordance with Item 4.5 - 01/11/2013 of the Bid Adjudication Committee, commencing on the 1st of August 2014 until completion of the projects

The project fees shall be in accordance with the total project cost and shall be in line with the Engineering Council of South Africa Rates as Gazetted.

[Redacted]

Please acknowledge receipt of the letter promptly in writing.

Yours faithfully

[Redacted]

CHIEF FINANCIAL OFFICER

[Redacted]

[Redacted]

Water and Sanitation

16 August 2021

To whom It may concern

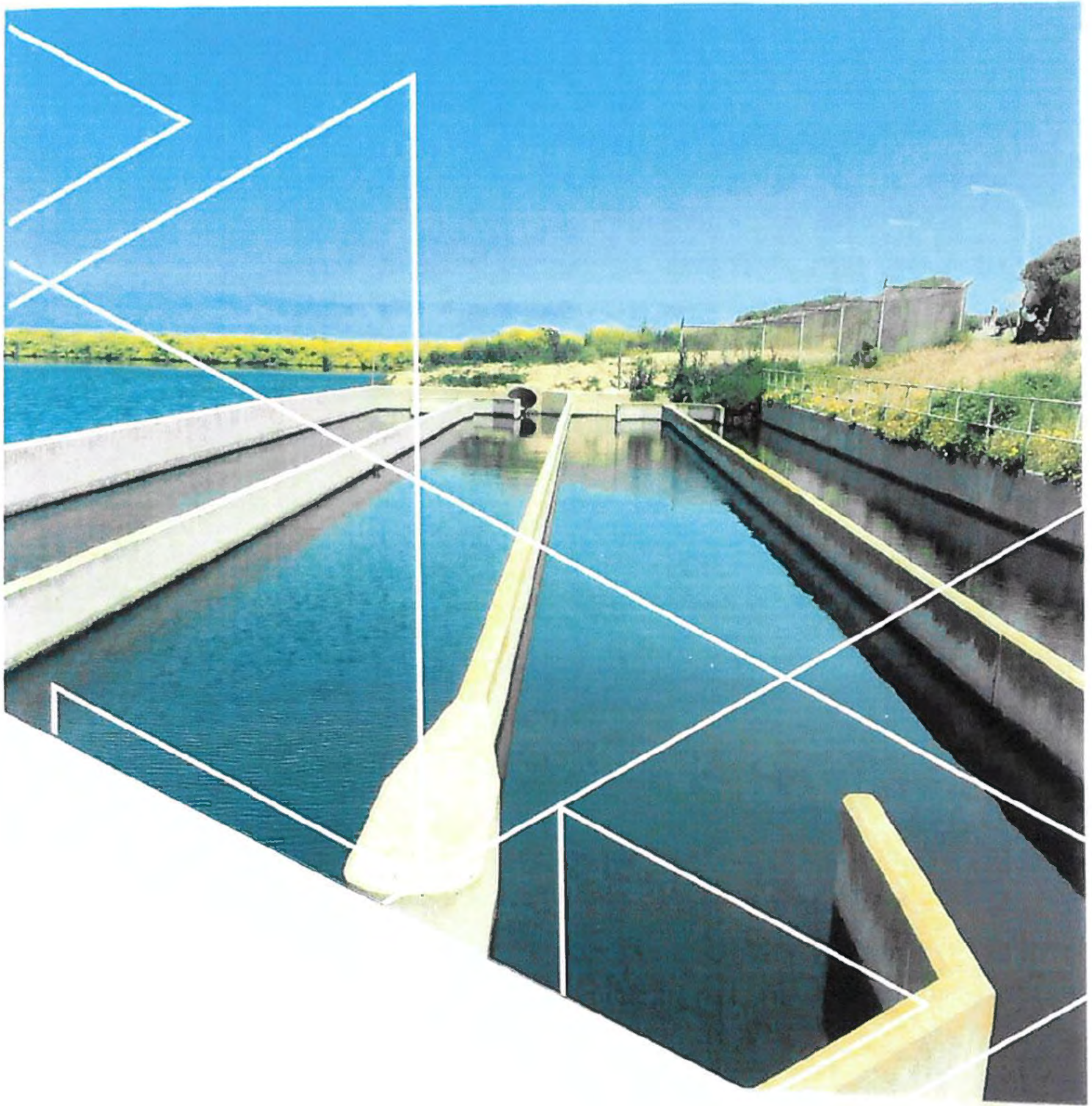
**W0903A & B: NORTH-EASTERN WASTEWATER TREATMENT WORKS:
SUCCESSFUL COMPLETION**

Mangaung Metropolitan Municipality employed Aurecon South Africa to assist with the design, control and supervision of projects on our behalf. They completed the following projects successfully:

Project Description	Project Value	Duration	Start/Completion	Status
W0903A&B – North-Eastern Wastewater Treatment Works Phase 1 & 2	Phase 1: R244.1 million	Phase 1 – 46 months	Phase 1: Feb 2013 – Dec 2016	Phase 1: Completed
	Phase 2: R163.2 million	Phase 2 – 27 months	Phase 2: Mar 2016 – June 2018	Phase 2: Completed


Manager Engineering Services

17/08/2021
Date



Sebokeng WWTW:

- Award Letter
- Client Reference Letter



CLUSTER : FINANCIAL SERVICES

SUPPLY CHAIN MANAGEMENT UNIT

15 November 2010

**APPOINTMENT FOR THE ENGINEERING DESIGN AND FEASIBILITY STUDY
OF THE EXTENSIONS TO THE SEBOKENG WASTEWATER TREATMENT
WORKS**

I have the pleasure to inform you that, your tender dated 13 September 2010 has been accepted by the Tender Adjudication Committee on 5 November 2010. You are hereby appointed for the Engineering Design and Feasibility Study of the Extensions to the Sebokeng Wastewater Treatment Works as per the resolution attached as Annexure A

Your appointment is in accordance with the Municipality's Specifications and Conditions of tender and your tender.

Emfuleni Local Municipality kindly requests that you forward within 10 working days of the receipt of this letter your written acceptance accompanied by your terms of reference for facilitating the conclusion and signing of the contract. Please take note that upon acceptance of this letter Aurecon South Africa (Pty) Ltd shall be expected to commence duty immediately.

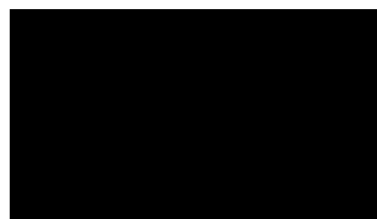


Acceptance of this tender will be highly appreciated and hope that you will find this in order

Yours sincerely,



MUNICIPAL MANAGER



ANNEXURE A

08/2011: REQUEST FOR PORPOSALS FOR THE ENGINEERING DESIGN AND FEASIBILITY STUDY OF THE "EXTENSIONS TO THE SEBOKENG WASTEWATER TREATMENT WORKS"

RESOLUTION BY THE TENDER ADJUDICATION COMMITTEE ON 5 NOVEMBER 2010:

- A That subject to the conditions set out below, Aurecon South Africa (Pty) Ltd (Reg. 1997/003711/07) be appointed for TENDER 08/2011: REQUEST FOR PORPOSALS FOR THE ENGINEERING DESIGN AND FEASIBILITY STUDY OF THE "EXTENSIONS TO THE SEBOKENG WASTEWATER TREATMENT WORKS" an estimated corrected total tender amount of R 49 432 614 (Forty nine million four hundred and thirty two thousand six hundred and fourteen rand) (excluding 10% contingencies and VAT and contract price adjustment) (This tender amount includes discounts consisting of 40% for Civil Engineering Fees and 35% for Mechanical Engineering Fees).
- B That Messrs Lyon & Partners, a local Consulting Engineering Practice be appointed by Aurecon as a sub-consultant for the Electrical and Electronic Engineering Design of the Works.
- C That local Empowered Consulting Engineering Practices be appointed as Sub-consultants for the balance of the required 30 % of the contract value.
- D That the existing Project Management Office be appointed by Aurecon for the project management of the design works and the tender evaluation

In accordance with the Municipality's Specification and Conditions of tender and their tender, subject to the following suspensive conditions.

- 1.1 That the final professional fees in terms of this competitive tender be determined once the consultant has completed and finalised their investigations and designs, the contract(s) is awarded to a successful contractor(s) and the final contract amount(s), contract period(s), safety agent fees and final disbursement costs and expenses are known
- 1.2 That the remuneration of Aurecon South Africa (Pty) Ltd be made in accordance with the standard fee structure as determined by the Engineering Council of South Africa (ECSA) and other statutory fees and applicable fees as indicated in the tender report (CB197/2007) and its Amendments no 1 and 2
- 1.3 That an amount calculated at the rate of 10% of the final professional fees estimated at R4 900 000 (Four million nine hundred thousand) (excluding 14% VAT), subject to Items 1.1 and 1.2 above, be provided for possible contingencies, due to unforeseen expenses on the Contract 08/2011. This amount is not included in the total figure shown in Item 1 above


MUNICIPAL MANAGER



HEAD OFFICE

Reference:

Enquiries:

Date: 17 August 2021

CLIENT REFERENCE LETTER:

We hereby confirm that your firm (individually or in association with another) was legally contracted for the following project: **Sebokeng Wastewater Treatment Works (WWTW)**.

Consultant(s)	Brief description of the Project	Start Date	End Date	Construction Value
Zutari	Design, Supervision & Monitoring for the construction of the wastewater treatment works, Sebokeng. The scope of the infrastructure comprised of a new inlet works, 4nr x primary settling tank, two 50 M ³ /d biological nutrient removal activated sludge units (100 M ³ /d of total capacity), 4nr x clarifiers, disinfection, sludge treatment and disposal for the complete facility.	2013	2020	R 755 million

We confirm that the first phase (50 M³/day) of the project comprising new inlet works for 100 M³/d,

Contract

267

C5.1

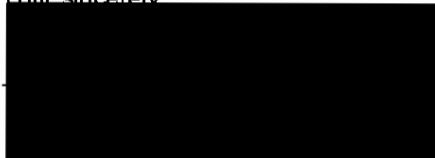
Part C5: Returnable Documents
Documents

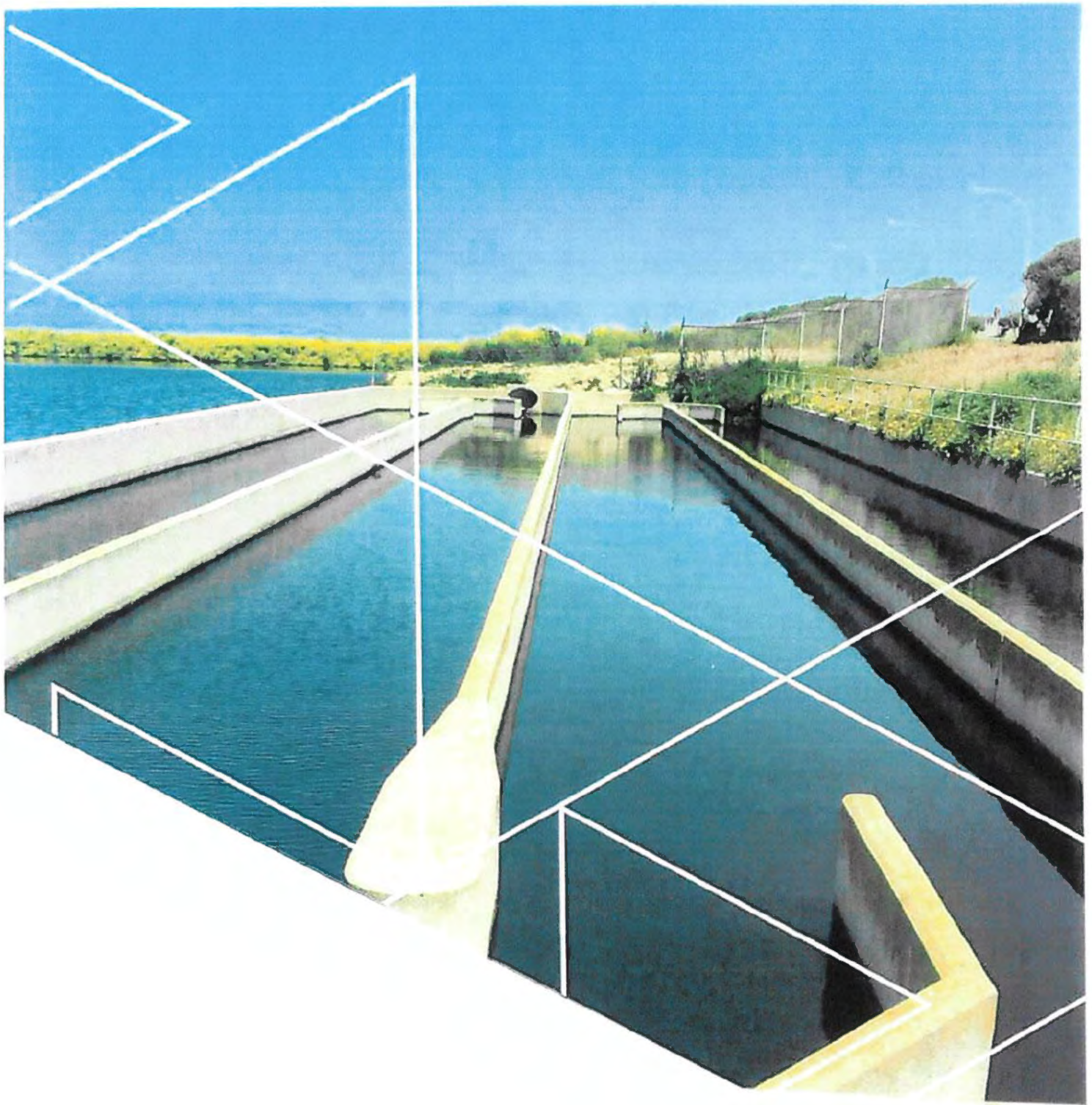
Reference No. 266C/2024/25

List of Returnable

2nr x primary settling tanks, 1 x 50 M³/d, 3nr x final clarifiers, disinfection as well as sludge dewatering plant was successfully completed in 2020.

Your sincerely





Potsdam WWTW:

- Award Letter
- Client Reference Letter

ANA ENGINEERING CONSULTANTS

a joint venture between



ASCH Professional Services (Pty) Ltd



HINHAM SHAND (Pty) Ltd



AFRICON Engineering International (Pty) Ltd

20 November 2003

Our Reference:c550-let-001

Your Reference:WW/T/19/03

Dear Sir

POTSDAM WASTEWATER TREATMENT WORKS: UPGRADING AND EXTENSIONS: APPOINTMENT OF CONSULTANTS

With reference to your letter, dated 11 November 2003, we wish to notify you of our acceptance of the above appointment.

We are available for a briefing session with you, to discuss the scope of works and to agree preliminary time-frames for the various aspects of the works.

The terms of the appointment will be as per our proposal and subsequent correspondence in this regard.

We wish to thank your Department and the City of Cape Town in entrusting this project to our team. We look forward to working with you in making a success of this project.

Yours faithfully
For ANA Engineering Consultants

Copy to:



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

WATER AND SANITATION DEPARTMENT
WATER AND WASTE DIRECTORATE

Principal Engineer: Design

29 May 2019

E-mail

Dear Sir

CLIENT REFERENCE LETTER:

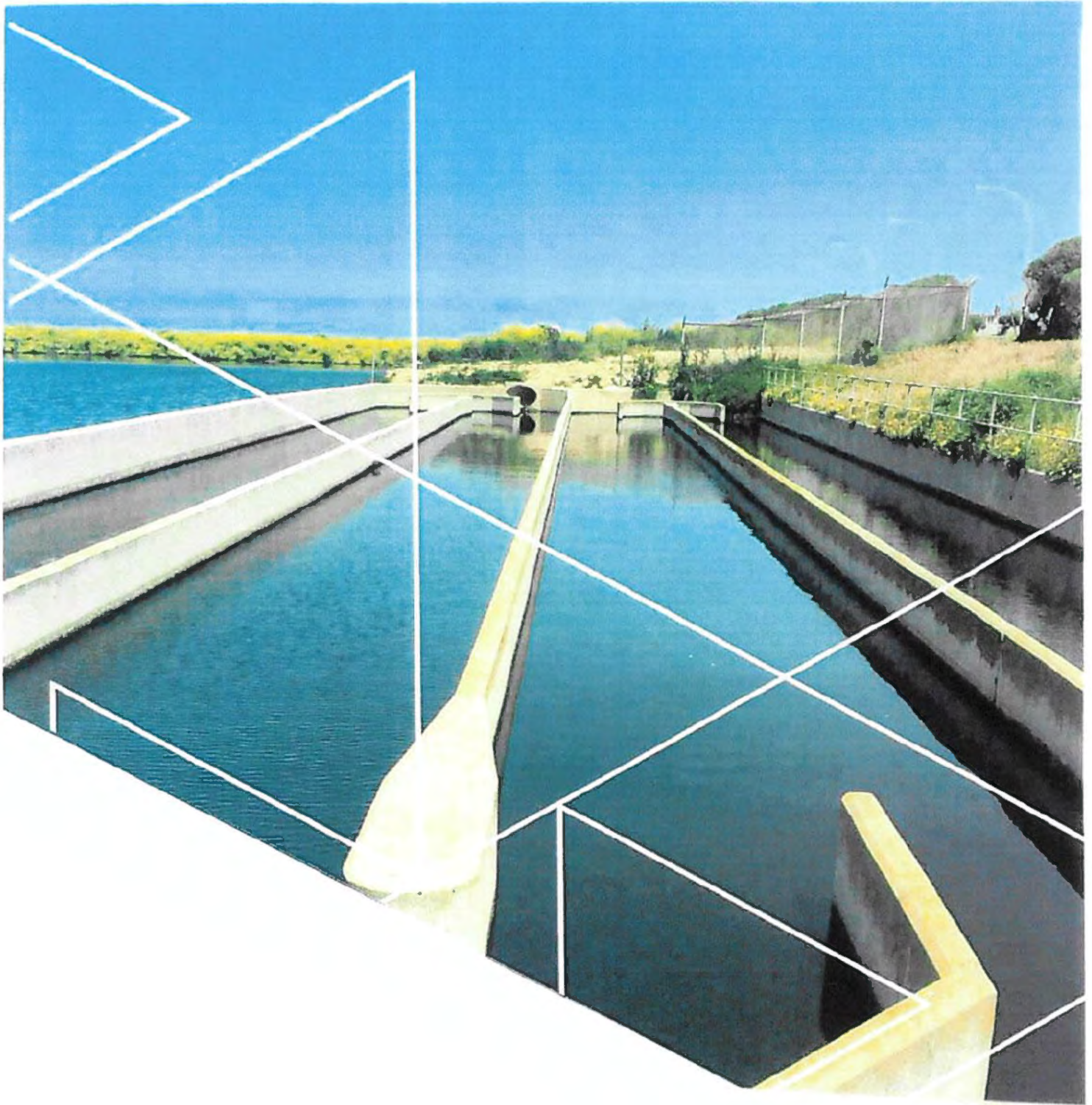
We hereby confirm that your firm (individually or in association with another) was legally contracted for the following project: **Upgrade and Extension of Potsdam Wastewater Treatments Works**

Consultant(s)	Brief description of the Project	Start Date	End Date	Construction Value
ANA Consultants (Joint Venture between Aurecon and ASCH)	Planning strategy, phased implementation, as well as design and contract management for the implementation phases for the upgrading and refurbishment of Potsdam Wastewater Treatment Works	2003	2012	R 280 million

We confirm that the project was successfully completed, May 2012.

Yours faithfully

PROJECT MANAGER: WASTEWATER BRANCH



Paarl WWTW Extension:

- Award Letter
- Client Reference Letter

Drakenstein

Municipality Munisipaliteit uMasipala



CM/ja
16/4/1/1 x 16/4/2/2

29 April 2003



Sir

**APPOINTMENT OF CONSULTING ENGINEER: PHOSPHATE AND NITRATE
REMOVAL AT WASTE WATER TREATMENT WORKS.**

With reference to your proposal dated 21 February 2003, I have to inform you that Council has decided to appoint your firm assisted by Lyners Consulting Engineers as the Consulting Engineers for Biological Phosphate and Nitrate removal at the Paarl and Wellington Waste Water Treatment Works.

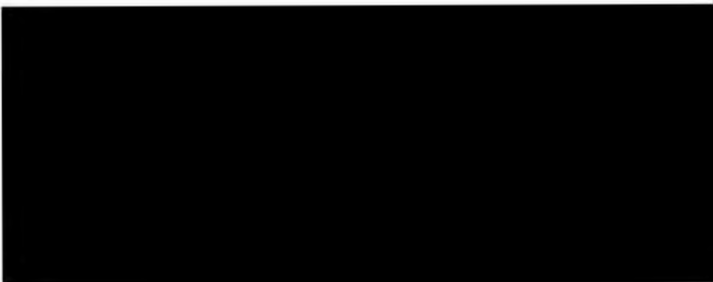
Further arrangements can be made with



Yours faithfully



HEAD: CORPORATE SERVICE



Chief Executive Officer Aurecon



Dear Sir

CLIENT REFERENCE LETTER: UPGRADE AND EXTENSION OF THE PAARL WWTW

We hereby confirm that your firm (in association with Lyners Consulting) was legally contracted for the following project: **Upgrade and Extension of the Paarl WWTW to 35 Ml/day**

Consultant(s)	Brief description of the Project	Start Date	End Date	Construction Value
Aurecon in association with Lyners	The project comprised the upgrade and extensions from 12 Ml/d to 35 Ml/d (ADWF) activated sludge works and installation of Archimedes screw pumps, upgrading existing biological reactor, secondary settling tanks, interconnecting pipelines and associated services. Phase 1 Construction completed 2010 Phase 2 Construction completed 2012 Aurecon was responsible for conceptual design and planning, preliminary design, detailed design, tender documentation and construction supervision, specifically related to the following main unit processes: • 3 No x Archimedes screw pumps installation • Upgrade and extension of biological reactor to full biological nutrient removable configuration • 1 No x Secondary Sedimentation Tank of 33m diameter WAS and Washwater Pump Stations • Plant-wide hydraulics, pipelines and channels • Sludge thickening and dewatering facilities	2007	2012	R 300 million

We confirm that the project was successfully completed on May 2012.

Your sincerely



Manager: Wastewater Services

DRAKENSTEIN MUNICIPALITY

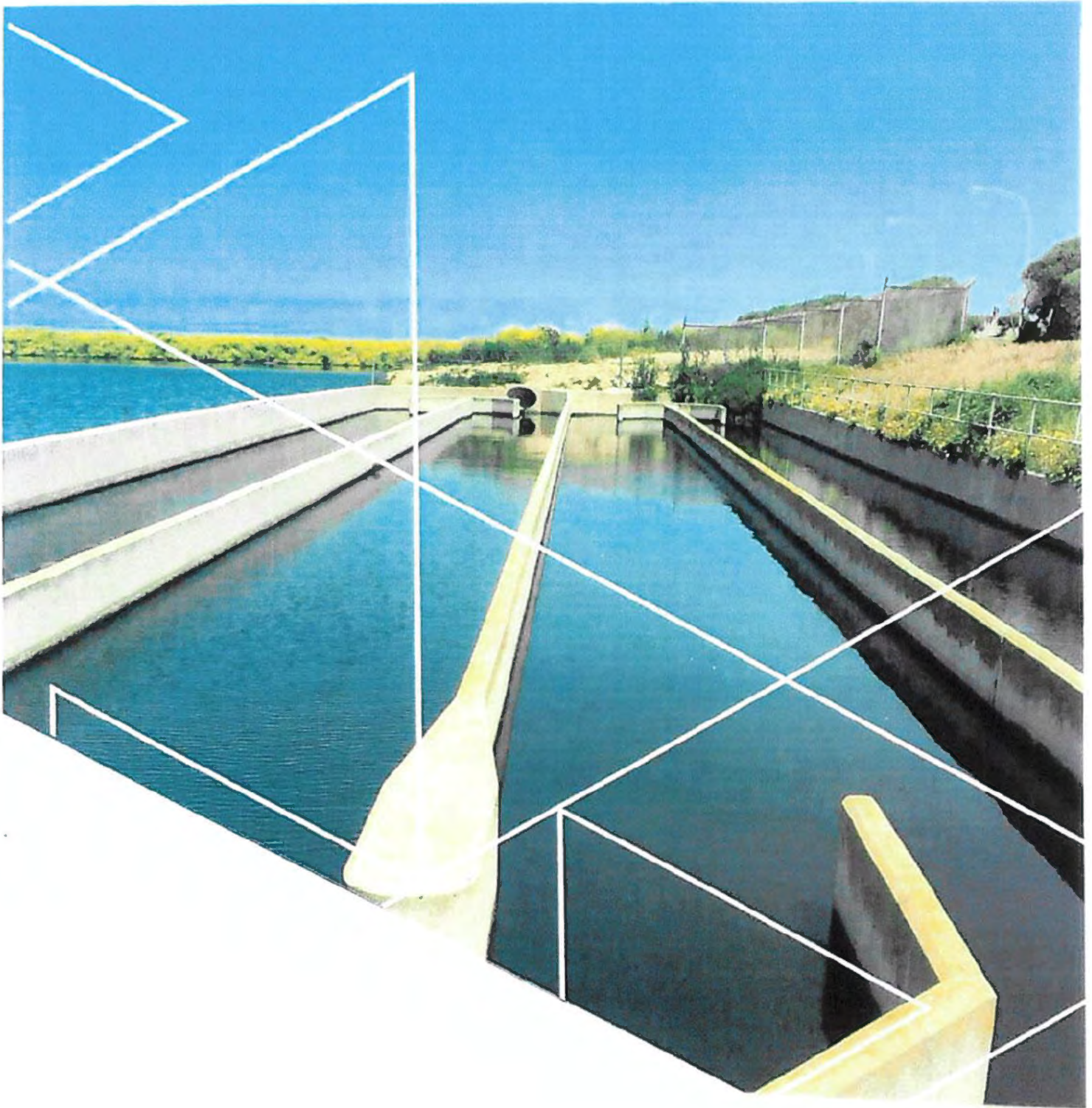
C5.1

Part C5: Returnable Documents
Documents

Reference No. 266C/2024/25

List of Returnable





Sunderland Ridge WWTW:

- Award Letter
- Client Reference Letter



SERVICE DELIVERY

OFFICE OF THE GENERAL MANAGER: WATER AND SANITATION

Your ref:
Our ref: 9/3/8/8/1
Date: 23/10/2003

Enquiries:
Tel:
E-mail:

TSHWANE WASTEWATER CONSULTANTS JV

Sir

APPOINTMENT AS CONSULTANT: TSHWANE WASTEWATER CONSULTANTS, JV FOR THE EXTENSION OF THE SUNDERLAND RIDGE WASTE WATER TREATMENT WORKS (710364)

The Council of the City of Tshwane Metropolitan Municipality (CTMM), at its meeting held on 31 July 2003 under item 44, approved the appointment of your firms as consultants and project co-ordinators for project 710364: Extension of the Sunderland Ridge Waste Water Treatment Works (The project, as well as the item number must be quoted on all correspondence).

Should more than one appointment be made under the same project number, all correspondence must be submitted separately.

DETAILS OF APPOINTMENT

The project requires the rendering of professional services in accordance with resolutions 1 to 8 under item 44, adopted by Council at its meeting held on the 31 July 2003. The rendering of professional services will be in respect of the provisioning of a new treatment module, required for the extension of the plant. This will consist of a complete plant comprising an inlet works, primary treatment, flow equalization, biological nutrient removal, disinfection, sludge stabilization and dewatering.

The project is funded by the CTMM and must be implemented in terms of the policies, procedures and specifications adopted by the CTMM.

You are also advised that the conditions of appointment as set out in the Regulations of the Professional Engineers Act, Act No. 114 of 1990 and in Model Form 1 - All Disciplines of the South African Association of Consulting Engineers, are however, also applicable.

Furthermore, [REDACTED] by appointed as the Agent of the CTMM in terms of the Construction Regulations, 2003 as promulgated on 18 July 2003 under Section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

PROJECT TITLE

The Extension of the Sunderland Ridge Waste Water Treatment Works

PROJECT DESCRIPTION

The provision of a new treatment module to cater for the growth in the Centurion area.

Specific details of the deliverables of the project entail:

- Process design for a new plant extension in co-operation with the CTMM , taking the following into account:
 - Existing flows and loads received at the works;
 - Peak wet weather flows;
 - Existing and new effluent standards as determined by DWAF;
 - Standardization of the technology within Tshwane
- Concept design and positioning of the new module on the site, interlinking with the existing infrastructure and requirements of the extension thereof.
- License application in terms of the National Water Act (Act 36 of 1998) to the Department of Water Affairs and Forestry for the discharge of waste or water containing waste.
- Obtaining authorization of an Environmental Impact Assessment from the Gauteng Department of Agriculture, Conservation, Environment and Land.
- Preliminary engineering design for the module including, geotechnical, process, civil, hydraulic, mechanical and electrical components.
- Preparation of a preliminary design report.
- Detail engineering design after approval of the preliminary design report.
- Preparation of contract documentation for the construction and installation of the new module.
- Submission of a tender evaluation report for approval
- Appointment of a contractor for the execution of the project
- Site supervision over the execution of the project
- Submission of progress reports and payment certificates
- Submission of as-built drawings and the project completion report
- Ensuring that the principal contractor and all the contractors to be appointed to execute work related to the abovementioned project comply with and adhere to the Occupational Health and Safety Act and Regulations relevant to construction work currently applicable as well as the compliance and adherence to any amendments to the Occupational Health and Safety Act and ALL relevant Regulations as amended from time to time.
- Ensuring that the principal contractor and all the contractors to be appointed for the execution of work related to the abovementioned project, each appoints a full time Safety Officer to ensure that all aspects of the Occupational Health and Safety Act and Regulations relevant to construction work are complied with and adhered to.

- Tshwane Wastewater Consultants JV shall be responsible for the following in order to ensure compliance with the provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and ALL relevant Regulations to the mentioned Act including the Construction Regulations, 2003 as promulgated on 18 July 2003 under Section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993):
 - a) to prepare a documented health and safety specification for the construction work;
 - b) to provide any principal contractor who is making a bid or appointed to perform construction work for the client with the health and safety specifications for the construction work;
 - c) to promptly provide the principal contractor / agent with any information which might affect the health and safety of any person at work carrying out construction work;
 - d) to ensure that the principal contractor and all the contractors to be appointed for the execution of work related to the abovementioned project perform a risk assessment by a competent person to analyse, evaluate and address as far as is reasonably practicable, ergonomic related hazards;
 - e) to take reasonable steps to ensure that each principal contractor's health and safety plan as determined in regulation 5(1) of the above mentioned Act and Regulations are implemented and maintained on the construction site: Provided that the steps taken, shall include periodic audits at intervals mutually agreed upon between the Agent of the CTMM and the principal contractor and contractors, but at least once every month;
 - f) to stop any contractor from executing construction work, which is not in accordance with, the principal contractor's health and safety plan contemplated in regulation 5(1) of the above mentioned Act and Regulations for the site or which poses a threat to the health and safety of persons;
 - g) to ensure that where changes are brought about to the design or construction, sufficient health and safety information and appropriate resources are made available to the principal contractor to execute the work safely;
 - h) to ensure that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to work commencing on site; and
 - i) to ensure that potential principal contractors submitting tenders, have made provision for the cost of health and safety measures during the construction process.
- Tshwane Wastewater Consultants JV shall discuss and negotiate with the principal contractor the contents of the health and safety plan contemplated in regulation 5(1) of the above mentioned Act and Regulations and thereafter finally approve the health and safety plan for implementation.
- Tshwane Wastewater Consultants JV shall ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor.

- Should the need arise Tshwane Wastewater Consultants JV shall not appoint any contractor to perform construction work, unless the Agent is reasonably satisfied that the contractor has the necessary competencies and resources to carry out the work safely.

A copy of the Construction Regulations, 2003 as promulgated on 18 July 2003 under Section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) as well as the Safety Inspection Register form are attached as Annexure B.

GUIDELINES AND DOCUMENTATION

The tender documents will be prepared using the relevant standard documents of the Water and Sanitation Division and using the "City Council of Pretoria's Standard Specifications for Municipal Civil Engineering Works". Any omissions of specifications or uncertainty must be verified using SABS 1200. All guidelines to be used shall be approved by the Water and Sanitation Division.

The following documentation is required:

- A work report / memorandum after the completion of the project.
- One set of master copies of all final project documentation.
- Monthly Progress Report
- Monthly Safety Report

All final reports must also be submitted in electronic format in MS Office, the version of which needs to be agreed on prior to the project commencing. The format of as-built drawings must be confirmed prior to submission.

INFORMATION

- All information obtained and paid for during the course of the project is required to be submitted to the CTMM in the pre-specified format.
- All data, information, plans, documents and other deliverables collated and/or produced as a result of this appointment are the rightful property of the CTMM and the CTMM shall also require the copyright thereof.
- The CTMM reserves the right, in its sole discretion, to make any of the above-mentioned data, information, plans, documents and other deliverables, available for use, processing or sharing with / by other organisations.
- The CTMM, in paying for any appointment of a consultant, also acquires the intellectual property associated with the project being / having been undertaken. This intellectual property shall not be utilised elsewhere without prior written consent of the CTMM.

- The source codes of all electronically developed programmes and systems are considered to be a part of the project and need to be delivered to the CTMM on completion of the project who will then assume full ownership of such source codes.
- In the event that source codes are changed / altered or modified for whatever reason, such changes shall be communicated and delivered to the CTMM on a mutually agreed basis.
- Any development of programmes, systems and other application need to be undertaken in such a manner so as to be compatible with the CTMM's systems at the time of development.

PROGRAMME AND BUDGET

A programme for each of the abovementioned deliverables should be compiled and submitted to the CTMM within 15 days from date of appointment.

It should be noted that the CTMM's budget year ends on 30 June 2004. It must further be noted that a portion of the expenditure incurred in accordance with and emanating from this appointment must be claimed before that date

The funds allocated for this project in the current financial year, amount to R 3 000 000.00 and the amount must not be exceeded without prior approval. The budget figure excludes VAT, but includes professional fees, contract supervision, escalation and contingencies.

Please refer to the Council Resolution, Item 44, adopted on 31 July 2003, attached as Annexure A.

A monthly progress report is to be submitted on the third last working day of each month. A proforma of the monthly progress report is attached as Annexure C.

A revised detail break down of all construction costs, construction programme and cash flow, must be provided to the Water and Sanitation Division as soon as possible.

REMUNERATION AND PROFESSIONAL FEES

Messrs Tshwane Wastewater Consultants JV will be remunerated in accordance with The City of Tshwane Metropolitan Municipality's Council Resolution, Item 44, adopted on 31 July 2003.

The appointment and remuneration will be in accordance with the Form of Agreement for Consulting Services, February 2002 as published by the South African Association of Consulting Engineers (SAACE). The Engineering Council of South Africa (ECSA) latest Scope of Service and Tariff of Fees promulgated in the Government Gazette will be used for the appointment for the basic fee.

The basic fee as set out in the ECSA tariff structure is based on percentages of Cost of the Works. The latest released tariff structures will be used.

The fees for Construction Supervision will be paid according to the Forms of Agreement for Consulting Services, February 2002 Appendix B1.

Reimbursable Costs will be paid according to the latest Forms of Agreement for Consulting Services, February 2002 Appendix B1 published by SAACE. The hourly rates given in the Financial Proposal of the two consortiums will be used subject to the necessary escalation.

The final 5% of percentage fees will only be paid after submission of the as-built drawings and the project completion report.

ACCEPTANCE

Messrs Tshwane Wastewater Consultants JV must react, in writing, within 14 days from date of this letter the acceptance/non acceptance of the appointment. If no response is received within 14 days it is accepted that you concur with the conditions in this letter. On acceptance the following matters must be mentioned, namely:

- the acceptance of the conditions and stipulations of this correspondence
- the names and surnames of the project team members (with mentioning of the number and their duties), as well as the name and surname of the professional registered engineer that will act as the project leader.

Proof of insurance signed by the JV's insurance broker must accompany the above mentioned letter. The JV must take out professional indemnity insurance policy from an insurance company, which is registered according to the law of the Republic of South Africa, that render coverage against the following with respect to all Consulting Engineers work to be executed by the JV or the JV's appointed agents (excluding insurance with respect to the construction phase of the abovementioned projects) :

- any loss or damage that The City of Tshwane Metropolitan Municipality has suffered due to any misconceptions, omissions or negligence, due to the non compliance of professional duties by the Consulting Engineer or his/her workers with regards to services that he/she has undertook to deliver, for an insured amount of not less than 1.5 times the planned relevant professional fees.
- any accountability for the death or injury of any third party due to misconceptions, omissions or negligence due to the non compliance of professional duties for which the Consulting Engineer is responsible with respect to this agreement.

LIAISON

For the sake of efficient administration of the project it is required that:

Liaison will take place via the following employee:

Contact Person: [REDACTED]

Designation: Deputy Manager: Process Development, Upgrading and Evaluation

Address: [REDACTED]

Tel. No: [REDACTED]

Fax. No: [REDACTED]

Cell. No: [REDACTED]

E-mail: [REDACTED]

Variation orders or any instruction for work may only be accepted if authorised by the Contact Person, as mentioned above or his delegate, confirmed in writing.

TERMINATION

The City of Tshwane Metropolitan Municipality reserves the right to cancel/postpone the appointment at any time and to reimburse the JV for work done to date, after which any further obligations shall fall away.

GENERAL INFORMATION

It is noted that Goba Moahloli Keeve Steyn (Pty) Ltd, Golder Associates Africa (Pty) Ltd formerly known as Wates, Meiring & Barnard (Pty) Ltd, Nyeleti Consulting (Pty) Ltd and Ninham Shand (Pty) Ltd have formed a joint venture as the Main Consultants to be known as Tshwane Wastewater Consultants, JV. The Sub-consultants to be used according to the recommendation of the Council and in terms of the policies of the CTMM, will be Lebone (Pty) Ltd, Semanya Furumele (Pty) Ltd and P.D Naidoo and Associates (Pty) Ltd.

We trust that the conditions stated in this appointment are acceptable to you and look forward to work with you in the implementation thereof.

Yours faithfully,

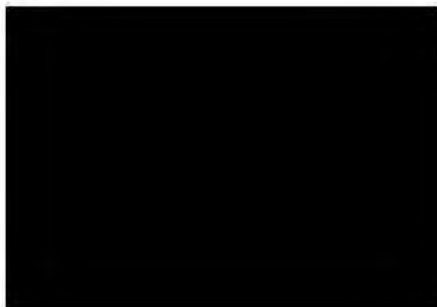
[REDACTED]
/GENERAL MANAGER: WATER AND SANITATION



Services Infrastructure Department
Water and Sanitation Division
Wastewater Treatment Section



To:



CLIENT REFERENCE LETTER

We hereby confirm that your firm (individually or in association with another) is legally contracted for the following project:

Consultant(s)	Brief Description of the Project	Start date	End date
Aurecon	Design and construction monitoring of the 30 Ml/d extensions of the Sunderland Ridge Wastewater Treatment Works	January 2009	June 2014

We hereby recommend Aurecon as a reputable firm capable of carrying out the above works, and worthy of every employer's reliance.

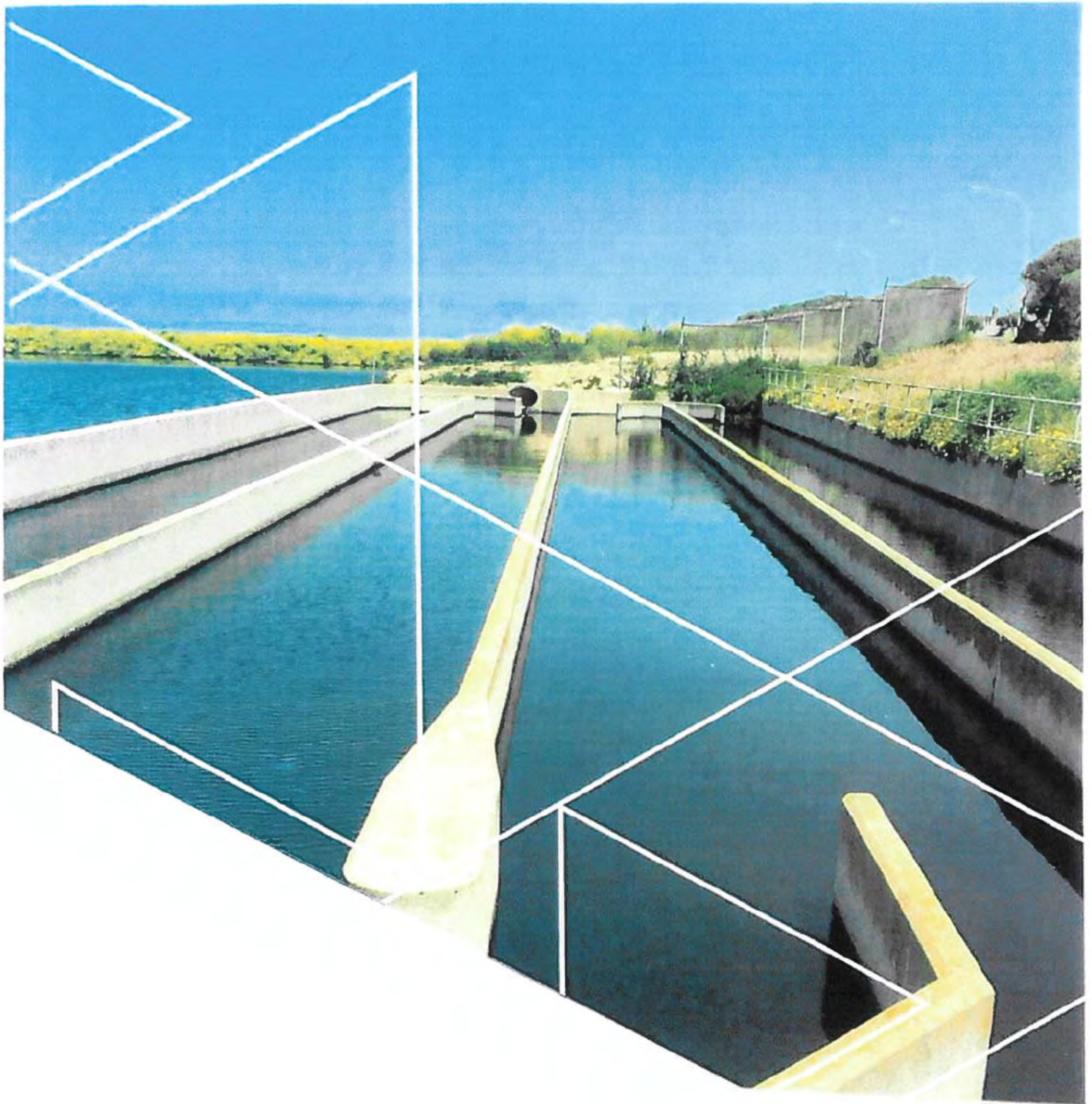
Yours Truly,



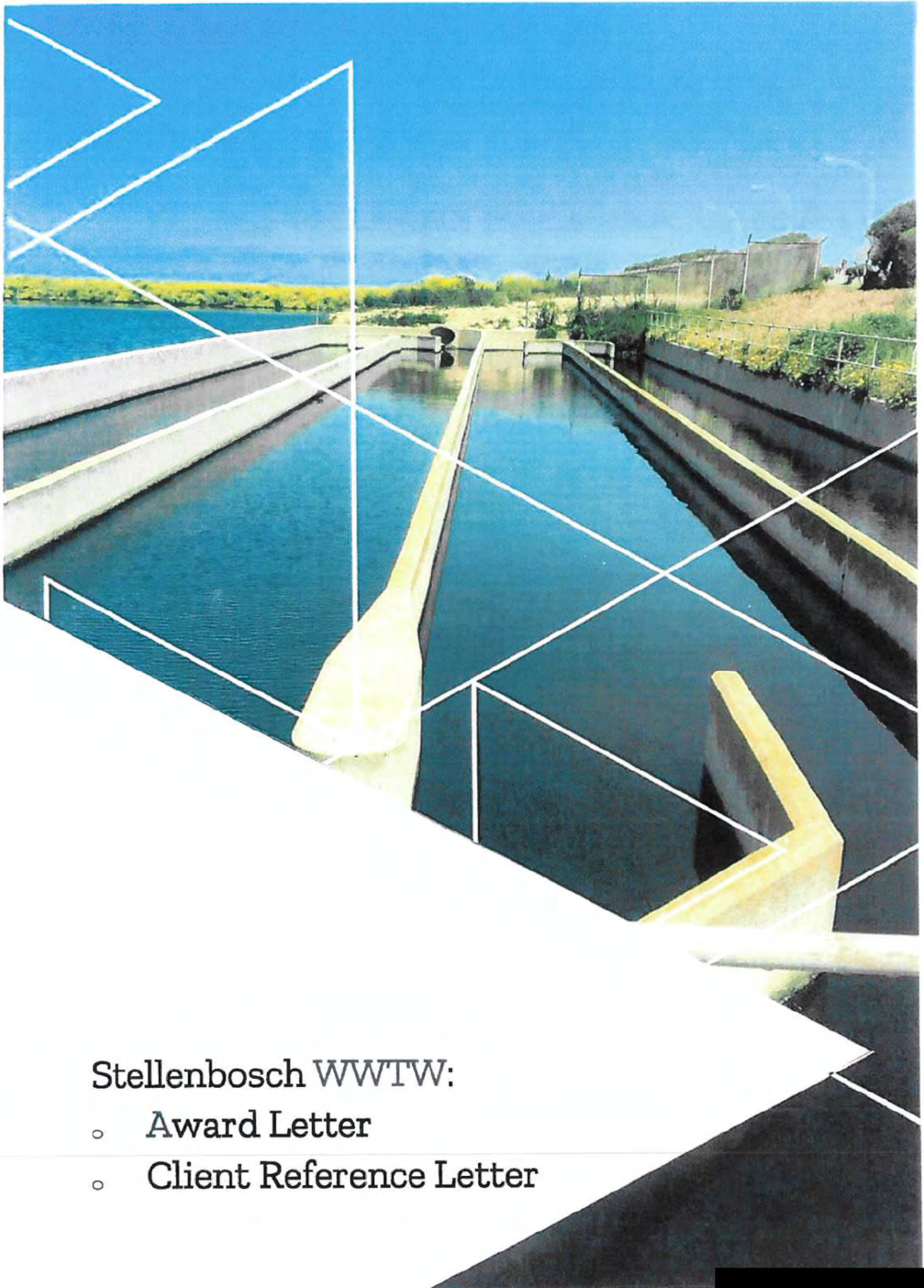
ACTING DIRECTOR: WASTEWATER TREATMENT

On request, this document can be provided in another official language.





Schedule 11.2: References for New Wastewater
Sludge Thickening, Stabilisation, Conditioning and
Mechanical Dewatering Projects Completed



Stellenbosch WWTW:

- Award Letter
- Client Reference Letter



STELLENBOSCH MUNICIPALITY

STELLENBOSCH · PNIEL · FRANSCHHOEK

MUNISIPALITEIT · UMASIPALA · MUNICIPALITY

[REDACTED]
29 November 2013

ATTENTION: [REDACTED]

LETTER OF APPOINTMENT: B/SM 13/14: TENDER FOR THE APPOINTMENT OF CONSULTING ENGINEERS TO RENDER PROFESSIONAL ENGINEERING SERVICES FOR THE EXTENSION OF THE STELLENBOSCH WASTEWATER TREATMENT AND ASSOCIATED WORKS.

With reference to our letter dated 19 October 2013 (Ref: 6/1/1) and your letter dated 25 October 2013.

It is our pleasure to inform you that Aurecon (Pty) Ltd has been appointed as service provider to **RENDER PROFESSIONAL ENGINEERING SERVICES FOR THE EXTENSION OF THE STELLENBOSCH WASTEWATER TREATMENT AND ASSOCIATED WORKS IN TERMS OF TENDER B/SM 13/14** and that you may commence with the project.

Although Aurecon (Pty) Ltd has been appointed for the entire project as described in more detail in the tender documents (B/SM 13/14), this instruction to commence should be read with clause C3.4 of the tender documents.

"The services to be provided in terms of this project are inextricably linked to the Employer's capital budget. All services to be provided and construction works to be executed shall therefore be programmed in order to make full use of, but not exceed, the budget provision in any given financial year.

The Service Provider's attention is drawn to the fact that the entire project (including construction) will be phased according to the capital budget of the Employer and will run over different financial years. Although the Service Provider will be appointed for

the entire project the appointment is subject to the budget provision of the Employer. The Service Provider may not proceed with any phase of the contract without the written instruction of the Employer to proceed. It should be noted that while the Employer has every intention of completing the full Scope of Work making full use of the budget provision, the Employer budget is subject to periodic review and annual approval and confirmation."

Please arrange a Project Initiation Meeting with [REDACTED] of the Stellenbosch Municipality (contact number [REDACTED]) to discuss the detail regarding the available budget, program and the phasing of the project and arrange for the signing of the contract document.

It is anticipated that a successful, co-operative working relationship will be established between Aurecon and the Stellenbosch Municipality on this very challenging project to ensure the delivery of a successful project that will benefit all the people of the greater Stellenbosch.

Yours faithfully



Director: Engineering Services





02 April 2025

TO WHOM IT MAY CONCERN

COMPANY EXPERIENCE IN MEMBRANE TECHNOLOGY FOR WATER TREATMENT PURPOSE

Client Name	Stellenbosch Municipality		
Client Representative Name	[Redacted]		
Location of Plant	Stellenbosch WWTW, Stellenbosch Municipality		
Plant Size	27 Ml/d Ultrafiltration Membrane Biological Reactor		
Type of Technology and treatment purpose. Example Membrane filtration Reverse Osmosis or ultrafiltration or microfiltration (Membrane distillation, Membrane Permeation.)	Zutari was responsible for the planning, design, procurement, construction administration and monitoring for the upgrade of the existing Stellenbosch wastewater treatment works (WWTW) and associated infrastructure from a capacity of 20.4 Ml/d to 35 Ml/d in terms of Average Dry Weather Flow. The WWTW comprised of an 8 Ml/d activated sludge lane and a 27 Ml/d membrane bioreactor (MBR) lane. The MBR lane uses ultra-filtration membrane for solid-liquid separation in the MBR.		
Consultant Project Manager Name	[Redacted]		
Contact details Client	Email, Phone and Address	E: T: A:	[Redacted]
Completion Certificate	Yes	No	
Was the project completed in the required time and cost	Yes	No	
Why was the project not completed in the time cost – Example budget constraints	N/A		





STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

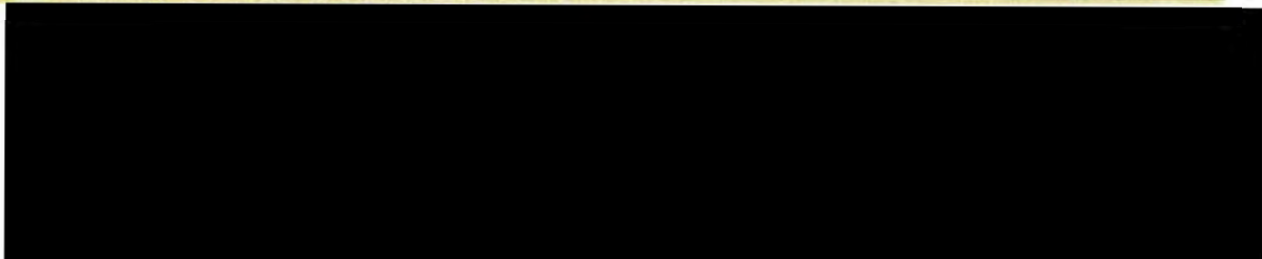
Is the Plant still operational	Yes	No	
Problems associated with the operation of this plant	N/A		

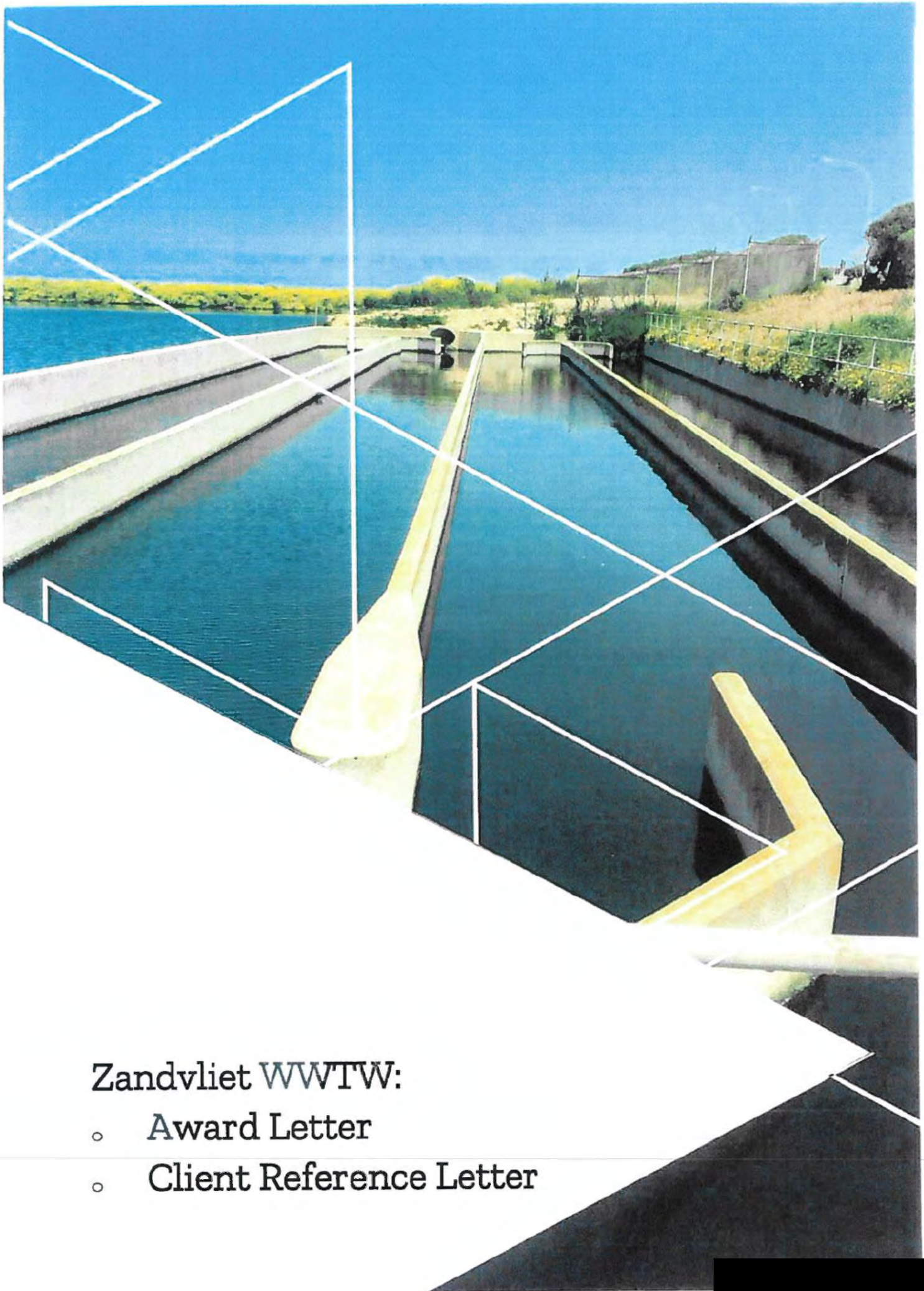
Should you require additional information, please do not hesitate to contact me.

Yours faithfully



MANAGER WASTEWATER TREATMENT





Zandvliet WWTW:

- Award Letter
- Client Reference Letter



CITY OF CAPE TOWN | RESOURCES | PROGRAMS

THIS CITY WORKS FOR YOU

OFFICE OF THE DIRECTOR: SUPPLY CHAIN MANAGEMENT

21 October 2013

FAX: (021) 460 8100

Attention: [REDACTED]

Dear Sir/Madam:

TENDER NUMBER: 387C/2012/13: PROVISION OF PROFESSIONAL ENGINEERING CONSULTANCY SERVICES: ZANDVLIET WASTEWATER TREATMENT WORKS, 18MLD CAPACITY EXTENSION AND ASSOCIATED INFRASTRUCTURE REFURBISHMENT

The Supply Chain Management Bid Adjudication Committee of the City of Cape Town, on 14 October 2013, considered your offer for the abovementioned tender. I have the pleasure of advising you that your offer was successful and that the tender was awarded, subject to the conclusion of the section 33 process, as follows:

A ZANDVLIET WASTEWATER TREATMENT WORKS/ BLACKHEATH-MACASSAR SCREENINGS STATION/ MACASSAR PUMPSTATION

NORMAL SERVICES

Item No 1: Normal Services

Item No.	Activity Description	Unit	Unit Rate (Excl. VAT) R
1.1	Provide hourly rates for the following resources:		
	- Project leader	Hour	660.00
	- Process Engineer	Hour	400.00
	- Mechanical Engineer	Hour	620.00
	- Civil/Structural Engineer	Hour	610.00
	- Electrical Engineer	Hour	600.00
	- Civil/Mechanical/Electrical Designer	Hour	550.00
	- CAD Operator	Hour	150.00
	- Environmental Officer	Hour	530.00

THIS CITY WORKS FOR YOU ESI SIKEXO SISEBENZELA WENJA HIERDIE STAD WERK VIR JOU

2013-Oct-21 14:51 CoCT TENDERS & CONTRACTS

ADDITIONAL SERVICES**Item No 2: Additional Services**

Item No.	Activity Description	Unit	Unit Rate (Excl. VAT) R
2.1	Additional Services pertaining to all stages of the Project.	Sum	1 000.00
2.1.1	Applying for wayleave conditions and approvals from all services authorities	Sum	3 600.00
2.1.2	Services related to targeted procurement	Sum	4 000.00
2.2	Provide a level 4 construction monitoring service as described in the Scope of Work. This rate makes provision for a staff complement of a minimum of 3 sites.	Month	150 000.00
2.3	The Tenderer shall provide training to Engineer in the following areas namely:		
	Stage 1 – Inception	Sum	900.00
	Stage 2 – Concept and Viability	Sum	3 600.00
	Stage 3 – Design Development (Detail Design)	Sum	3 600.00
	Stage 4 – Documentation and Procurement	Sum	1 800.00
	Stage 5 – Contract Administration and Inspection	Sum	3 500.00
	Stage 6 – Close-Out	Sum	900.00
2.4	Act as Employers agent in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and the Construction Regulations, 2003.	Month	4 416.67

Item No 3: Recoverable Expenses (Disbursements)

Item No.	Description	Unit	Unit Rate (Excl VAT) R
3.1	Recoverable expenses in respect of printing/copying as specified below:		
	Printing: size A0	Each	40.00
	Printing: size A1	Each	30.00
	Printing: size A2	Each	18.00
	Printing/copying: size A4 (reports and tender documents only).	Each	0.38
	Compilation and binding of reports/tender documents, books of drawings.	Each	20.00
	Electronic Data provided on Compact Disks	Each	10.00
3.2	Recoverable expenses in respect of travelling.	Provisional Sum	45 000.00
3.3.1	Other costs incurred on behalf of and with the approval of the Employer.	Contingency Sum	250 000.00
3.4.2	Extra over item 3.3.1 above in respect of all other costs, overhead charges and profit.	%	5%

B BLACKHEATH-MACASSAR SEWER**Item No 1: Planning, Studies, Investigations and Assessments**

Item No.	Activity Description	Unit	Unit Rate (Excl VAT) R
1.1	Inspection of existing bulk sewer pipes	Sum	131 640.00
1.2	Review and evaluate inspection information, video footage and pipe wall samples	Sum	165 560.00
1.3	Planning and Preliminary Design: Rehabilitation of bulk sewer pipes	Sum	77 290.00
1.4	Preparation of report	Sum	68 880.00

Item No 2: Normal Services

Item No.	Activity Description	Tendered Percentage Fee (excluding VAT)	
		Estimated Contract Value (engineering component) inclusive of contingencies but exclusive of VAT (Construction Cost)	Tendered % fee as a percentage of the estimated contract value
2.1	Provide engineering services as described in the Scope of Work in respect of: Planning, Studies, Investigations and Assessments, Stage 1 – Inception Stage 2 – Concept and Viability Stage 3 – Design Development Stage 4 – Documentation and Procurement Stage 5 – Contract Administration and Inspection Stage 6 – Close-Out	R15 000 000	3.25%

Item No 3: Additional Services

Item No.	Activity Description	Unit	Unit Rate (Excl. VAT) R
3.1	Additional Services pertaining to all stages of the Project	-	-
3.1.1	Applying for wayleave conditions and approvals from all services authorities	Sum	37 850.00
3.1.2	Services related to targeted procurement	Sum	5 000.00
3.2	Provide a level 4 construction monitoring service as described in the Scope of Work	Month	100 000.00
3.3	The Tenderer shall provide training to Engineer in the following areas namely:		
	Stage 1 – Inception	Sum	1 000.00
	Stage 2 – Concept and Viability	Sum	1 000.00
	Stage 3 – Design Development (Detail Design)	Sum	1 000.00
	Stage 4 – Documentation and Procurement	Sum	1 000.00
	Stage 5 – Contract Administration and Inspection	Sum	1 000.00
	Stage 6 – Close-Out	Sum	1 000.00

Item No.	Activity Description	Tendered Percentage Fee (excluding VAT)	
		Estimated Contract Value (engineering component) inclusive of contingencies but exclusive of VAT (Construction Cost)	Tendered % fee as a percentage of the estimated contract value
3.4	Act as Employers agent in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and the Construction Regulations, 2003.	R15 000 000	0.55%

Item No 4: Recoverable Expenses (Disbursements)

Item No.	Description	Unit	Unit Rate (Excl. VAT) R
4.1	Recoverable expenses in respect of printing/copying as specified below:		
	Printing: size A0	Each	40.00
	Printing: size A1	Each	30.00
	Printing: size A2	Each	18.00
	Printing/copying: size A4 (reports and tender documents only)	Each	0.38
	Compilation and binding of reports/tender documents, books of drawings.	Each	20.00
	Electronic Data provided on Compact Disks	Each	5.00
4.2	Recoverable expenses in respect of travelling.	Provisional Sum	45 000.00
4.3.1	Other costs incurred on behalf of and with the approval of the Employer.	Provisional Sum	250 000.00
4.3.2	Extra over item 4.3.1 above in respect of all other costs, overhead charges and profit.	%	5%

Please note that the award of this tender is subject to a 21 day appeal period in terms of the Municipal Systems Act. You will be duly notified after this period whether or not any appeals have been lodged against the award and the subsequent commencement date of the contract.

It must be noted that no rights will accrue until appeals (if any) have been finalised.

Requests for further information in this regard may be submitted in writing to the Director, Supply Chain Management, [REDACTED]

Yours faithfully,

[REDACTED]
Director, Supply Chain Management
[REDACTED]



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

WATER AND SANITATION DEPARTMENT
WATER AND WASTE DIRECTORATE

20/08/2021

Dear Sir/ Madam

We hereby confirm that your firm (individually or in association with another) was legally contracted for the following project: **Upgrade of Zandvliet Wastewater Treatment Works (WWTW).**

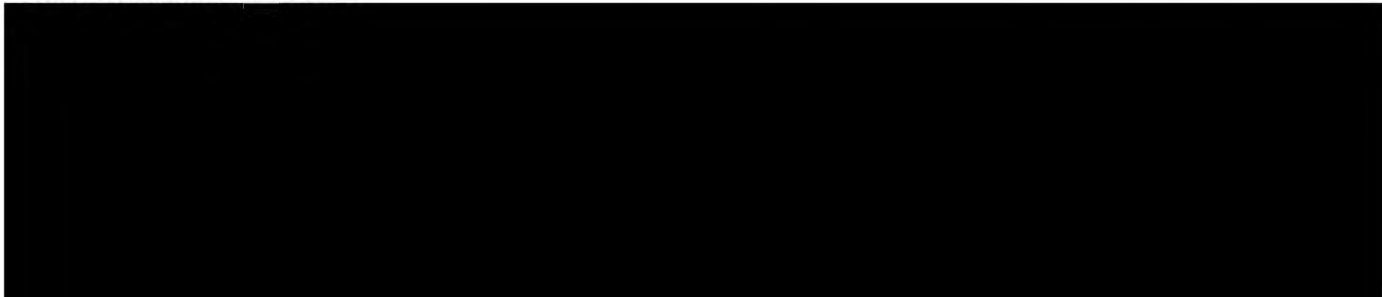
Consultant(s)	Brief description of the Project	Start Date	End Date	Construction Value
Zutari	The capacity extension of Zandvliet WWTW from 72 Ml/d upgraded to 90 Ml/d. The project also included the refurbishment of the existing MBR and conventional activated sludge treatment lanes. To date the construction of the Black-Mac screening station and the Macassar pumpstation as well as the Black-Mac sewer outfall have been completed (construction value of R400 million). Phase 1: New 150 Ml/d inlet works, 4No PSTs, sludge dewatering and handling facilities, 120 Ml/d MBR lift pumpstation and demolition works (construction value of R 600 million).	2014	Ongoing	R 1.4 billion

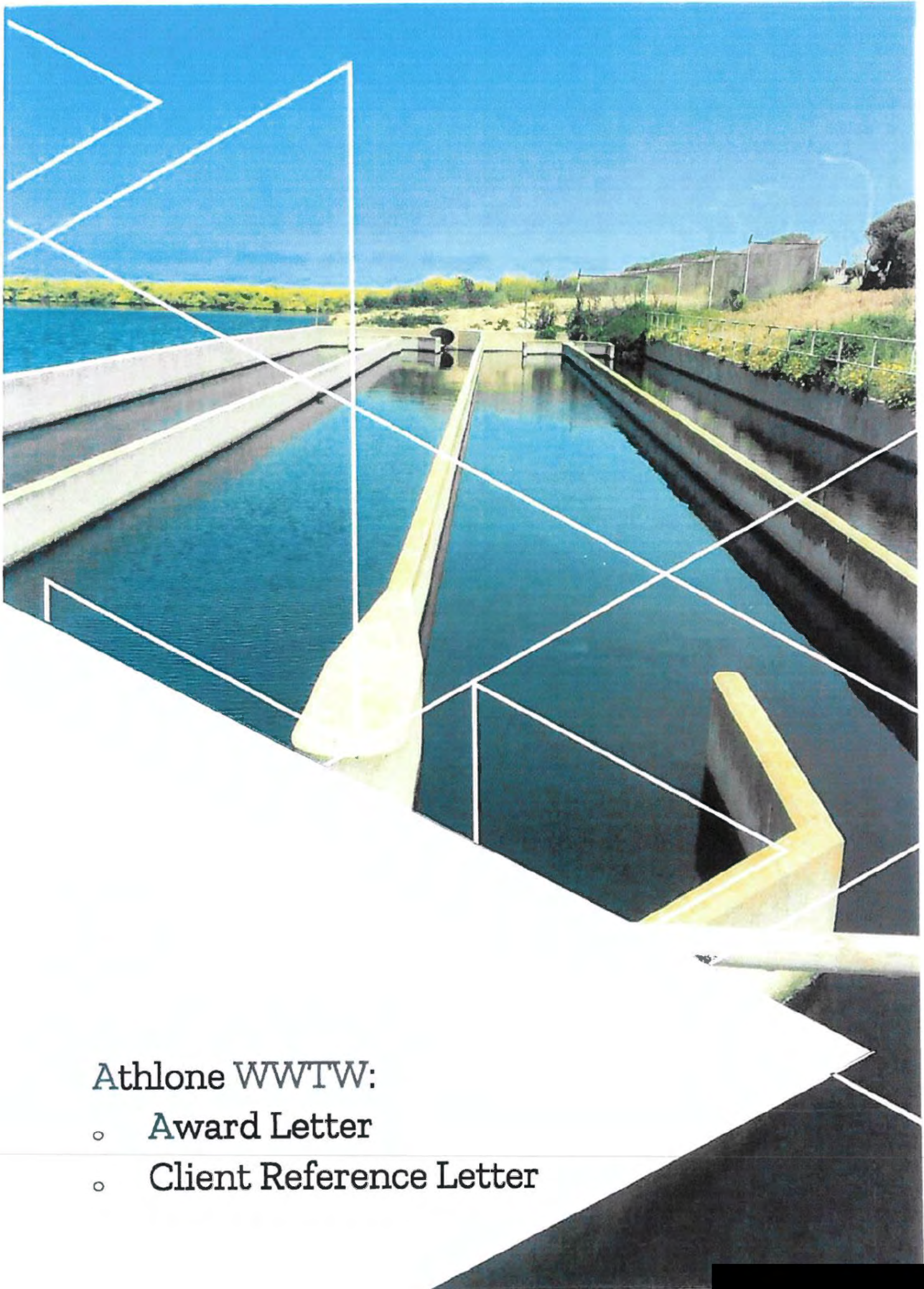
	Phase 2: New 27 Ml/d MBR Plant and Infrastructure refurbishment for the existing CAS Plant (54 Ml/d) and existing MBR Plant (18 Ml/d) (construction value of R 800 million).			
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We confirm that the project is ongoing.



PRINCIPAL ENGINEER: WASTEWATER





Athlone WWTW:

- Award Letter
- Client Reference Letter

CAPE METROPOLITAN COUNCIL
KAAPSE METROPOLITAANSE RAAD
IBHUNGA LOLAWULO LWENQILA YEKAPA



(For the attention of [REDACTED])

Dear Sir

ATHLONE WASTEWATER TREATMENT WORKS: PERFORMANCE ASSESSMENT OF EXISTING FACILITIES, PLANNING AND DESIGN OF ESSENTIAL UPGRADING REQUIREMENTS, EXTENSIONS AND CONTRACT ADMINISTRATION: APPOINTMENT OF CONSULTANTS

I have pleasure in confirming that Council at its meeting held on 1999-09-29 authorised the appointment of the joint venture consortium of consulting engineers Ninham Shand (South) (Pty) Ltd, Africon Engineering International (Pty) Ltd and [REDACTED] for the above project with Ninham Shand (South) (Pty) Ltd as the main consultant.

The terms of reference of this project relate to the planning, design and construction of the various upgradings of equipment and processes on the Athlone Wastewater Treatment Works inclusive of all associated investigations and study reviews applicable to the project requirements. In addition, a capacity extension of the Works is required appropriate to the developmental requirements of the catchment and any plans for cross catchment deviation of flows.

A comprehensive rationalisation of the Works is required together with the implementation of odour control systems, sludge management and automation of operational control.

In general, the nature of the improvements are as follows:-

- ❖ Upgrading of existing equipment where necessary;
- ❖ Upgrading of existing treatment processes where necessary;
- ❖ Capacity extension;
- ❖ Land use plan and boundary review;
- ❖ Odour control;

- ❖ Automation and operational management systems;
- ❖ Demolishing of redundant structures and footprint rationalisation;
- ❖ Establishment of a sludge management system;
- ❖ Extensions to maturation ponds;
- ❖ Nitrogen and phosphorous removal facilities;
- ❖ Landscape / surround / housekeeping improvements for minimum maintenance.

The above list should not be regarded as total or limiting and will be subject to review and adjustment as directed. All improvements are subject to the appropriate environmental authorisation and interfacing with interested and affected parties

All work is to be designed to ensure continued functioning of the treatment plant under all constructional activities with minimum potential for nuisance to operational staff and the public, during the undertaking of these improvements. Close liaison is essential with the Head of Planning and Design, Wastewater who will act as project controller, all designs and intentions being subject to his approval.

Due to the several years time span of this project your close attention will be necessary to the annual financial limitations applicable, these amounts being reviewed each year at the time of Capital Estimates approval. Financial and technical planning is therefore an important aspect of the project and must receive ongoing consideration.

Close liaison is required with the CMC's mechanical, electrical and environmental specialists to ensure that appropriate technology and preferred systems are utilised. It is further intended that informative meetings will be held with associated role players from these specialist units on a three monthly basis. On the planning and technical control issues, monthly meetings are required under the chairmanship of the Head of Planning and Design, Wastewater.

Consultant's fees will be in accordance with the latest applicable Gazetted Tariff of Fees while the CMC's fee parameters for travelling, disbursement and site staff rates will apply. Should you utilise the services of the CMC's Quantity Survey Section for civil works measurement and scheduling or should you make use of the CMC's contract specifications or other documentation, a negotiated refund under such circumstances will apply to the consultants fees.

I trust that you are in a position to commence the project immediately and look forward to a mutually satisfactory association.

Kindly confirm your acceptance of this brief.

Yours faithfully



EXECUTIVE DIRECTOR: WATER AND WASTE



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

WATER AND SANITATION DEPARTMENT
WATER AND WASTE DIRECTORATE

29 May 2019

E-mail:

Attention.

Dear Sir

CLIENT REFERENCE LETTER:

We hereby confirm that your firm (individually or in association with another) was legally contracted for the following project: **Upgrade and Extension of the Athlone Wastewater Treatment Works.**

Consultant(s)	Brief description of the Project	Start Date	End Date	Construction Value
Athlone Wastewater Consultants (Joint Venture between Aurecon and DHV Royal Haskoning)	Planning strategy, phased implementation, as well as design and contract management for the implementation phases for the upgrading and refurbishment of Athlone Wastewater Treatment Works	1999	2014	R 450 million

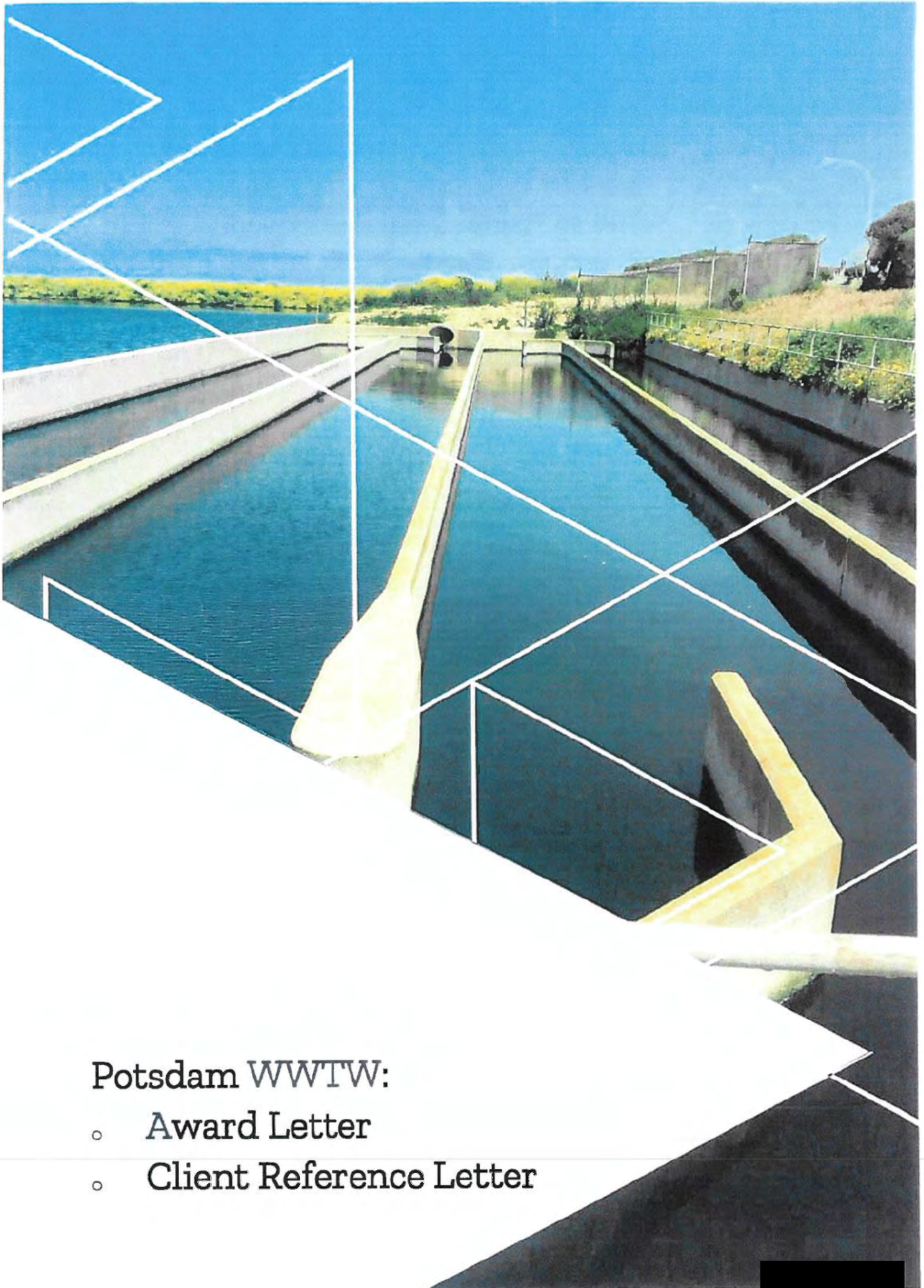
We confirm that the project was successfully completed, October 2009.

Yours faithfully

PROJECT MANAGER: WASTEWATER BRANCH

WATER & SANITATION HEAD OFFICE

Making progress possible. Together



Potsdam WWTW:

- Award Letter
- Client Reference Letter

[REDACTED]

11 November 2003

[REDACTED] Acting Head: Wastewater Department: Water Services

Attention: [REDACTED]

[REDACTED]

Dear Sir

**POTSDAM WASTEWATER TREATMENT WORKS : UPGRADING AND EXTENSIONS :
APPOINTMENT OF CONSULTANT**

The Mayoral Committee at its meeting on 6 November 2003 resolved to appoint consulting engineers ASCH Professional Services Ltd, Ninham Shand (Pty) Ltd and Africon Engineering International (Pty) Ltd operating as a joint venture partnership under the name of ANA Engineering Consultants for the detailed design, contract administration and associated responsibilities associated with the upgrading and extensions to Potsdam Wastewater Treatment Works.

The Terms of Reference for this appointment is attached and I would be grateful if you could confirm your acceptance of the appointment as soon as possible to enable the project to proceed. Thereafter an inaugural meeting will be held on 21 November at 11:00, 38 Wale Street with the relevant role players to structure the way forward and programme the necessary actions.

I look forward to a meaningful partnership in addressing the requirements of this challenging project.

Yours faithfully

[REDACTED]

DIRECTOR: WATER SERVICES



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

WATER AND SANITATION DEPARTMENT
WATER AND WASTE DIRECTORATE

29 May 2019

E-mail: [REDACTED]

Dear Sir

CLIENT REFERENCE LETTER:

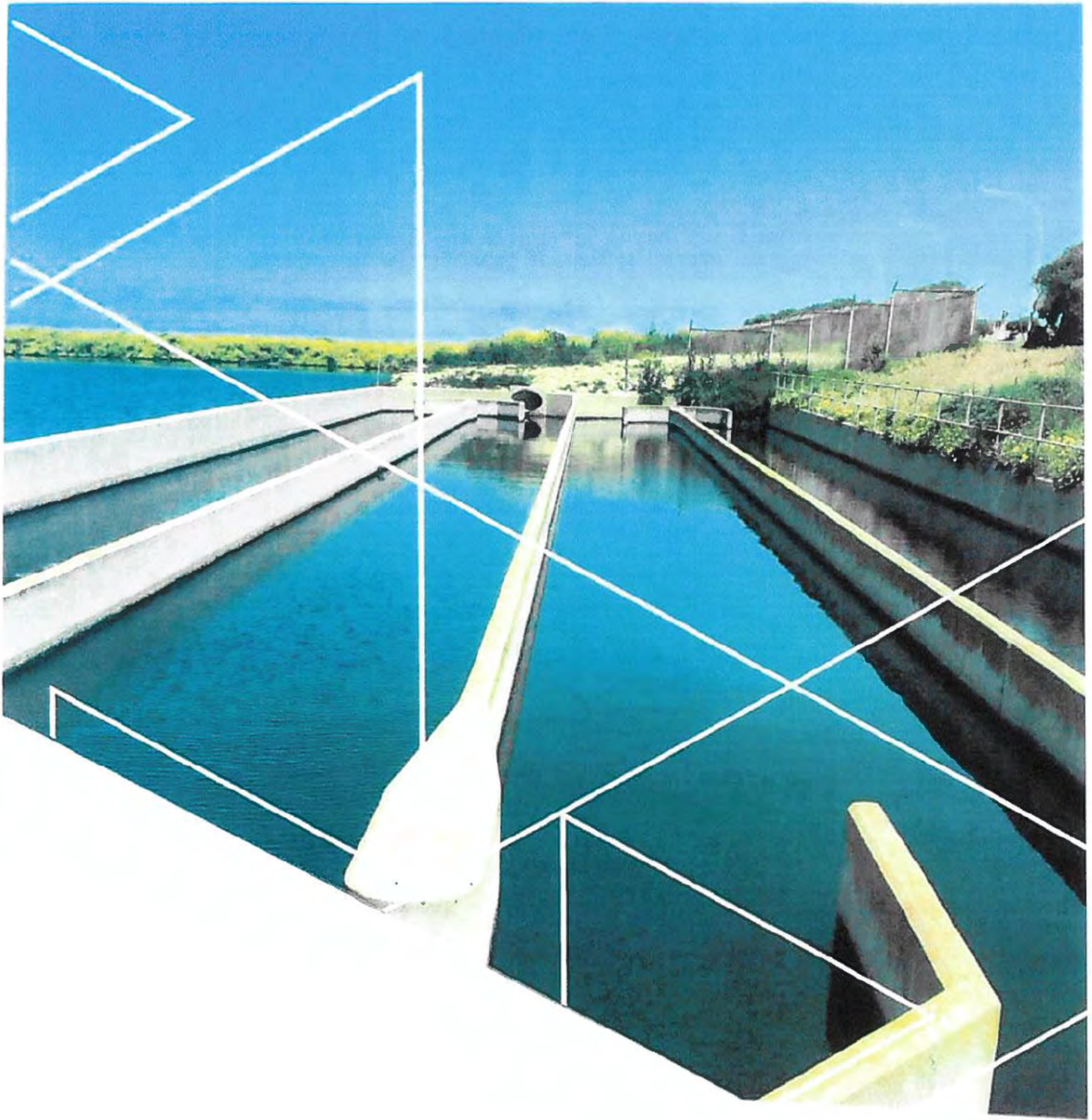
We hereby confirm that your firm (individually or in association with another) was legally contracted for the following project: **Upgrade and Extension of Potsdam Wastewater Treatments Works**

Consultant(s)	Brief description of the Project	Start Date	End Date	Construction Value
ANA Consultants (Joint Venture between Aurecon and ASCH)	Planning strategy, phased implementation, as well as design and contract management for the implementation phases for the upgrading and refurbishment of Potsdam Wastewater Treatment Works	2003	2012	R 280 million

We confirm that the project was successfully completed, May 2012.

Yours faithfully,

[REDACTED]
PROJECT MANAGER, WASTEWATER BRANCH



Paarl WWTW Upgrade:

- Award Letter
- Appointment Letters of Contractors

DEPARTMENT : CIVIL ENGINEERING SERVICES
TELEPHONE : [REDACTED]

REFERENCE : CONTRACT CES 17/2014 – AURECON (192)
ENQUIRIES : [REDACTED]

08 February 2016

[REDACTED]

Attention: Mr. [REDACTED]

Dear Sir,

CONTRACT CES 17/2014: APPOINTMENT FOR THE PROVISION OF PROFESSIONAL ENGINEERING SERVICES: PAARL WASTE WATER TREATMENT WORKS

1. AURECON (Pty) Ltd was appointed by Drakenstein Municipality's Bid Adjudication Committee on 20 October 2015 as one of 31 Consulting Engineering firms to which consulting engineering projects may be awarded over the next three (3) year period.
2. We herewith wish to assign the following project to you for the PROVISION OF PROFESSIONAL ENGINEERING SERVICES: PAARL WASTE WATER TREATMENT WORKS.

The overall objective of the project is to investigate how to simplify and automate the existing Paarl WWTW in terms of operation and maintenance, and improve energy efficiency. The aim of the proposed investigation is to relieve any bottlenecks and refurbish any infrastructure and equipment that have reached their life expectancy.

The scope of work proposed for the Paarl WWTW will be divided into the following three phases, but not limited to:

- 1) Centralised Sludge Treatment Facility: This will cater for sludge from the Paarl, Wellington and future Paarl South WWTW
 - 2) Emergency Works: Refurbishment and modifications to the existing Paarl WWTW which are considered critical to improve operation and relieve any bottlenecks in the process
 - 3) Future Upgrades: Refurbishment and Modifications to the existing Paarl WWTW which can be implemented at a later stage subject to budget availability
- [REDACTED]

A more detailed description of the scope of works for the three phases shall include, but is not limited to:

A) Investigation into Centralised Sludge Treatment Facilities (Subject to budget availability):

- Refurbishment of existing primary settling tanks (PSTs) and investigate the provision of additional PSTs to accommodate the gross flow received at Paarl WWTW
- Upgrade the sludge storage, thickening and anaerobic digestion facilities
- Condition analysis of infrastructure for energy recovery if proven feasible
- Modify and upgrade the existing dewatering facilities
- Struvite recovery facility if required
- Investigate sludge disposal options and recommend a feasible plan
- Operation, Maintenance and Training by Principle Contractor
- Other potential works to ensure the facility is fit for purposes.

B) Emergency Works: Investigation into the Refurbishment and Modifications to the existing Paarl WWTW which are considered critical:

- Refurbishment of the domestic and industrial sewage pump stations, domestic inlet works and industrial inlet works
- Refurbishment of the existing Bio-filters
- Refurbishment of the biological reactor aeration
- Refurbishment of the secondary settling tanks (SSTs)
- Upgrade of instrumentation, control and Scada system to improve control, plant energy efficiency, monitoring and emergency response
- Investigate and remedy health and safety concerns
- Other potential works to ensure the facility is fit for purposes.

C) Future Upgrades: Investigate the Refurbishment and Modifications to the existing Paarl WWTW which can be implemented at a later stage subject to budget availability:

- Investigate potential reduction of process units by combining domestic and industrial streams
- Refurbishment of existing buildings and paving
- Upgrading of road surfaces, storm water and fencing.

4. Your appointment will be on a time and cost and percentage of contract value basis, plus remuneration for site supervision and disbursements.
5. All conditions as stipulated in Contract CES 17/2014 will apply to this appointment and Aurecon's professional fees and disbursements will be in accordance with their tender on this contract. Kindly note that this appointment and project/s emanating from this appointment is subject to the availability of funding.
6. You are herewith requested to provide us with :
 - A programme of deliverables before or on **Friday, 26th of February 2015**.
7. Please confirm acceptance of this appointment and the conditions applicable to it in writing within seven (7) days after receipt of this letter.
8. Mr. [REDACTED] can be contacted for more information and further [REDACTED]

DEPUTY EXECUTIVE MANAGER: CIVIL ENGINEERING SERVICES

I:\BROWN\KORRESPONDENCE\External\Appointment letter CONTRACT CES 17_2014_ APPOINTMENT FOR THE PROVISION OF PROFESSIONAL ENGINEERING SERVICES_PAARL WWTW.doc

Copy: **1. Senior Engineer: Waste Water Services**

Part C5: Returnable Documents
Documents
Reference No. 266C/2024/25

List of Returnable

Enquiries.
Contact number:
Reference:
Date:

Attention:

Dear Sir

CONTRACT CES 07/2018: APPOINTMENT AS PROJECT MANAGER: INVESTIGATION INTO CENTRALIZED SLUDGE TREATMENT FACILITY WITHIN DRAKENSTEIN MUNICIPALITY

1. The Appeals Authority, as per letter dated 18 February 2019 have resolved that Aurecon South Africa (Pty) Ltd, be appointed as one of the Professional Service Providers in the Category 4: Wastewater Services: Bulk Services to which consulting engineering projects may be awarded during the validity of Contract CES 7/2018.
2. Your appointment is in terms of Contract CES 07/2018 as Consulting Engineers for the PROJECT MANAGEMENT: INVESTIGATION INTO A CENTRALIZED SLUDGE TREATMENT FACILITY WITHIN DRAKENSTEIN MUNICIPALITY
3. The scope of your appointment includes the following:
 - 3.1. A feasibility study on investigation into a centralized sludge treatment facility within Drakenstein Municipality
 - 3.2 The investigation is to include the following:
 - 3.2.1 Initiation and project management: Meetings with client, meeting with project team, briefing risk analysis, kick-off and completion of project programme. Project management and coordination/progress meetings
 - 3.2.2 Legal Component:
Obtain a legal opinion from Environmental Consultant / Legal Practitioner regarding Water Use License requirements and sludge discharge standards.
 - 3.2.3 Research & Best Practice Component:
Research of various treatment technologies and processes available and determine best practices in the industry. Research case studies and visit case studies to ascertain the suitability of processes and technologies. Determine the most appropriate and sustainable solutions to be implemented in Drakenstein Municipality. Provide a short report on best practices and lessons learned.
 - 3.2.4 Information Gathering & Collation Component:
Determine the current Status Quo of the extent of the existing sludge handling infrastructure at the Paarl WWTW and Wellington WWTW. The sludge

characteristics that influence the design must be determined and the current quantities of sludge established. The future sludge quantities to be estimated.

3.2.5 Concept & Viability Component:

Develop design options and undertake an options analysis to determine the preferred option. Each option will be evaluated technically and financially. The design of the preferred option to be developed further, in more detail, to confirm the viability of Centralized Sludge Treatment within Drakenstein Municipality and ascertain that the most effective process be recommended which must include the possibility of generation of electricity in a sustainable manner. In addition, different procurement strategies must be investigated, including a conventional tender process or a public private partnership (PPP).

- 3.3 Three (3) hard copies of the final report to be submitted to the Civil Engineering Services Department, as well as an electronic copy.
- 3.4 The investigation must be completed before 31 March 2020 whereupon the subsequent phases will continue once funding is confirmed.
- 3.5 Provide a power-point presentation (electronic format) relating to the final project preparation analysis to be used by Drakenstein Municipality.
4. Your appointment will be on a Time & Cost basis.
5. All conditions as stipulated in Contract CES 07/2018 will apply to this appointment and Aurecon South Africa professional fees and disbursements will be in accordance with their tender on this contract.
6. You are herewith requested to attend a meeting with undersigned, subsequent to which you are to provide us with :
 - A cost estimation of the project, inclusive of professional fees. Your attention is drawn to the New Construction Regulations (2014) and you are requested to include in your fees any additional costs forthcoming from it.
 - A programme of deliverables.
7. Please confirm acceptance of this appointment and the conditions applicable to it in writing within 7 days after receipt of this letter.
8. Mr. RM Brown (021-807 4725) can be contacted for more information and further discussions.

ACTING EXECUTIVE DIRECTOR: ENGINEERING SERVICES

MR. RM BROWN, CONSULTANT/AURECON, SLUDGE INVESTIGATION/ APPOINTMENT/ APPOINTMENT AS PROJECT MANAGER - INVESTIGATION INTO CENTRALIZED SLUDGE TREATMENT FACILITY WITHIN DM - 17072019 DDOX

Copies: 1.

2.

Part C5: Returnable Documents
Documents
Reference No. 266C/2024/25

List of Returnable

Our reference: 112553/COR/CIV/001/NG/sr

11 September 2023

ATTENTION:

E-MAIL

CONTRACT NO. CES 01/2023: PAARL WASTEWATER TREATMENT WORKS – LIQUID STREAM CIVIL WORKS:

APPOINTMENT AND ASSOCIATED CONTRACTUAL REQUIREMENTS

Your appointment for the above Contract refers. Drakenstein Municipality has agreed to accept the offer from Stefanutti Stocks (Pty) Ltd dated 24 April 2023 inclusive of all subsequent clarification correspondence, subject to the terms and conditions embodied therein, for Contract No. CES 01/2023: Paarl Wastewater Treatment Works – Liquid Stream Civil Works.

The accepted Contract Sum is R 241,221,361.13 (excl. VAT) as summarised in the table below:

STEFANUTTI STOCKS	Rand (Excl. VAT)
SUMMARY OF BILLS	R 198,837,601.03
ADD CONTINGENCIES	R 19,883,760.10
SUB-TOTAL	R 218,721,361.13
PLUS ALLOWANCE ESCALATION	R 22,500,000.00
TOTAL CONTRACT SUM (Excl. VAT)	R 241,221,361.13

A signed copy of Part C1.1 – Form of Offer and Acceptance will be issued to your company by 13 September 2023. One fully complete copy of the Contract Document will be issued to Stefanutti Stocks during the course of the next two weeks, once all the contractual requirements stipulated below have been met.

Further, you are also requested to submit the following documentation in accordance with the periods stated below:

- In terms of Sub-Clause 8.6 of the General Conditions of Contract, and as amended in the Schedule of Contract Specific Data, copies of insurance policies in respect of the Works, Special Risks and Liability Insurance and evidence of payment of current premiums, which shall be no longer than 14 days after the Commencement Date.

- b) In terms of Sub-Clause 8.6.1.5 of the General Conditions of Contract, as amended in the Particular Conditions of Contract, the required proof of payment/or letter with respect to the Compensation for Occupational Injuries and Diseases Act (Workmen's Compensation Act), which shall be no longer than 14 days after the Commencement Date.
- c) In terms of Sub-Clause 6.2.1 of the General Conditions of Contract, as amended in the Schedule of Contract Specific Data, a Performance Guarantee from an approved financial institution in the sum of R 27,740,456.53 (i.e., 10% of the accepted contract amount including VAT). The Performance Guarantee must be valid until the issue of the Certificate of Completion and shall be in accordance with the form under Annexure A of Section C1.3 of the Contract documents.
- d) In terms of Sub-Clause 5.3.1 of the Schedule of Contract Specific Data (and the Construction Regulations, 2014 of the Occupational Health and Safety Act), a health and safety plan will be submitted to the Client's Health and Safety Agent within 7 days of commencement date for approval. The Client's Health and Safety Agent is Safe Working Practice represented by Mr [REDACTED]
- e) In terms of Sub-Clause 6.8.2 of the Schedule of Contract Specific Data and the Contract Price Adjustment Schedule, the base month will be March 2023 which is a month before tender closure in accordance with the Conditions of Contract.
- f) Kindly submit, in terms of Sub-Clause 5.6 of the General Conditions of Contract and Sub-Clause 5.3.1 of the Schedule of Contract Specific Data, your proposed programme for the construction of the works as well as a forecasted cash-flow for the Works. This programme and cash-flow shall show the order of procedure, your arrangements and the estimated value of work done each month. The approval of your programme shall be subject to the alignment of the programme for Contract No. CES 04/2023 (Paarl Wastewater Treatment Works – Liquid Stream: Mechanical and Electrical Installation).
- g) Kindly submit the names and CVs of the following key staff (Sub-Clause 4.11.3 as amended in the Particular Conditions) and sub-contractors:
 - Contract Manager/Director, Construction Manager (Sub-Clause 4.12 of the General Conditions of Contract), Quantity Surveyor, Environmental Officer and Health and Safety Officer (in terms of C3.5.8 of the Scope of Work, and the Particular Specifications).
 - Details and Key Personal for all Sub-contractors, as well as the estimated cost of work to be allocated to Sub-contractors.

The "Commencement Date" as per Clause 1.1.1.5 of the Conditions of Contract will be amended as follows:

- The Commencement Date is confirmed as 13 September 2023, however subject to your company receiving a signed copy of Part C1.1 – Form of Offer and Acceptance.
- Access to site in accordance with Clause 5.4.1 of the Conditions of Contract will be subject to the following, unless otherwise instructed by the Engineer:
 - Approval and issue of the construction permit which is anticipated to be issued during the week ending 22 September 2023
 - Submission and approval of the Contractor's documents as stipulated in items (a) to (g) above.

Contract

Part C5: Returnable Documents
Reference No. 266C/2024/25

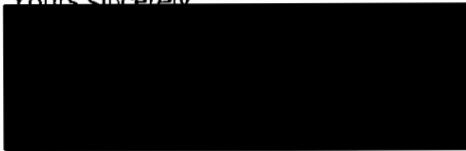
List of Returnable



We trust that you find the above in order. Please do not hesitate to contact us should you have any queries or require any further information on the above matter.

We trust this Contract will prove a satisfactory one for you and look forward to a successful Contract for all parties involved.

Yours sincerely,



pp ZUTARI

cc.

Mr.

Mr.

Mr.

Mr.

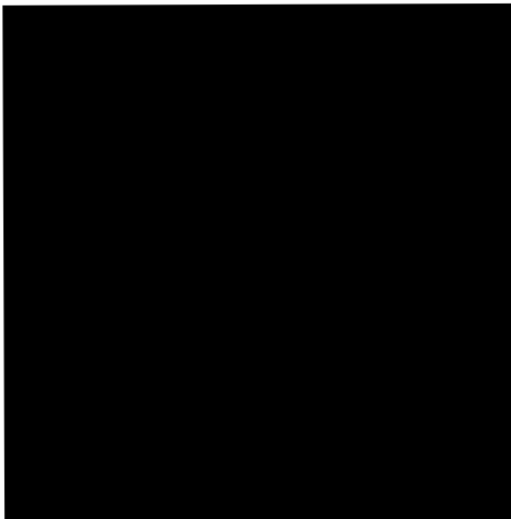
Mr.

Mr.

Mr.

Mr.

Mr.



Our Reference: 112553/COR/M&E/001/NH/ah

8 September 2023

ATTENTION

**CONTRACT NO. CES 04/2023: PAARL WASTEWATER TREATMENT WORKS – LIQUID
STREAM: MECHANICAL AND ELECTRICAL INSTALLATION: LETTER OF APPOINTMENT**

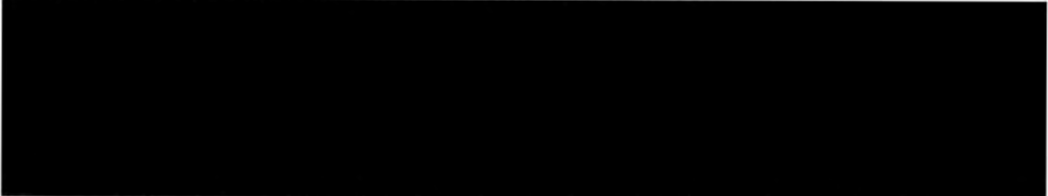
Your appointment for the above Contract refers. Drakenstein Municipality has agreed to accept the offer from Inenzo Water (Pty) Ltd dated 26 April 2023 inclusive of all subsequent clarification correspondence, subject to the terms and conditions embodied therein, for **Contract no. CES 04/2023: Paarl Wastewater Treatment Works – Liquid Stream: Mechanical and Electrical Installation.**

The accepted Tender Sum following the price negotiation between Inenzo Water (Pty) Ltd and Drakenstein Municipality is **R 116,843,874.66** (excl. VAT) as summarised in the table below.

BILL	DESCRIPTION	INENZO WATER (PTY) LTD
Bill no M1 to M16	Summary of Mechanical Works	R 76,038,685.35
Bill no E1 to E12	Summary of Electrical and Electronic Works	R 17,001,200.71
	TOTAL OF BILLS	R 93,039,886.06
	Allowances for Contingencies (10%)	R 9,303,988.60
	SUB-TOTAL	R 102,343,874.66
	Provision for Escalation	R 7,500,000
	Provision for Foreign Exchange Adjustment	R 7,000,000
CONTRACT SUM (Excl. VAT)		R 116,843.874.66
15% VAT		R 17,526,581.20
CONTRACT SUM (Incl. VAT)		R 134,370,455.86

A copy of Part C1.1 – Form of Offer and Acceptance will be issued to your company once signed. One fully complete copy of the Contract Document will be issued to Inenzo during the course of the next two weeks, once all the contractual requirements stipulated below have been met.

Further, you are also requested to submit the following documentation in accordance with the periods stated below:

- a) In terms of Sub-Clauses 18.1, 18.2 and 18.3 of the General Conditions of Contract, and as amended in the Particular Conditions of Contract, copies of insurance policies in respect of the Works, Special Risks and Liability Insurance and evidence of payment of current premiums, which shall be no longer than 14 days after the Commencement Date.
- b) In terms of Sub-Clause 18.4 of the General Conditions of Contract, as amended in the Particular Conditions of Contract, the required proof of payment/or letter with respect to the Compensation for Occupational Injuries and Diseases Act (Workmen's Compensation Act), which shall be no longer than 14 days after the Commencement Date.
- c) In terms of Sub-Clause 4.2 of the General Conditions of Contract, as amended in the Particular Conditions of Contract, a Performance Security from an approved financial institution in the sum of R 13,437,045.59 (i.e. 10% of the accepted contract amount including VAT). The Performance Security must be valid until the issue of the Performance Certificate and shall be in accordance with the form under Annexure A of Section C1.3 of the Contract documents.
- d) 
- e) In terms of Sub-Clause 13.8 of the Particular Conditions of Contract and the Contract Price Adjustment Schedule, the base month will be April 2023 which is seven days prior to tender closure in accordance with the Conditions of Contract.
- f) Kindly submit, in terms of Sub-Clause 8.3 of the General Conditions of Contract, your proposed programme for the construction of the works as well as a forecasted cash-flow for the Works. This programme and cash-flow shall show the order of procedure, your arrangements and estimated value of work done each month. The programme shall be in accordance with the contract duration, which shall be submitted no longer than 14 days after the Commencement Date. It must be noted that the programme submitted shall further be discussed/negotiated with the appointed Civil Contractor (CES 01/2023) and once all parties are in agreement with the sequencing of events and access dates, which includes the Engineer's approval, then only shall the programme be considered final.
- g) Kindly submit the name and CVs of the following:

Proposed Contractor's Manager/Director

Proposed Contractor's Representative in terms of Sub-Clause 4.3 of the General Conditions of Contract.

Health and Safety Specialist in terms of C3.5.8 of the Scope of Work, and the Particular Specifications.

Details and Key Personal for the Sub-contractors.

Your appointment for this Contract is conditional subject to the Client's acceptance of the following documentation:

- Schedule of Deviations. This is to be signed by the Employer and yourself.
- Project programme.

Cont

We trust this Contract will prove a satisfactory one for you and look forward to a successful Contract for all parties involved. Please do not hesitate to contact us if you have any queries.

Yours sincerely,

[Redacted Signature]

pp **ZUTARI**

Copies:

Mr.
Mr.
Mr.
Mr.
Mr.
Mr.
Mr.
Mr.

[Redacted List of Names]

[Redacted Footer]

Our Reference: 112553/COR/Package 2/001/NG/mw

E-MAIL

6 June 2025

ATTENTION:

**CONTRACT NO. CES 11/2024: PAARL WASTEWATER TREATMENT WORKS - SLUDGE
STREAM: CIVIL WORKS, MECHANICAL AND ELECTRICAL INSTALLATION:**

APPOINTMENT AND ASSOCIATED CONTRACTUAL REQUIREMENTS

Your appointment for the above Contract refers.

Drakenstein Municipality has evaluated the tender offer for "Contract No. Contract No. CES 11/2024: Paarl Wastewater Treatment Works – Sludge Stream: Civil Works, Mechanical and Electrical Installation" submitted by Stefanutti Stocks (Pty) Ltd dated 21 November 2024. Stefanutti Stocks submitted an offer of R 1,384,657,599.60 (incl. VAT), this offer was inclusive of all subsequent clarification correspondence, subject to the terms and conditions embodied therein. Due to budgetary related constraints, the scope of works on the above tender was reduced, placing certain scope on hold. Contract No. CES 11/2024 will therefore be phased with Stefanutti Stocks (Pty) Ltd being appointed for Phase A which amounts to R 850,538,768.48 (excl. VAT), and is inclusive of all subsequent negotiations between Drakenstein Municipality and Stefanutti Stocks (Pty) Ltd on the scope of works which makes up Phase A.

The accepted Contract Sum for Phase A is R 850,538,768.48 (excl. VAT) as summarised in the table below:

BILL	DESCRIPTION	AMOUNT
P&G	Summary of Preliminary and General	R 127,893,622.87
C1 to C27	Summary of Civil Bill of Quantities	R 162,089,243.86
M1 to M28	Summary of Mechanical Bill of Quantities	R 239,432,424.48
E1 to E17	Summary of Electrical Bill of Quantities	R 195,085,888.77
Net Total of Works		R 724,501,179.98
ADD CONTINGENCIES: The Tenderer shall add 7.5% of the total of Schedule of Quantities for Contingencies. The sum provided here for contingencies is under the sole control of the Engineer and may be deducted in whole or in part.		R 54,337,588.50

Sub-Total	R	778,838,768.48
Plus Allowance for Escalation	R	55,000,000.00
Plus Allowance Foreign Exchange Adjustment	R	16,700,000.00
Contract Sum (Excl. VAT)	R	850,538,768.48
Plus Allowance for 15% VAT	R	127,580,815.27
Contract Sum (Incl. VAT)	R	978,119,583.75

A signed copy of Part C1.1 – Form of Offer and Acceptance will be issued to your company within the next week. One fully complete copy of the Contract Document will be issued to your company during the course of the next two weeks, once all the contractual requirements stipulated below have been met.

Further, you are also requested to submit the following documentation in accordance with the periods stated below:

- a) In terms of Sub-Clauses 18.1, 18.2 and 18.3 of the General Conditions of Contract, and as amended in the Particular Conditions of Contract, copies of insurance policies in respect of the Works, Special Risks and Liability Insurance and evidence of payment of current premiums, which shall be no longer than 14 days after the Commencement Date.
- b) In terms of Sub-Clause 18.4 of the General Conditions of Contract, as amended in the Particular Conditions of Contract, the required proof of payment/or letter of good standing with respect to the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 (or the Workmen's Compensation Act), which shall be no longer than 14 days after the Commencement Date.
- c) In terms of Sub-Clause 4.2 of the General Conditions of Contract, as amended in the Particular Conditions of Contract, a Performance Security from an approved financial institution in the sum of **R 97,811,958.38** (i.e. 10% of the accepted contract amount including VAT). The Performance Security must be valid until the issue of the Performance Certificate and shall be in accordance with the form under Annexure A of Section C1.3 of the Contract documents.
- d) In terms of Sub-Clause 4.8 of the Particular Conditions of Contract (and the Construction Regulations, 2014 of the Occupational Health and Safety Act), a Health and Safety Plan to the Client's Health and Safety Agent for approval, namely Safe Working Practice represented by [REDACTED] Email: [REDACTED] which shall be submitted no longer than 14 days after the Commencement Date.
- e) In terms of Sub-Clause 13.8 of the Particular Conditions of Contract and the Contract Price Adjustment Schedule, the base date is 14 November 2024 and the base month is October 2024 which is seven days prior to tender closure in accordance with the Conditions of Contract.
- f) Kindly submit, in terms of Sub-Clause 8.3 of the General Conditions of Contract, your initial programme for the Works as well as a forecasted cash-flow for the Works. This programme and cash-flow shall show the order of procedure, your arrangements and estimated value of work done each month. The programme shall be in accordance with the contract duration, which shall be submitted no longer than 14 days after the Commencement Date. Approval of the programme shall be contingent upon discussions with the appointed Civil Contractor (CES 01/2023) and the appointed Mechanical and Electrical Contractor (CES 04/2023), specifically in relation to site access to parts of the site and any construction-related restrictions.
- g) The names and CVs of the following key staff and sub-contractors:
 - Proposed Contract Manager/Director
 - Proposed Contractor's Representative/Project Manager
 - Site Agent (Mechanical and Electrical)



Site Agent (Civil)

Mechanical Design Engineer

Electrical Design Engineer

Quantity Surveyor

Environmental Officer

Health and Safety Officer.

Details and Key Personnel for all sub-contractors, as well as the estimated value of work to be allocated to sub-contractors.

The "Commencement Date" as per Clause 1.1.3 of the Conditions of Contract will be as follows:

- The Commencement Date shall be as per the Contract (Clause 1.1.3 of the Conditions of Contract), specifically once your company receives a fully completed and signed copy of Part C1.1 – Form of Offer and Acceptance.
- Access to site in accordance with Clause 2.1 of the Conditions of Contract will be subject to the following, unless otherwise instructed by the Engineer:
 - Approval and issue of the construction permit which is anticipated to be issued during the week ending 04 July 2025
 - Submission and approval of the documents as stipulated in items (a) to (g) above.
- Following receipt of the construction permit, a separate letter will follow to your company confirming the "Commencement Date" and the "Access to Site Date".

Your appointment for this Contract is conditional subject to the Client's acceptance of the following documentation:

- Schedule of Deviations. This is to be signed by the Employer and yourself.
- Project programme and cashflow.

We trust this Contract will prove a satisfactory one for you and look forward to a successful Contract for all parties involved. Please do not hesitate to contact us if you have any queries.

Yours sincerely

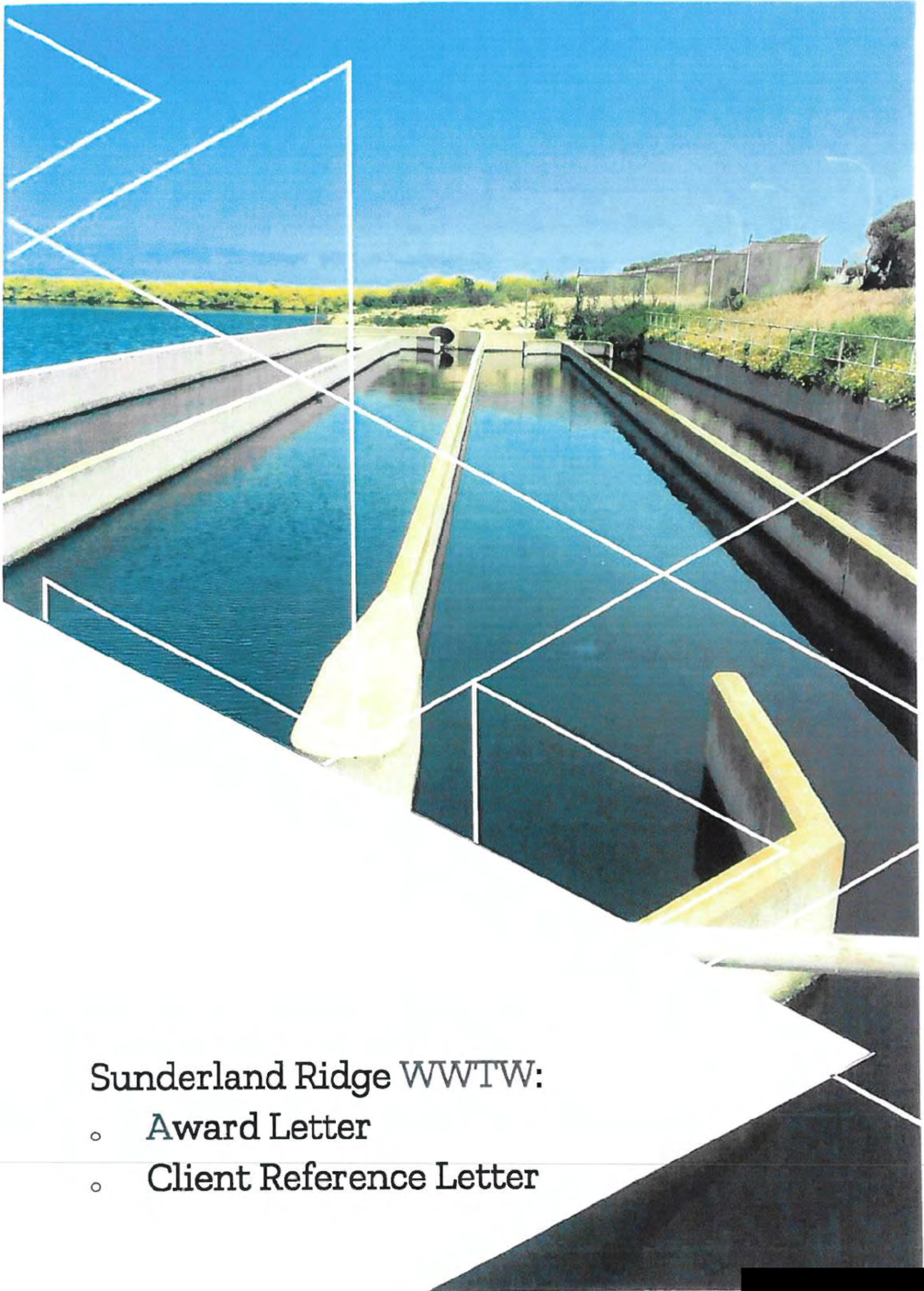


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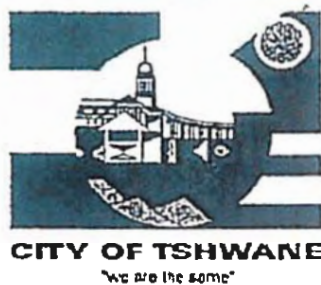
Mr.
Mr.
Mr.
Mr.
Mr.
Mr.





Sunderland Ridge WWTW:

- Award Letter
- Client Reference Letter



SERVICE DELIVERY

OFFICE OF THE GENERAL MANAGER: WATER AND SANITATION

Your ref:
Our ref: 9/3/8/6/1
Date: 23/10/2003

Enquiries:
Tel:
E-mail:

TSHWANE WASTEWATER CONSULTANTS JV

Sir

APPOINTMENT AS CONSULTANT: TSHWANE WASTEWATER CONSULTANTS, JV FOR THE EXTENSION OF THE SUNDERLAND RIDGE WASTE WATER TREATMENT WORKS (710364)

The Council of the City of Tshwane Metropolitan Municipality (CTMM), at its meeting held on 31 July 2003 under item 44, approved the appointment of your firms as consultants and project co-ordinators for project 710364: Extension of the Sunderland Ridge Waste Water Treatment Works (The project, as well as the item number must be quoted on all correspondence).

Should more than one appointment be made under the same project number, all correspondence must be submitted separately.

DETAILS OF APPOINTMENT

The project requires the rendering of professional services in accordance with resolutions 1 to 8 under item 44, adopted by Council at its meeting held on the 31 July 2003. The rendering of professional services will be in respect of the provisioning of a new treatment module, required for the extension of the plant. This will consist of a complete plant comprising an inlet works, primary treatment, flow equalization, biological nutrient removal, disinfection, sludge stabilization and dewatering.

The project is funded by the CTMM and must be implemented in terms of the policies, procedures and specifications adopted by the CTMM.

You are also advised that the conditions of appointment as set out in the Regulations of the Professional Engineers Act, Act No. 114 of 1990 and in Model Form 1 - All Disciplines of the South African Association of Consulting Engineers, are however, also applicable.

Furthermore, Messrs Tshwane Wastewater Consultants JV, are hereby appointed as the Agent of the CTMM in terms of the Construction Regulations, 2003 as promulgated on 18 July 2003 under Section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

PROJECT TITLE

The Extension of the Sunderland Ridge Waste Water Treatment Works

PROJECT DESCRIPTION

The provision of a new treatment module to cater for the growth in the Centurion area.

Specific details of the deliverables of the project entail:

- Process design for a new plant extension in co-operation with the CTMM , taking the following into account:
 - Existing flows and loads received at the works;
 - Peak wet weather flows;
 - Existing and new effluent standards as determined by DWAF;
 - Standardization of the technology within Tshwane
- Concept design and positioning of the new module on the site, interlinking with the existing infrastructure and requirements of the extension thereof.
- License application in terms of the National Water Act (Act 36 of 1998) to the Department of Water Affairs and Forestry for the discharge of waste or water containing waste.
- Obtaining authorization of an Environmental Impact Assessment from the Gauteng Department of Agriculture, Conservation, Environment and Land.
- Preliminary engineering design for the module including, geotechnical, process, civil, hydraulic, mechanical and electrical components.
- Preparation of a preliminary design report.
- Detail engineering design after approval of the preliminary design report.
- Preparation of contract documentation for the construction and installation of the new module.
- Submission of a tender evaluation report for approval
- Appointment of a contractor for the execution of the project
- Site supervision over the execution of the project
- Submission of progress reports and payment certificates
- Submission of as-built drawings and the project completion report
- Ensuring that the principal contractor and all the contractors to be appointed to execute work related to the abovementioned project comply with and adhere to the Occupational Health and Safety Act and Regulations relevant to construction work currently applicable as well as the compliance and adherence to any amendments to the Occupational Health and Safety Act and ALL relevant Regulations as amended from time to time.
- Ensuring that the principal contractor and all the contractors to be appointed for the execution of work related to the abovementioned project, each appoints a full time Safety Officer to ensure that all aspects of the Occupational Health and Safety Act and Regulations relevant to construction work are complied with and adhered to.

- Tshwane Wastewater Consultants JV shall be responsible for the following in order to ensure compliance with the provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and ALL relevant Regulations to the mentioned Act including the Construction Regulations, 2003 as promulgated on 18 July 2003 under Section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993):
 - a) to prepare a documented health and safety specification for the construction work;
 - b) to provide any principal contractor who is making a bid or appointed to perform construction work for the client with the health and safety specifications for the construction work;
 - c) to promptly provide the principal contractor / agent with any information which might affect the health and safety of any person at work carrying out construction work;
 - d) to ensure that the principal contractor and all the contractors to be appointed for the execution of work related to the abovementioned project perform a risk assessment by a competent person to analyse, evaluate and address as far as is reasonably practicable, ergonomic related hazards;
 - e) to take reasonable steps to ensure that each principal contractor's health and safety plan as determined in regulation 5(1) of the above mentioned Act and Regulations are implemented and maintained on the construction site: Provided that the steps taken, shall include periodic audits at intervals mutually agreed upon between the Agent of the CTMM and the principal contractor and contractors, but at least once every month;
 - f) to stop any contractor from executing construction work, which is not in accordance with, the principal contractor's health and safety plan contemplated in regulation 5(1) of the above mentioned Act and Regulations for the site or which poses a threat to the health and safety of persons;
 - g) to ensure that where changes are brought about to the design or construction, sufficient health and safety information and appropriate resources are made available to the principal contractor to execute the work safely;
 - h) to ensure that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to work commencing on site; and
 - i) to ensure that potential principal contractors submitting tenders, have made provision for the cost of health and safety measures during the construction process.
- Tshwane Wastewater Consultants JV shall discuss and negotiate with the principal contractor the contents of the health and safety plan contemplated in regulation 5(1) of the above mentioned Act and Regulations and thereafter finally approve the health and safety plan for implementation.
- Tshwane Wastewater Consultants JV shall ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor.

- Should the need arise Tshwane Wastewater Consultants JV shall not appoint any contractor to perform construction work, unless the Agent is reasonably satisfied that the contractor has the necessary competencies and resources to carry out the work safely.

A copy of the Construction Regulations, 2003 as promulgated on 18 July 2003 under Section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) as well as the Safety Inspection Register form are attached as Annexure B.

GUIDELINES AND DOCUMENTATION

The tender documents will be prepared using the relevant standard documents of the Water and Sanitation Division and using the "City Council of Pretoria's Standard Specifications for Municipal Civil Engineering Works". Any omissions of specifications or uncertainty must be verified using SABS 1200. All guidelines to be used shall be approved by the Water and Sanitation Division.

The following documentation is required:

- A work report / memorandum after the completion of the project.
- One set of master copies of all final project documentation.
- Monthly Progress Report
- Monthly Safety Report

All final reports must also be submitted in electronic format in MS Office, the version of which needs to be agreed on prior to the project commencing. The format of as-built drawings must be confirmed prior to submission.

INFORMATION

- All information obtained and paid for during the course of the project is required to be submitted to the CTMM in the pre-specified format.
- All data, information, plans, documents and other deliverables collated and/or produced as a result of this appointment are the rightful property of the CTMM and the CTMM shall also require the copyright thereof.
- The CTMM reserves the right, in its sole discretion, to make any of the above-mentioned data, information, plans, documents and other deliverables, available for use, processing or sharing with / by other organisations.
- The CTMM, in paying for any appointment of a consultant, also acquires the intellectual property associated with the project being / having been undertaken. This intellectual property shall not be utilised elsewhere without prior written consent of the CTMM.

- The source codes of all electronically developed programmes and systems are considered to be a part of the project and need to be delivered to the CTMM on completion of the project who will then assume full ownership of such source codes.
- In the event that source codes are changed / altered or modified for whatever reason, such changes shall be communicated and delivered to the CTMM on a mutually agreed basis.
- Any development of programmes, systems and other application need to be undertaken in such a manner so as to be compatible with the CTMM's systems at the time of development.

PROGRAMME AND BUDGET

A programme for each of the abovementioned deliverables should be compiled and submitted to the CTMM within 15 days from date of appointment.

It should be noted that the CTMM's budget year ends on 30 June 2004. It must further be noted that a portion of the expenditure incurred in accordance with and emanating from this appointment must be claimed before that date

The funds allocated for this project in the current financial year, amount to R 3 000 000.00 and the amount must not be exceeded without prior approval. The budget figure excludes VAT, but includes professional fees, contract supervision, escalation and contingencies.

Please refer to the Council Resolution, Item 44, adopted on 31 July 2003, attached as Annexure A.

A monthly progress report is to be submitted on the third last working day of each month. A proforma of the monthly progress report is attached as Annexure C.

A revised detail break down of all construction costs, construction programme and cash flow, must be provided to the Water and Sanitation Division as soon as possible.

REMUNERATION AND PROFESSIONAL FEES

Messrs Tshwane Wastewater Consultants JV will be remunerated in accordance with The City of Tshwane Metropolitan Municipality's Council Resolution, Item 44, adopted on 31 July 2003.

The appointment and remuneration will be in accordance with the Form of Agreement for Consulting Services, February 2002 as published by the South African Association of Consulting Engineers (SAACE). The Engineering Council of South Africa (ECSA) latest Scope of Service and Tariff of Fees promulgated in the Government Gazette will be used for the appointment for the basic fee.

The basic fee as set out in the ECSA tariff structure is based on percentages of Cost of the Works. The latest released tariff structures will be used.

The fees for Construction Supervision will be paid according to the Forms of Agreement for Consulting Services, February 2002 Appendix B1.

Reimbursable Costs will be paid according to the latest Forms of Agreement for Consulting Services, February 2002 Appendix B1 published by SAACE. The hourly rates given in the Financial Proposal of the two consortiums will be used subject to the necessary escalation.

The final 5% of percentage fees will only be paid after submission of the as-built drawings and the project completion report.

ACCEPTANCE

Messrs Tshwane Wastewater Consultants JV must react, in writing, within 14 days from date of this letter the acceptance/non acceptance of the appointment. If no response is received within 14 days it is accepted that you concur with the conditions in this letter. On acceptance the following matters must be mentioned, namely:

- the acceptance of the conditions and stipulations of this correspondence
- the names and surnames of the project team members (with mentioning of the number and their duties), as well as the name and surname of the professional registered engineer that will act as the project leader.

Proof of insurance signed by the JV's insurance broker must accompany the above mentioned letter. The JV must take out professional indemnity insurance policy from an insurance company, which is registered according to the law of the Republic of South Africa, that render coverage against the following with respect to all Consulting Engineers work to be executed by the JV or the JV's appointed agents (excluding insurance with respect to the construction phase of the abovementioned projects) :

- any loss or damage that The City of Tshwane Metropolitan Municipality has suffered due to any misconceptions, omissions or negligence, due to the non compliance of professional duties by the Consulting Engineer or his/her workers with regards to services that he/she has undertook to deliver, for an insured amount of not less than 1.5 times the planned relevant professional fees.
- any accountability for the death or injury of any third party due to misconceptions, omissions or negligence due to the non compliance of professional duties for which the Consulting Engineer is responsible with respect to this agreement.

LIAISON

For the sake of efficient administration of the project it is required that:

Liaison will take place via the following employee:

Contact Person: [REDACTED]

Designation: Deputy Manager: Process Development, Upgrading and Evaluation

Address: [REDACTED]

Tel. No: [REDACTED]

Fax. No: [REDACTED]

Cell. No: [REDACTED]

E-mail: [REDACTED]

Variation orders or any instruction for work may only be accepted if authorised by the Contact Person, as mentioned above or his delegate, confirmed in writing.

TERMINATION

The City of Tshwane Metropolitan Municipality reserves the right to cancel/postpone the appointment at any time and to reimburse the JV for work done to date, after which any further obligations shall fall away.

GENERAL INFORMATION

It is noted that Goba Moahloli KEEVE Steyn (Pty) Ltd, Golder Associates Africa (Pty) Ltd formerly known as Wates, Meiring & Barnard (Pty) Ltd, Nyeleti Consulting (Pty) Ltd and Ninham Shand (Pty) Ltd have formed a joint venture as the Main Consultants to be known as Tshwane Wastewater Consultants, JV. The Sub-consultants to be used according to the recommendation of the Council and in terms of the policies of the CTMM, will be Lebone (Pty) Ltd, Semanya Furumele (Pty) Ltd and P.D Naidoo and Associates (Pty) Ltd.

We trust that the conditions stated in this appointment are acceptable to you and look forward to work with you in the implementation thereof.

Yours faithfully

[REDACTED]

7 GENERAL MANAGER: WATER AND SANITATION

[REDACTED]



Services Infrastructure Department
Water and Sanitation Division
Wastewater Treatment Section



To:



CLIENT REFERENCE LETTER

We hereby confirm that your firm (individually or in association with another) is legally contracted for the following project:

Consultant(s)	Brief Description of the Project	Start date	End date
Aurecon	Design and construction monitoring of the 30 Ml/d extensions of the Sunderland Ridge Wastewater Treatment Works	January 2009	June 2014

We hereby recommend Aurecon as a reputable firm capable of carrying out the above works, and worthy of every employer's reliance.

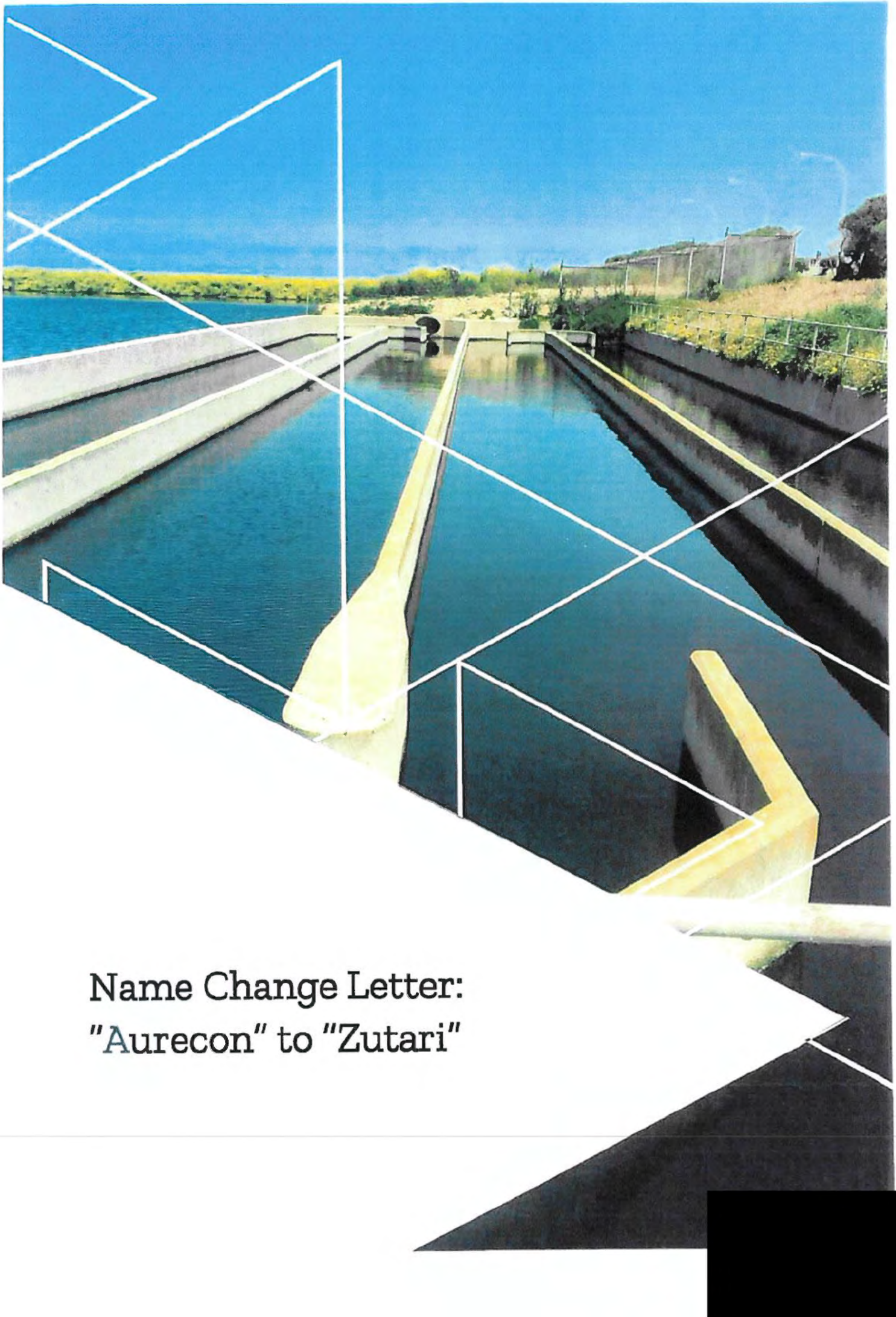
Yours Truly,



ACTING DIRECTOR: WASTEWATER TREATMENT

On request, this document can be provided in another official language.





Name Change Letter:
"Aurecon" to "Zutari"

We are pleased to announce that we are now officially Zutari (Pty) Ltd.

Our name change from Aurecon South Africa (Pty) Ltd to Zutari (Pty) Ltd has officially been processed by the Companies and Intellectual Property Commission (CIPC) on 9 July 2020. We are now entering into a brief transitional period to change related documentation and launch our new brand.

Zutari will continue to be management-owned, and most of our business details will remain the same (e.g. company registration, tax and bank account numbers, B-BBEE Level 1, etc.).

This is in line with the announcement at the end of 2019 that Aurecon's Africa business will demerge from the Aurecon Group. The demerger has positioned us to better focus on performance and growth in Africa and reduce the complexity of business operations.

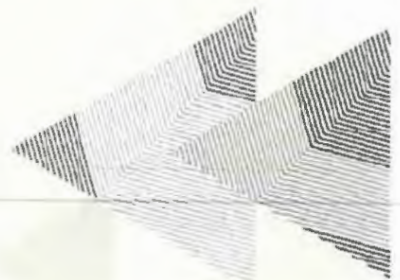
We retain 16 offices in South Africa, as well as our offices in Angola, Botswana, Eswatini, Ghana, Kenya, Lesotho, Mauritius, Mozambique, Namibia, Nigeria, Rwanda, Tanzania, Uganda and Zambia.

Our dedicated Global Design Centres in Africa will continue to export design services to other continents.

Follow our journey to the launch on social media



**Zutari co-creates
an engineered impact.**





COMPANIES AND INTELLECTUAL PROPERTY COMMISSION
REPUBLIC OF SOUTH AFRICA

Form COR14.3 - Amended Registration Certificate

Effective date: 09/07/2020
Print date: 09/07/2020
Customer code: [REDACTED]
Trading number: [REDACTED]

Concerning:

ZUTARI (PTY) LTD [REDACTED]

The above company has amended its Memorandum of Incorporation in terms of section 16 of the Companies Act, 2008, changing the company name from AURECON SOUTH AFRICA to ZUTARI (PTY) LTD.

In accordance with the Notice of Amendment of the Memorandum of Incorporation, the change of the company name takes effect on 09/07/2020.

In conjunction with this certificate, the Commission has not issued another notice contemplated in section 12 (3).

Commissioner: CIPC



Printed on behalf of the Commission

P.O. Box 125, PRETORIA 0001 Republic of South Africa

Contract

337

C5.1

Part C5: Returnable Documents
Documents
Reference No. 266C/2024/25

List of Returnable





RETURNABLE SCHEDULE

RETURNABLE SCHEDULE



RETURNABLE SCHEDULES INDEX

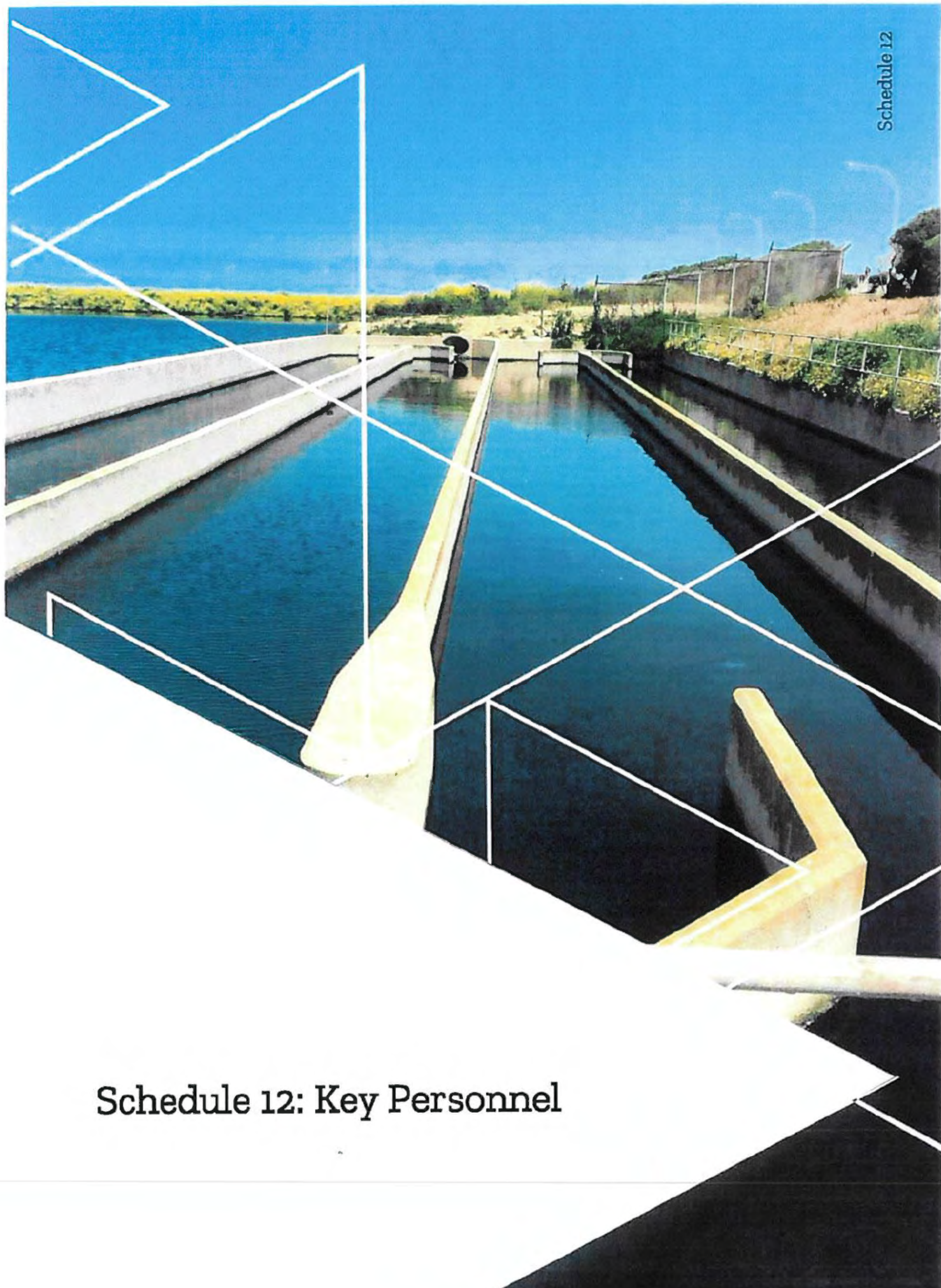
File 1 of 2 Index

- ▶ Schedule 1: Commercial Enterprise (Small Business)
- ▶ Schedule 2: Declaration of Interest – State Employees (MBQ) & Schedule 3: Authorization Letter
- ▶ Declaration of Outstanding Amounts Owed to CITT
- ▶ Schedule 10: Consultancy Services Provided to Organs of State
- ▶ Schedule 11: Schedule of Work Experience of Tenderer
- ▶
- ▶

File 2 of 2 Index (This file)

- ▶ Schedule 12: Key Personnel
- ▶ Schedule 13: Schedule of Support Resources (For Information Only) Schedule 14: Professional Indemnity Insurance
- ▶ Schedule 16: Proposed Work Plan
- ▶ Schedule 17: Confirmation of Tenderer Registration Accreditation Schedule 19: Personnel
- ▶ Schedule (Other than Key Personnel) Schedule 20: Schedule of Subcontractors
- ▶ Schedule 22: Record of Addenda to Tender Documents Schedule 24: Preference Schedule & BBBEE Certificates
- ▶ Schedule 26: Information to be Provided with the Tender
- ▶
- ▶





Schedule 12: Key Personnel

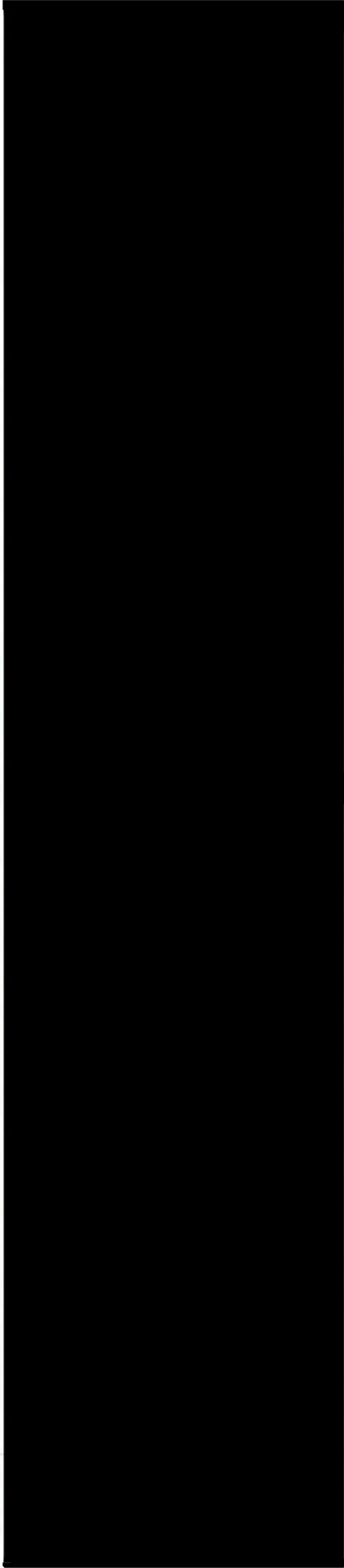
SCHEDULE 12: ORGANOGRAM



Organogram:

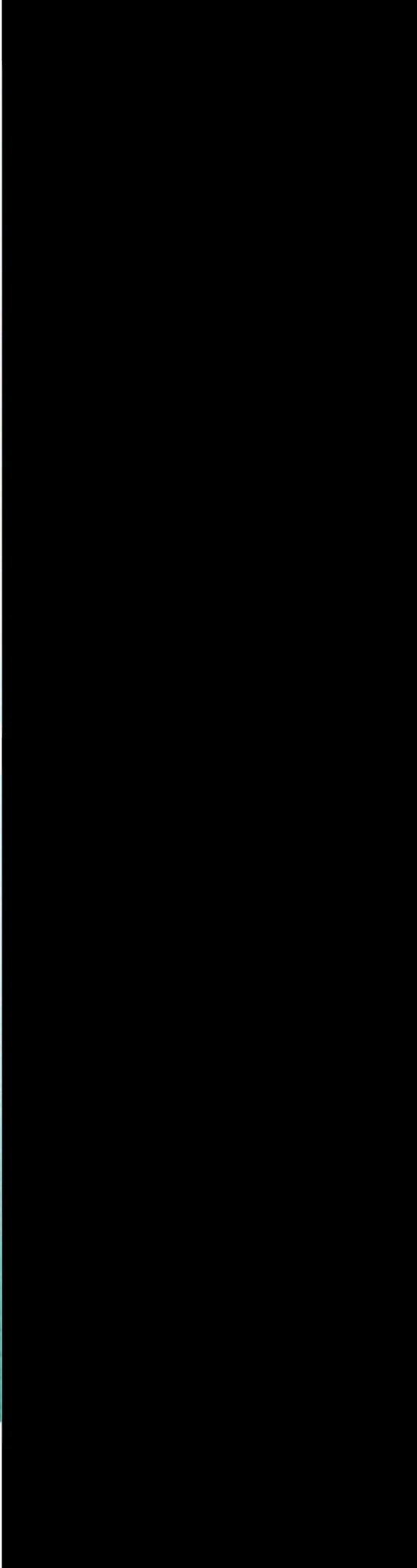


Design Team



Site Supervision Team

Support Services Team



SCHEDULE 12: KEY PERSONNEL

TENDER NO: 266C/2024/25
PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE
UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

SCHEDULE 12: KEY PERSONNEL (INCLUDES KEY AND OTHER AS PRESCRIBED IN THE TENDER DOCUMENT)		
a. KEY STAFF		
PROJECT LEADER		
PROCESS DESIGN ENGINEER		
CIVIL ENGINEER		
CHIEF/LEAD RESIDENT ENGINEER		
MECHANICAL ENGINEER		

TENDER NO: 266C/2024/25

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

SCHEDULE 12: KEY PERSONNEL (INCLUDES KEY AND OTHER AS PRESCRIBED IN THE TENDER DOCUMENT)

ELECTRICAL ENGINEER

STRUCTURAL ENGINEER

MECHANICAL ENGINEER

ELECTRONIC ENGINEER

RESIDENT ENGINEER (x1)

TENDER NO: 266C/2024/25
PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

SCHEDULE 12: KEY PERSONNEL (INCLUDES KEY AND OTHER AS PRESCRIBED IN THE TENDER DOCUMENT)

RESIDENT ENGINEER (x1)

[Redacted]

QUANTITY SURVEYOR

[Redacted]

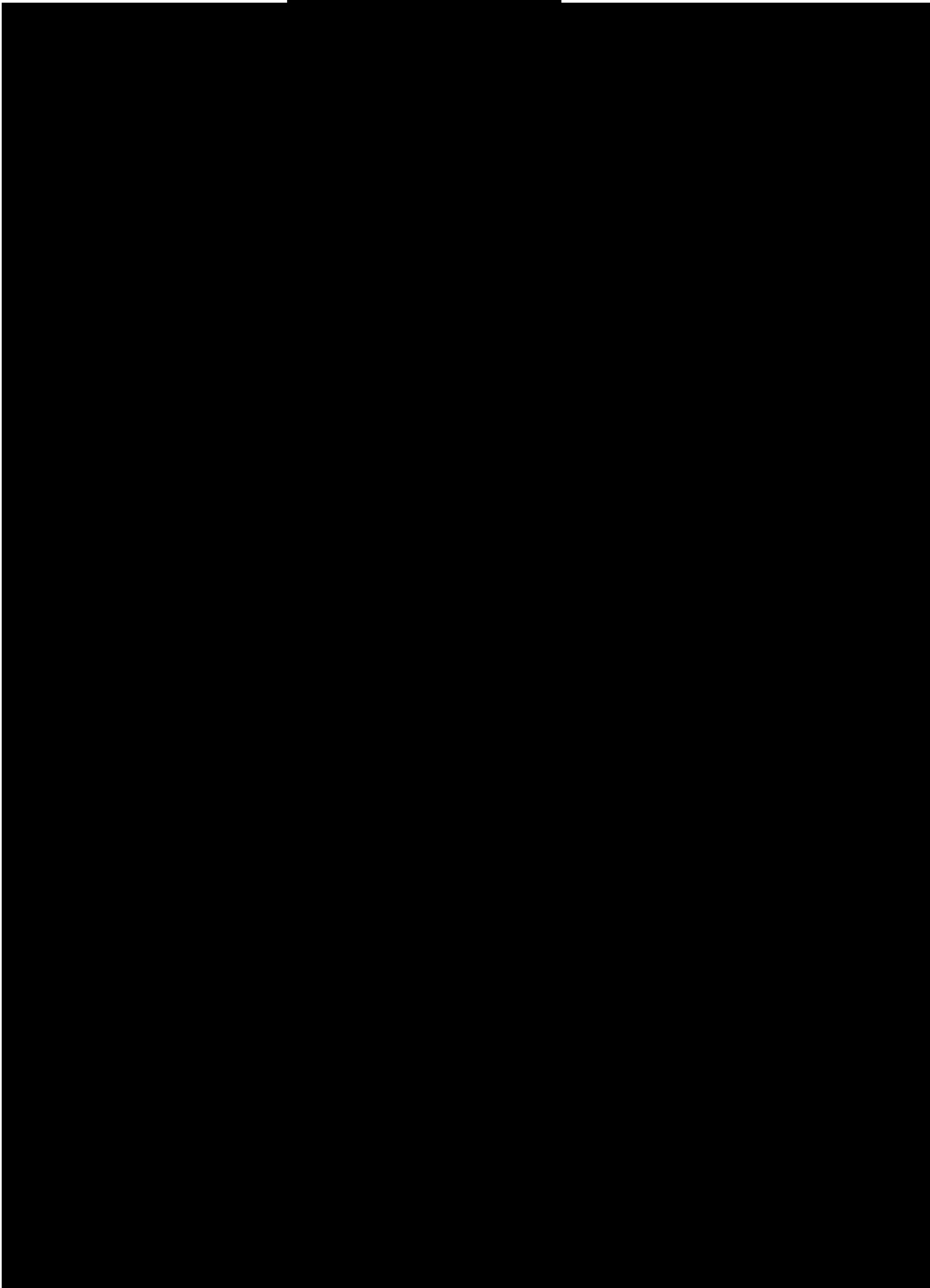
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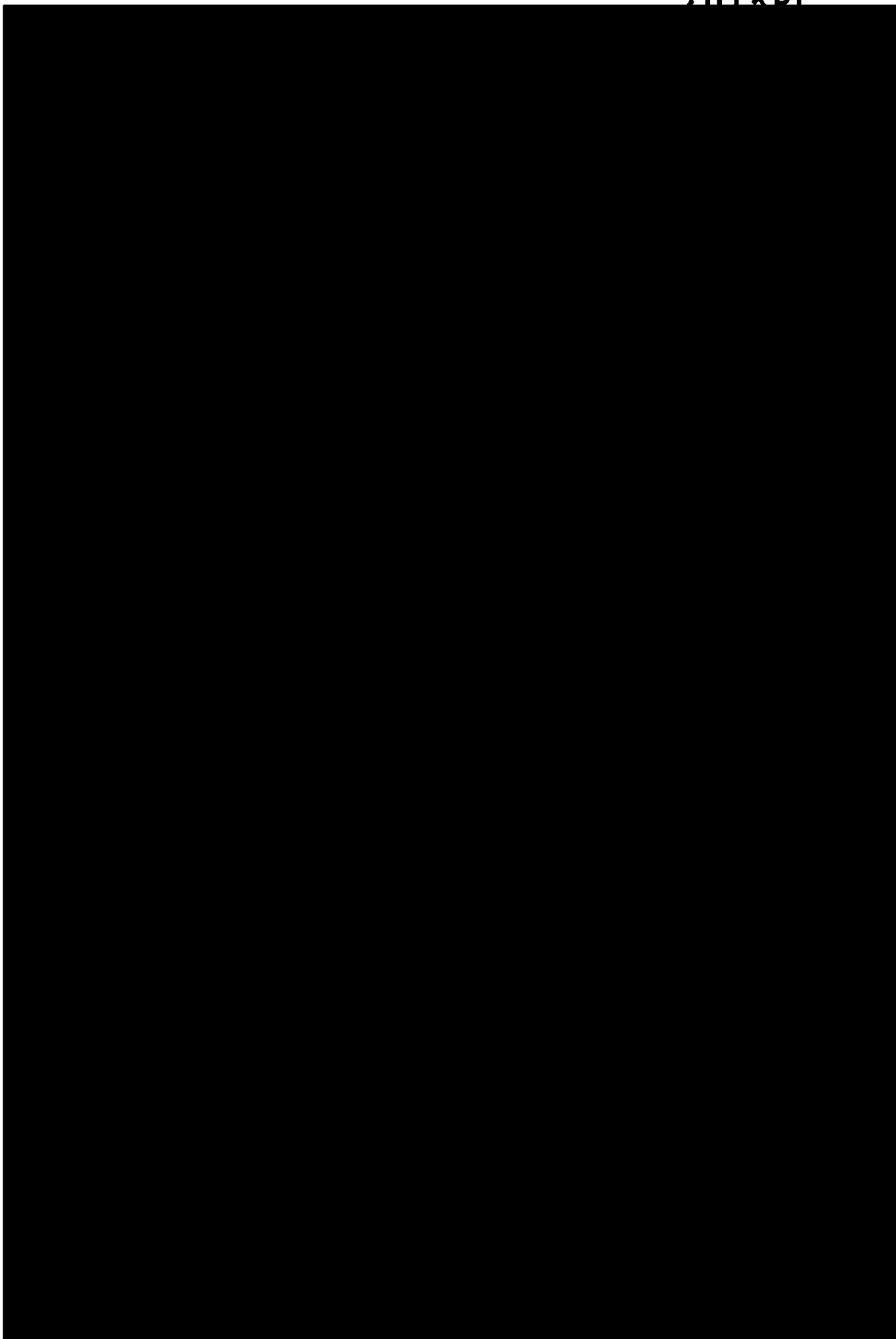
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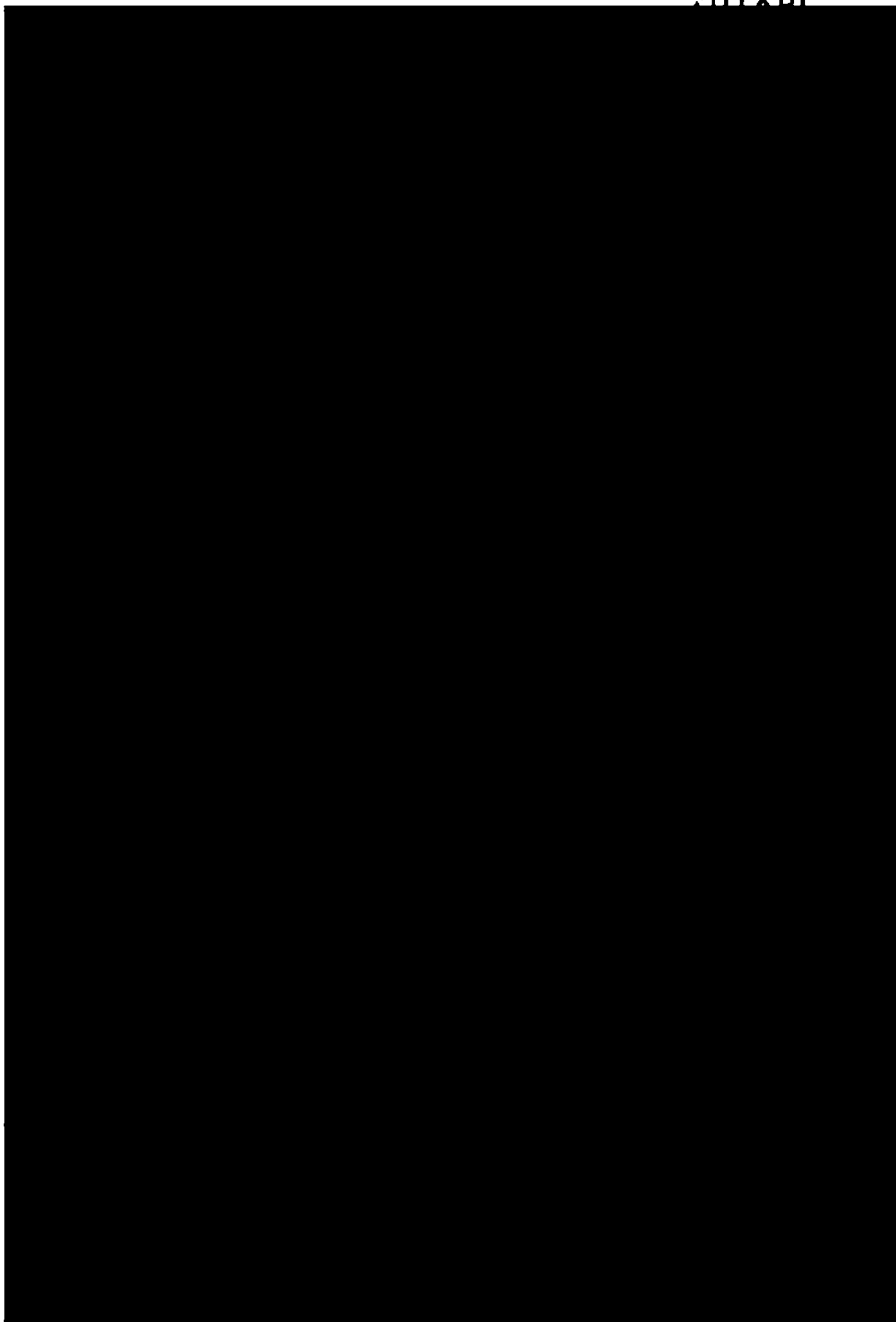
SCHEDULE 12.a: KEY PERSONNEL

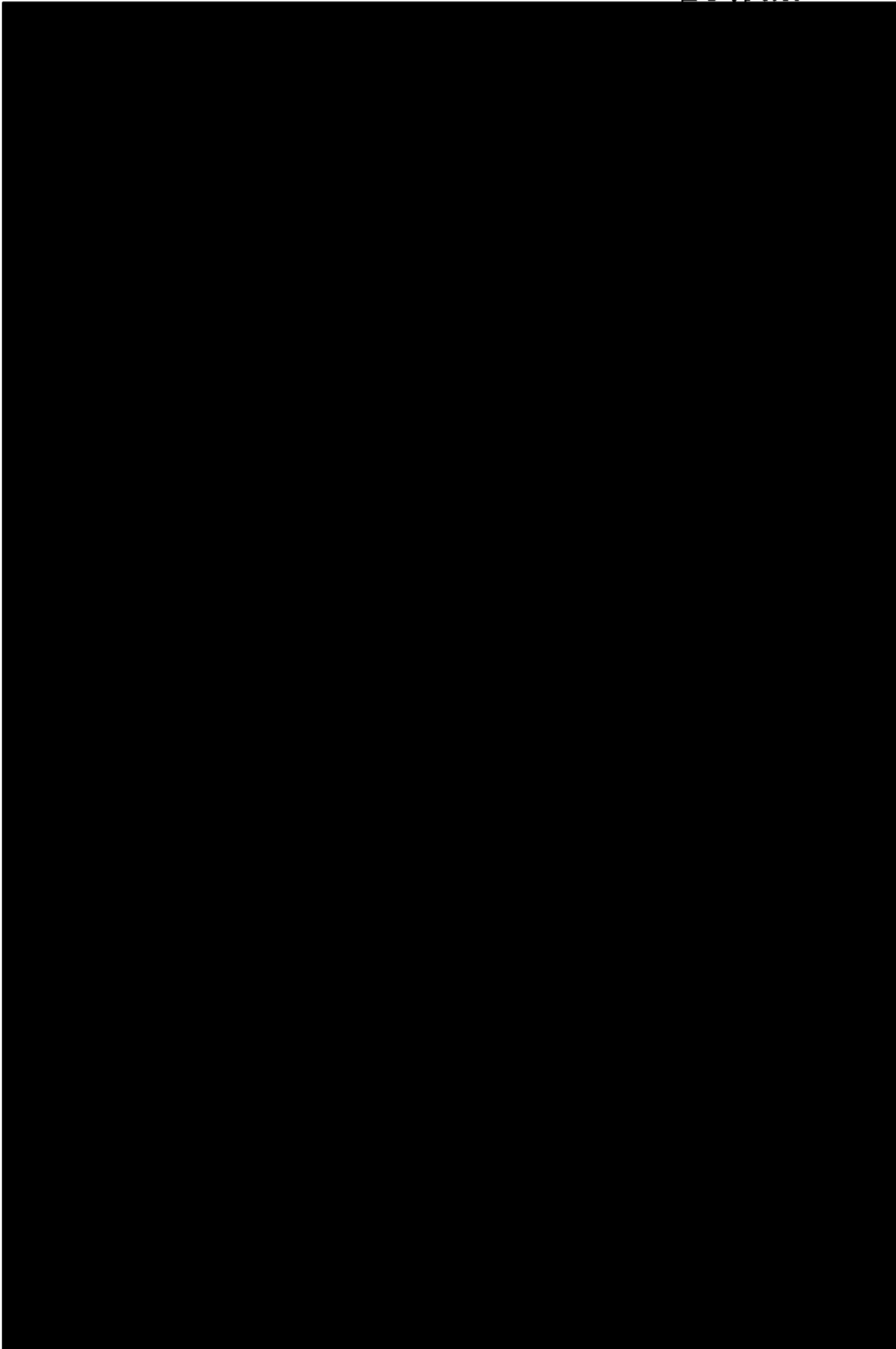


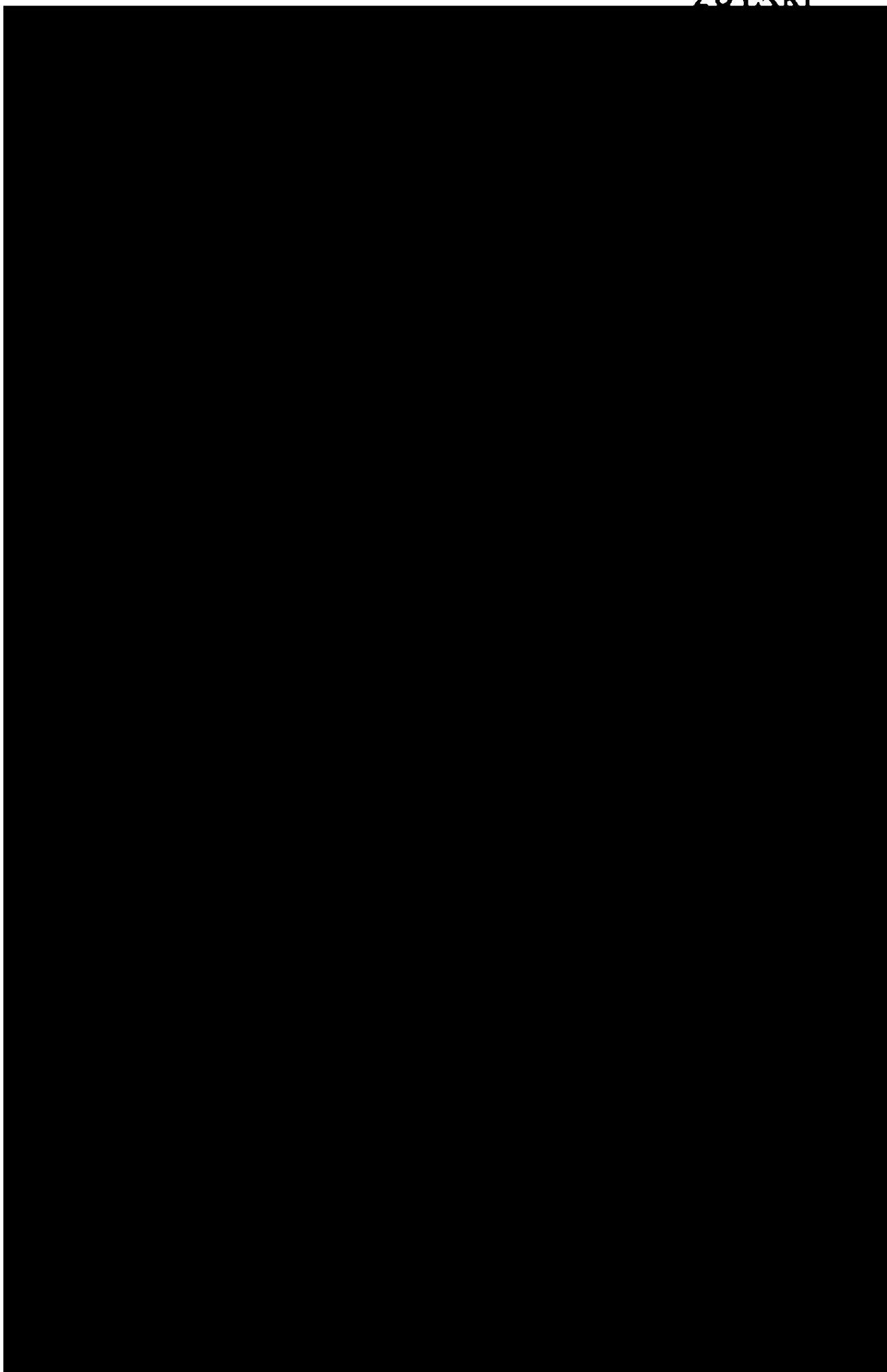
Curriculum Vitae:

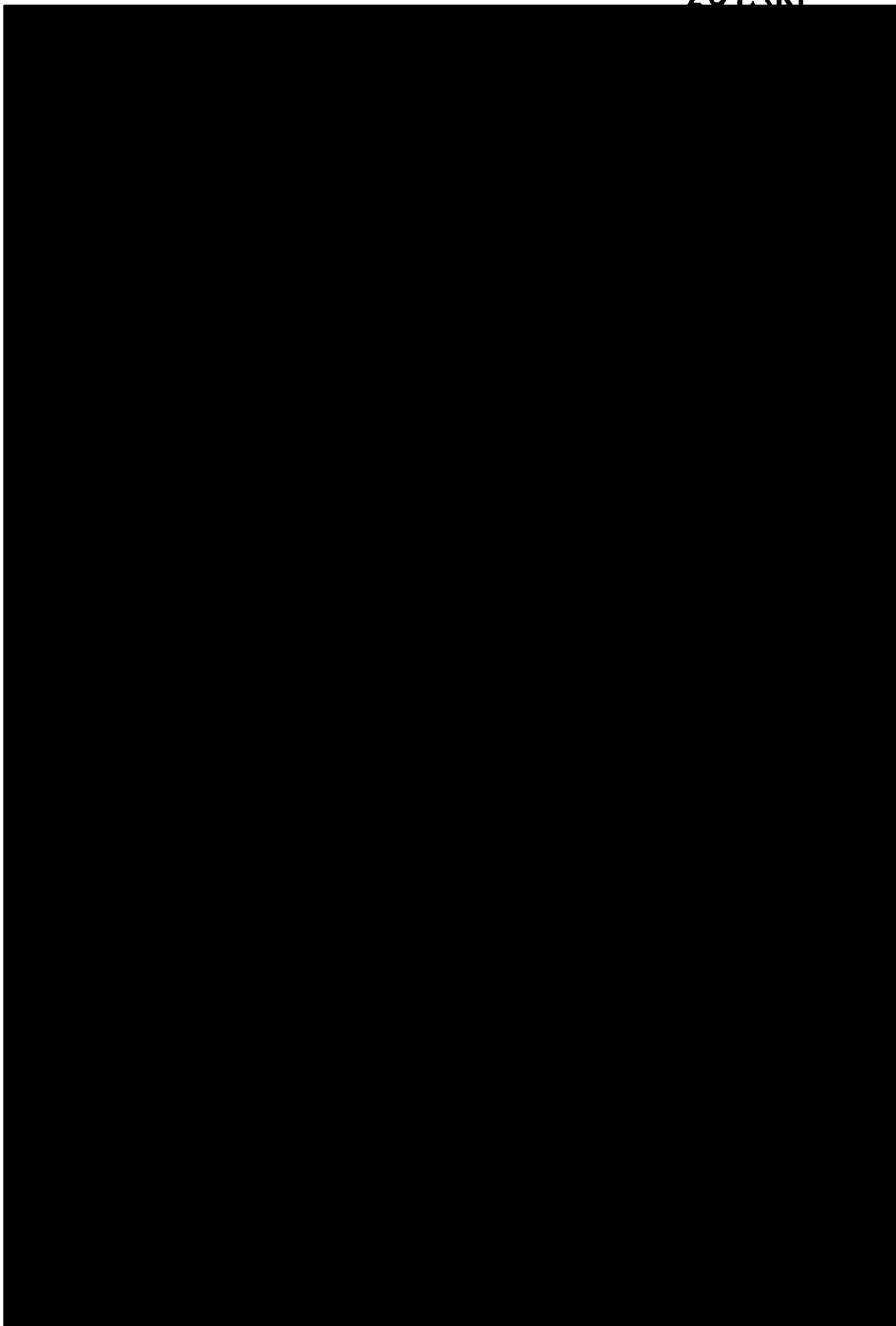












Professional Affiliations

[Redacted]

Languages

[Redacted]

By my signature below I certify the correctness of the information above and my availability to undertake this assignment.

[Redacted]

Signature of Staff Member

Date



Curriculum Vitae:

Name
Date of Birth
Profession/Specialisation
Years with Firm
Nationality
Years experience

Key Qualifications**Employment Record**

01/2021 - Date	Zutari, Managing Director: Water
07/2014 - 12/2020	Zutari, Technical Director
07/2011 - 06/2014	Zutari, Associate
09/2004 - 06/2011	Zutari, Project Engineer

Management Experience

01/2021 – Date	Managing Director for Water Business Unit at Zutari
01/2012 – Date	Project Manager for the upgrading of Zandvliet wastewater treatment works (WWTW) to 90 ML/d (hybrid of conventional activated sludge and membrane bioreactors), South Africa.
01/2018 – 06/2024	Project Manager for the upgrading of Moorreesburg wastewater treatment works (WWTW) to 2 ML/d using IFAS technology, South Africa.
01/2012 - 01/2019	Process optimization of the existing 25 ML/d conventional plant and design of the new 30 ML/d MBR plant at Gammams wastewater treatment works (WWTW) in Namibia
01/2012 - 01/2016	Project Manager for the upgrading of Riebeek Valley wastewater treatment works (WWTW) to 2 ML/d, South Africa.



- 01/2012 - 01/2013 Project Manager for the process optimization, performance investigation and augmentation models for the 500 ML/d Melbourne Eastern Treatment Plant (ETP) in Australia.
- 01/2006 - 01/2013 Project Manager for the upgrading of Malmesbury wastewater treatment works (WWTW) to 10 ML/d, using membrane bioreactors (MBRs), in South Africa.
- 01/2010 - 04/2012 Project Manager for the calibration, process optimization and performance investigation (ranging in capacity from 32 to 40 ML/d) for Yorkshire Water in the United Kingdom.

Experience Record

Upgrading of Zandvliet Wastewater Treatment Works (WWTW) and associated infrastructure (South Africa, Western Cape) 03/2014 – 12/2024. Project Manager and Lead Process Design Engineer. Zutari was appointed to analyse, plan and design equipment and infrastructure for the capacity extension and refurbishment of Zandvliet WWTW and associated infrastructure refurbishment from 72 MLD to 90 MLD at ADWF. The new nominal design capacity of 90 MLD was achieved through the construction of the following main unit processes: a new and enlarged inlet works, four new PSTs, a new biological nutrient removal (BNR) reactor using a membrane bioreactor (MBR) with a nominal capacity of 27 MLD at ADWF, a chlorine dosing building and chlorine contact tank, interconnecting pipelines, a WAS holding tank, two primary sludge holding tanks, sludge dewatering facilities (WAS and primary sludge belt presses) and two dewatered sludge silos. Furthermore, the existing 2 x 27 MLD conventional activated sludge (AS) plants and the 18 MLD MBR plant were refurbished with new mechanical equipment. New buildings entail a new machine building and a new administration building to house an upgraded supervisory control and data acquisition (SCADA) system. An on-site irrigation network using treated effluent. The project further included a sludge treatment feasibility study which considered conventional and advanced sludge treatment options, including combined heat and power. Zutari's services provided included Planning, conceptual and preliminary design, detailed design, contract documentation and procurement, construction monitoring, and project close out (ECSA Stages 1-6). Zutari's scope includes process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Zutari's scope also included management of OHS Agent and ECO officer. Personal responsibilities entailed managing the project budget and programme, the process design (primary treatment, secondary treatment including biological nutrient removal using activated sludge system and MBR, tertiary treatment, dewatering), overseeing all aspects of the treatment works detailed design and tender document preparation (civil and mechanical), conceptual design of control philosophy and supervisory control and data acquisition (SCADA) requirements and guiding the electrical team in detailed design of these aspects. Also responsible for arranging tenders and reporting (civil and mechanical) to the client, arranging approval for the project in terms of environmental legislation, overseeing the project team of at least 20 members and continued liaison with the client to ensure their objectives are met. (City of Cape Town)

Process and Performance Investigation and Review for Gammams Wastewater Treatment Works (WWTW) (Namibia) 08/2011 - 12/2020. Project Manager and Lead Process Design Engineer. The City of Windhoek is undertaking extensions to the existing Gammams WWTW, situated on the north-western outskirts of Windhoek. The scope includes upgrading the plant from 25 MLD to 55 MLD by adding a new inlet works, primary settling tanks, flow equalisation tank, biological nutrient removal reactors which use membrane biological reactor (MBR), sludge handling plant (includes sludge holding tanks, gravity thickeners and a sludge dewatering plant as well as refurbishment of anaerobic digesters, gas holding tanks and CHP equipment) and various pump stations. This WWTW forms an important link in the water cycle for this city. It purifies wastewater to a standard suitable for discharge to the environment or irrigation, and a significant fraction of the treated effluent feeds the Goreangab Dam and the Goreangab water reclamation system, on which the City of Windhoek is partially reliant for its potable water. Responsible for managing the project budget and programme, the process design (primary treatment, secondary treatment including biological nutrient removal using MBR and sludge handling plant), overseeing all aspects of the detailed design and tender document preparation (civil and mechanical), conceptual design of control philosophy and supervisory control and data acquisition (SCADA) requirements and guiding the electrical team in detailed design of these aspects. Also responsible for arranging tenders and reporting (civil and mechanical) on these to the client, arranging approval for the project in terms of environmental legislation, overseeing the project team of 14 members, continued liaison with the client to ensure their objectives are met, administration of the two contracts required for implementation of the work, along with quality and overseeing installation, testing, commissioning and training of the client's staff. (City of Windhoek).

Upgrade and Extension of the Stellenbosch Wastewater Treatment Works (WWTW) to 35 Ml/d (Stellenbosch Municipality, Western Cape Province, South Africa) 11/2013 – 03/2019. Process Design Engineer/Reviewer. This project consisted of refurbishing and upgrading the existing 20 Ml/day works and converting to a full biological nutrient (BNR) removal plant utilizing MBR technology. The capacity of the works was extended to 35 Ml/day. Furthermore, provision was made in the current design for it to be retrofitted with primary settling tanks (PSTs) and primary sludge facilities in the future. Thus, the inclusion of this process step will expand the current capacity from 35 Ml/day to 48.5 Ml/day. The 35 Ml/day upgrade comprises of two phases. Phase 1: A new 27 Ml/day membrane bioreactor (MBR) biological nutrient and excess phosphate removal (BNEPR) lane. Phase 1 infrastructure included a new Inlet Works, full biological nutrient removal MBR reactor (sized for 27 Ml/day without PSTs and 38 Ml/day with PSTs), Machine Building (including blowers, permeate pumps and backwash pumps), sludge thickening (DAF units), Aerobic Digester, Dewatering Building (Belt presses), Sludge Silos, New Administration Building, Generator buildings, Guardhouse, Ancillary structures and general civil works. Phase 2: The conversion of existing lane to 8 Ml/day activated sludge process (ASP) BNEPR lane, including associated civil, mechanical and electrical works. Majority of the Phase 2 infrastructure was refurbished and this included conversion of existing aeration reactors to full BNR reactors (sized for 8 Ml/day without PSTs and 10.5 Ml/day with PSTs), refurbishment of existing SSTs, and recycle pump stations, cleaning and refurbishing of the maturation ponds, new ultraviolet (UV) disinfection facilities (closed vessel in-line UV units) and ancillary structures and general civil works. The dewatering facilities were designed to accommodate the waste activated sludge from the MBR lane and the ASP lane, i.e. sludge treatment for a capacity equivalent to an ADWF of 35 Ml/day. It is anticipated that the future upgrade to 48.5 Ml/day will include PSTs, anaerobic digesters and an extension of the current dewatering facility to accommodate additional belt presses. Zutari's scope included feasibility and planning Study (RBIG process), planning and conceptual design, preliminary design, detailed design, tender documentation and evaluation, contract administration and construction supervision, as well as administration of the 3-year operation and maintenance contract. Zutari's scope also included management of OHS Agent and ECO officer. Responsible for process design verifications and reviews on primary treatment, secondary treatment including biological nutrient removal using activated sludge system and MBR, tertiary treatment, sludge thickening and dewatering. (Stellenbosch Municipality)

Upgrading of Malmesbury Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 10/2004 - 12/2020. Project Manager and Lead Process Design Engineer. The existing Malmesbury WWTW consisted of primary treatment processes, including screening, grit and sand removal, flow measurement and emergency storage; main treatment processes consisting of two separate systems, namely a biofilter and an activated sludge plant; tertiary treatment processes such as disinfection by chlorination or in the maturation ponds, sludge digestion, sludge dewatering and drying beds. The project involved upgrading the existing treatment works and associated infrastructure from a capacity of 5 to 10 Ml/d, using ultra-filtration membrane for solid-liquid separation in the membrane bioreactor (MBR). The upgraded treatment works include four 2.5 Ml/d (i.e. 10 Ml/d in total) activated sludge MBR modules in a biological nutrient configuration. Responsible for managing the project budget and programme; the process design; and overseeing all aspects of the detailed design, namely the designed modifications to the existing WWTW, including a new bioreactor equipped with fine-bubble diffused aeration, MBR, new return activated sludge (RAS) and waste activated sludge (WAS) pumps, and chlorine disinfection. Also responsible for tender document preparation (civil and mechanical); the conceptual design of control philosophy and supervisory control and data acquisition (SCADA) requirements and guiding the electrical team in detailed design of these aspects; arranging tenders and reporting (civil and mechanical) on these to the client; arranging approval for the project in terms of environmental legislation; overseeing the project team of 10 members; continued liaison with the client to ensure their objectives are met; administration of the two contracts required for implementation of the work, along with quality and overseeing installation, testing, and commissioning and training of the client's staff. (Swartland Local Municipality)

Upgrading Moorreesburg Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 09/2013 – 06/2024. Project Manager and Lead Process Design Engineer. The agricultural town of Moorreesburg is located in the Western Cape, approximately 40 km north of Malmesbury along the N7 highway. The Moorreesburg WWTW was originally constructed in 1975 and underwent an upgrade in 2004, resulting in the current plant with a hydraulic treatment capacity of 2 Ml/d. Zutari was appointed by the Swartland Municipality to provide professional engineering consultancy services for the upgrading of the Moorreesburg WWTW. Zutari's scope of work entailed planning, preliminary, detailed design, contract administration and construction supervision. The works included new inlet works and raw sewage pump station, bioreactors, SSTs, aerobic digesters and a dewatering plant. Personal responsibilities entailed managing the project budget and programme, the process design (primary and secondary treatment, sludge stabilisation and dewatering), overseeing all aspects of the treatment works detailed design and tender document preparation (civil and mechanical), conceptual design of control philosophy and supervisory control and data acquisition (SCADA) requirements and guiding the electrical team in detailed design of these aspects, as well as construction supervision. (Swartland Local Municipality).

Process, Performance Investigation and Augmentation Models Review for Melbourne Eastern Treatment Plant (ETP) (Australia, Victoria (VIC)) 11/2011 - 10/2013. Project Manager and Process Design Engineer. The Melbourne ETP, which has an average dry weather flow (ADWF) of 450 Ml/d, is owned and operated by the City of Melbourne and is the largest such facility in Melbourne treating wastewater flows from Melbourne and surrounding areas. Zutari was engaged by Melbourne Water Corporation (MWC) to undertake a peer review of the process and augmentation models developed for the ETP. The primary objective of this assignment was to perform a technical review of computer simulation models, Biowin™ and Hydromantis GPS-X™, provide an assessment of the current model set up and comment on how it can be improved to provide further value with respect to the latest flow and load forecasts provided by the retail water companies and the impact on the process units at ETP. The desired objective of the model was to provide an early indication to MWC on the timing of capital upgrades for the affected process areas. Responsible for project management and process design which entailed the model simulations included setting up the BioWin model, both steady state and dynamic simulations, and calibrating the model using at least one year of historical data; reviewing the flow and load forecasts for ETP using historic data provided by MWC from 2005 to 2012; reviewing the capacities for each process area of the treatment plant; simulating the plant performance for different treatment process scenarios; identifying any inputs which, if changed slightly, have the potential to significantly impact on the timing of capital expenditure (CAPEX) and reporting and documenting the findings. (Melbourne Water Corporation (MWC))

Calibration, Process And Performance Investigation for Yorkshire Water (United Kingdom) 02/2010 - 04/2012. Project Manager and Process Design Engineer. The 37 Ml/d Old Wittington WWTW, 40 Ml/d Woodhouse Mill WWTW and 32 Ml/d Aldwarke WWTW, which are owned and operated by Yorkshire Water, needed to be optimised, refurbished and upgraded to meet their capacities. Numerous components of the works had not performed to the satisfaction of Yorkshire Water and were unable to deliver the design capacity. Other problems were experienced with the selection of the appropriate process operational regime, poor effluent quality, sludge settling characteristics and removal, continuously erratic aeration patterns. Attempts to rectify the problems on an ad hoc basis had not been successful. Zutari was therefore appointed to undertake an investigation to identify the various problems, the causes of these problems, and the corrective actions required. The investigation included the use of the BioWin modelling, based on a two-week diurnal loading pattern. Zutari was successful in restoring the WWTWs to full capacity during this investigation, as well as to recommend immediate remedial plans and future upgrading of these treatment works. Personal responsibilities involved managing the project under the supervision of the project director, undertaking the compilation of a BioWin process model for each of the three WWTWs, calibrating the models and running seven steady state and dynamic modelling scenarios for each works. Also responsible for preparing the associated report, checking the process design and the physical design of the treatment works, with particular attention to accurate calibration based on sampled results and the effectiveness of the various process units, and was also able to recommend extensions and modifications. (TruSense Engineering Services)

Upgrade of Riebeek Valley Wastewater Treatment Works (WWTWs) (South Africa, Western Cape) 09/2007 - 12/2020. Project Manager. The project entailed the upgrading of the existing WWTW by combining the sewage from Riebeek Kasteel, Riebeek West and the PPC WWTWs, enlarging the Riebeek Kasteel WWTW and decommissioning and demolishing the Riebeek West and the PPC WWTWs. The upgrading involves the construction of a new treatment works at the existing Riebeek Kasteel WWTW, with an average dry weather flow (ADWF) of 2 Ml/d. In addition, the project comprised 12 km of gravity and rising mains from PPC to Riebeek Kasteel; primary treatment processes such as lifting pump stations, inlet works equipped with mechanical screening equipment and grit removal equipment of pista grit vortex chamber type); conventional activated sludge (AS) treatment process, including a five-stage Bardenpho biological nutrient and phosphorus bioreactor, two clarifiers and various sludge recycle pumps; and tertiary treatment processes, including disinfection by chlorination, aerobic sludge digestion and sludge dewatering using a belt press equipment. Responsible for managing the project budget and programme, the process design, overseeing all aspects of the detailed design and tender document preparation (civil and mechanical), conceptual design of control philosophy and supervisory control and data acquisition (SCADA) requirements and guiding the electrical team in detailed design of these aspects. Also responsible for arranging tenders and reporting (civil and mechanical) on these to the client, arranging approval for the project in terms of environmental legislation, overseeing the project team of 12 members, continued liaison with the client to ensure their objectives are met, administration of the two contracts required for implementation of the work, along with quality and overseeing installation, testing, commissioning and training of the client's staff. (Swartland Local Municipality)

Hoopstad and Tikwana Wastewater Treatment Works (WWTW) (South Africa) 01/2005 - 01/2006. Project Engineer. The existing 1 Ml/d WWTW receives wastewater from two sources, namely gravity flow from areas served by the waterborne sewer systems and the solid waste being dumped at the works, as well as the effluent from the bucket washing facilities. The flows from these two sources were treated separately. The gravity, waterborne wastewater was treated in a biofilter plant and pond system comprising anaerobic and oxidation- evaporation ponds. The ponds have a capacity of approximately 1 Ml/d of domestic wastewater.



Effluent from the ponds is used for irrigation. Solid waste from the dumping area as well as the wastewater from this area flows into two night soil ponds. Responsible for providing process design services for the upgrading of the existing works to 2 Ml/d, including a biological reactor for a nitrogen removal (MLE system) plant, while at the same time making optimum use of the existing infrastructure. In addition, the extension to the works included chemical dosing to remove phosphorus in wastewater, and also sludge drying beds for sludge conditioning before discharging into landfill sites.

Nutrient Management for the Department of Water Affairs (DWA) (South Africa) 2005 - 2006. Wastewater Specialist. The objective of this study was to develop guidelines on best practices for eutrophication management and to align the guidelines and more specifically, the implementation strategies and plans with recent advances in policy development at the Department of Water Affairs (DWA).

Water Research Commission (WRC) Wastewater Characterisation (South Africa) 2004 - 2005. Project Manager. The project entailed measuring the quality of the wastewater discharged from low-income, high-density residential areas. It also included assessing the population density, potable water use, the effect of the cost of water on potable water use in low-income, high-density residential areas, as well as assessing other factors, such as climate, type of houses and culture, that could impact the quality and quantity of wastewater.

Education

- 2004 MSc Civil Engineering, University of Cape Town (UCT), South Africa
- 2003 BSc Civil Engineering (with honours), University of Cape Town (UCT), South Africa

Professional Affiliations



Languages

	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Sepedi	Excellent	Excellent	Excellent

Publications



Ramphao MC, Wentzel MC and Ekama GA, 2004. "Impacts of membrane bioreactors for solid-liquid separation on the design of biological nutrient removal activated sludge systems (revised)" Bioengineering Journal, August 2004

Ramphao MC, Wentzel MC, Ekama GA and Buckley C, 2004. "Impacts of membrane bioreactors for solid-liquid separation on the design of biological nutrient removal activated sludge systems" WISA Conference, Cape Town, May 2004

By my signature below I certify the correctness of the information above and my availability to undertake this assignment.

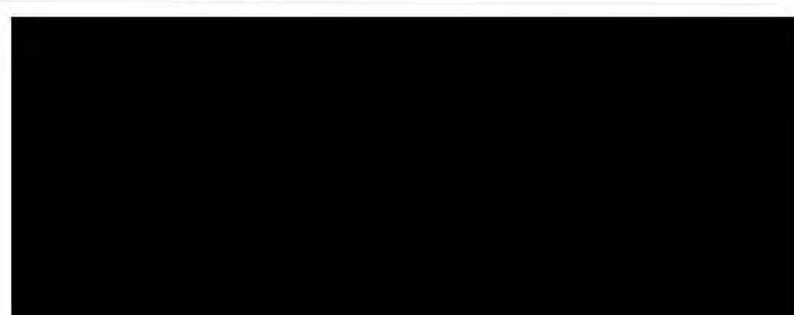
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Signature of Student Name



Zutari

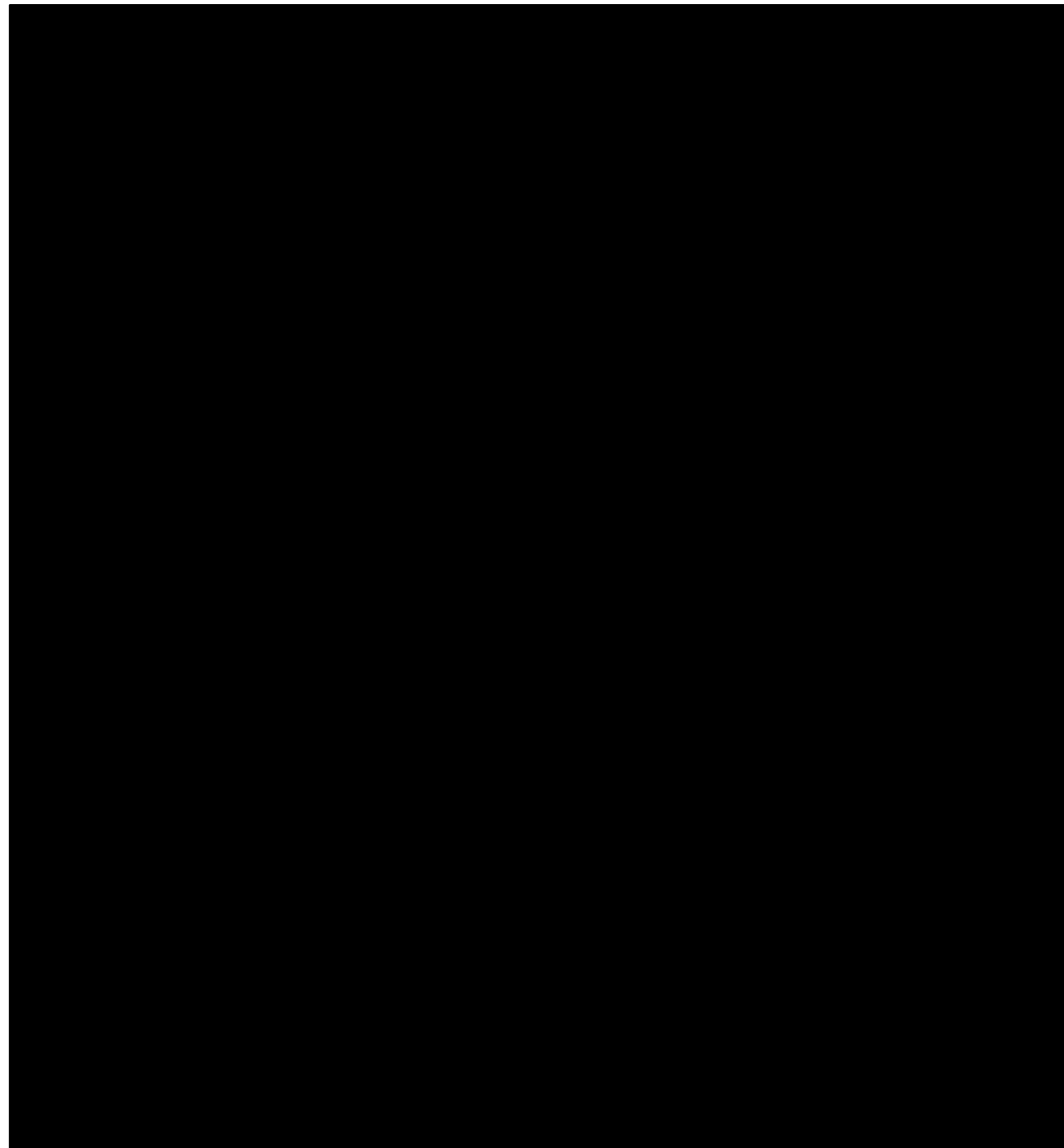
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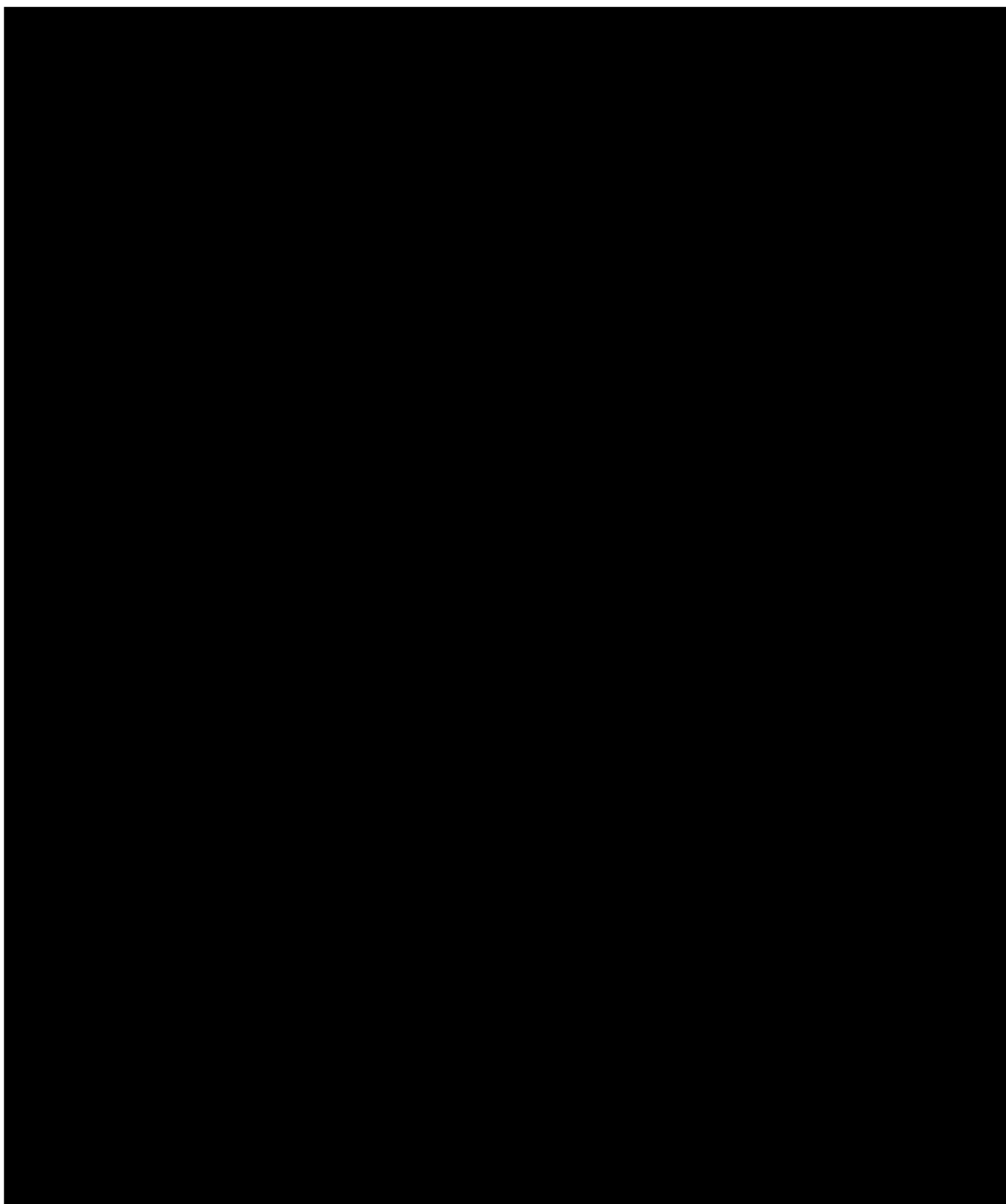
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Engineering Council of South Africa



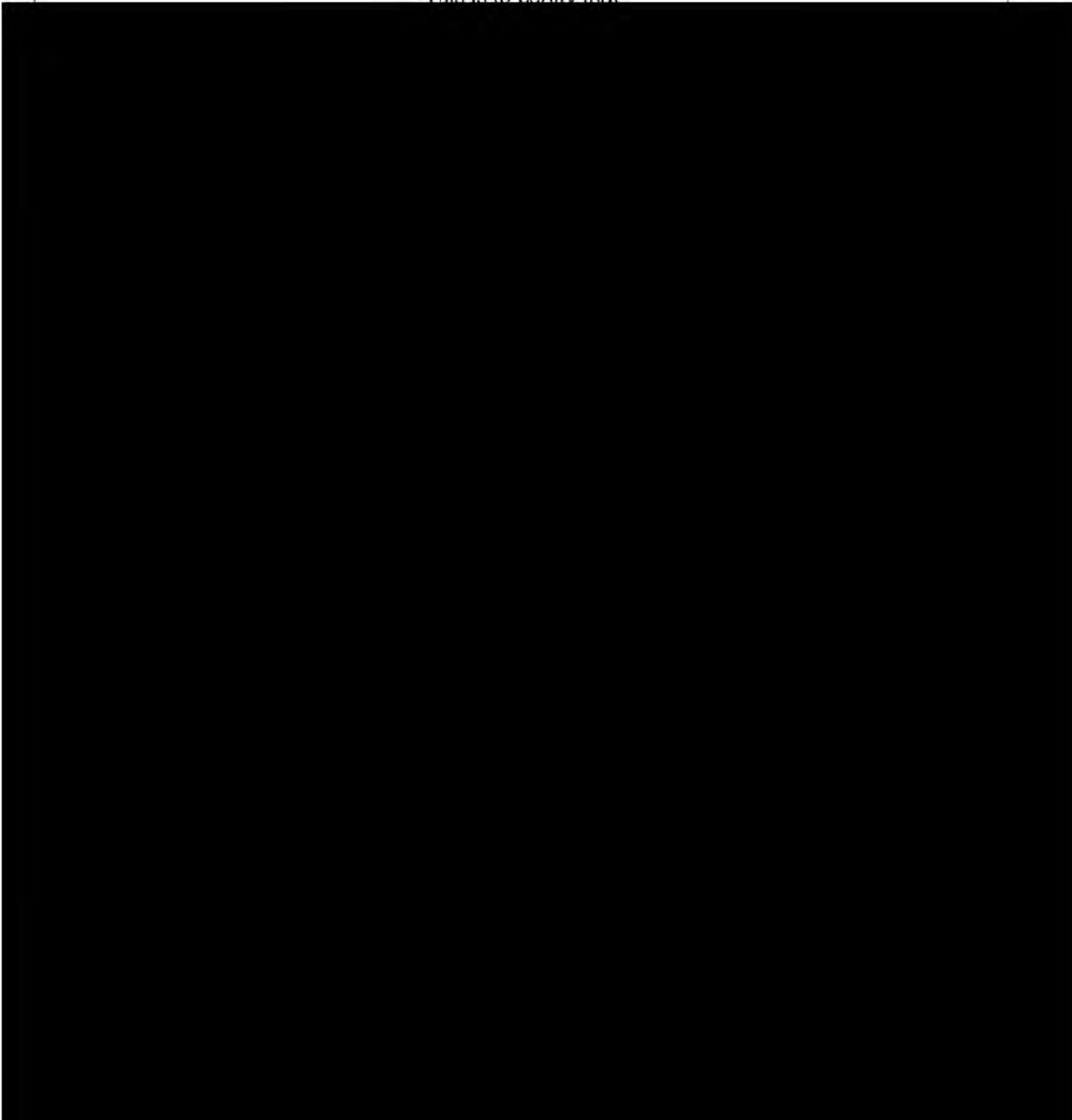


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Curriculum Vitae

Name
Date of Birth
Profession/Specialisation
Years with Firm
Nationality
Years experience

Key Qualifications

Employment Record

10/2022 – Date	Zutari, Technical Specialist
03/2009 - 10/2022	Zutari, Associate and Professional Engineering Technologist
01/1999 - 02/2009	Zutari, Design Technologist

Management Experience

06/2019 – 06/2023	Project Manager for Caledon wastewater treatment works (WWTW)
01/2011 – 10/2022	Zutari, Associate: Water

Experience Record

Macassar Wastewater Treatment Works (WWTW) Upgrade And Extension (South Africa, Western Cape) 11/2021 – Date. Lead Civil Engineer. The current design capacity of the Macassar WWTW is 48 Ml/day (ADWF). The project scope includes the upgrade and capacity extension of the existing WWTW to 80 Ml/day which will include a new liquid stream (inlet works, PSTs, BNR reactors, SSTs, UV and chlorine disinfection) and a new sludge stream (gravity thickeners, anaerobic digesters, gas holding tanks, sludge holding tanks, CHP gas engines, dewatering facilities with linear screens and belt presses) such that the ultimate design capacity is 120 Ml/day (ADWF). Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and evaluation of the first phase of the project, which entails a design capacity of 80 Ml/day (ADWF). Responsible as the lead civil designer which includes the hydraulic, civil and detailed design of the new concrete structures and building works, including overseeing and reviewing the tender and construction drawings. (City of Cape Town Water & Sanitation)

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 1 (Western Cape Province, South Africa) 01/2016 – Date [Anticipated Completion Date: 01/2026]. Lead Civil Engineer. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 1 entails the upgrade and refurbishment of the liquid stream (new inlet works, primary settling tanks, new administration building, new guard house, new chlorine contact tank for disinfection and general civil services including all interconnecting pipework, roads and stormwater. Responsible as the lead civil designer. This includes the hydraulic design, civil and detailed design of the new concrete structures and building works, including overseeing and reviewing the tender and construction drawings. (Drakenstein Municipality)

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 2 (Western Cape Province, South Africa) 01/2016 – Date [Anticipated Completion Date: 02/2028]. Lead Civil Engineer. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 2 entails the construction of a new centralised sludge treatment facility which caters for sludge treatment (primary sludge and waste activated sludge) from Paarl WWTW (35 Ml/day), Wellington WWTW (16 Ml/day) and future Paarl South WWTW (28 Ml/day), hence a combined ADWF of 79 Ml/day. The sludge treatment process includes sludge holding tanks, gravity thickeners, mesophilic anaerobic digesters, gas holding tanks, gas cleaning facility, combined heat and power (CHP), new dewatering plant with belt presses and sludge silos, and general civil services including all interconnecting pipework, roads and stormwater. Responsible as the lead civil designer. This includes the hydraulic design, civil and detailed design of the new concrete structures and building works, including overseeing and reviewing the tender and construction drawings. (Drakenstein Municipality)

Upgrading and Extension of the Stellenbosch Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 11/2013 - 03/2020. Task Leader / Lead Civil Engineer. This project consisted of refurbishing and upgrading the existing 20 Ml/day works and converting to a full biological nutrient (BNR) removal plant utilizing MBR technology. The capacity of the works was extended to 35 Ml/day. Furthermore, provision was made in the current design for it to be retrofitted with primary settling tanks (PSTs) and primary sludge facilities in the future. Thus, the inclusion of this process step will expand the current capacity from 35 Ml/day to 48.5 Ml/day. The 35 Ml/day upgrade comprises of two phases as described below: Phase 1: A new 27 Ml/day membrane bioreactor (MBR) biological nutrient and excess phosphate removal (BNEPR) lane. Phase 1 infrastructure included a new Inlet Works, full biological nutrient removal MBR reactor (sized for 27 Ml/day without PSTs and 38 Ml/day with PSTs), Machine Building (including blowers, permeate pumps and backwash pumps), Aerobic Digester, Dewatering Building (Belt presses), Sludge Silo, New Administration Building, Generator buildings, Guardhouse, Ancillary structures and general civil works. Phase 2: The conversion of existing lane to 8 Ml/day activated sludge process (ASP) BNEPR lane, including associated civil, mechanical and electrical works. Majority of the Phase 2 infrastructure was refurbished and this included conversion of existing aeration reactors to full BNR reactors (sized for 8 Ml/day without PSTs and 10.5 Ml/day with PSTs), refurbishment of existing SSTs, and recycle pump stations, cleaning and refurbishing of the maturation ponds, new ultraviolet (UV) disinfection facilities (closed vessel in-line UV units) and ancillary structures and general civil works. Responsible for the civil and detailed design of the new inlet works and plant hydraulics. (Stellenbosch Local Municipality).

Extension to the Sterkwater Wastewater Treatment Works (WWTW), Phase 3 (Free State Province, South Africa) 08/2014 - 12/2020. Lead Civil Designer. The project consisted of the design, technical specifications and tender documentation writing for the 20 Ml/d extension of the Sterkwater WWTW. The extension included new inlet works, biological reactor, blower building and equipment for fine bubble diffused aeration (FBDA) system settling tanks, a chlorine contact tank and building numerous pump stations. Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and construction supervision. The project also included a second sub-phase which included additional scope comprising of primary settling tanks and associated civil infrastructure. Responsible for the process, civil, hydraulic and detailed design of the new concrete structures of the extension, as well as project management, contract documentation, and overseeing and managing the production of tender and construction drawings. (Mangaung Metropolitan Municipality).

Extensions to Sebokeng Wastewater Treatment Works (WWTW) (Gauteng Province, South Africa) 11/2010 - 12/2018. Design/Civil Technologist. The Sebokeng WWTW was hydraulically overloaded and was retarding the development of the region. Zutari was appointed to design and monitor the construction of the works. The scope of the infrastructure comprised of a new inlet works (hydraulic capacity of 200 Ml/d), a balancing tank, primary settling tanks, two 50 Ml/d biological nutrient removal (BNR) activated sludge units, clarifiers, disinfection, sludge holding tanks, a sludge dewatering plant (linear screens and belt presses) as well as a sludge drying area, composting screening equipment and shed for sludge disposal. Zutari was responsible for feasibility analysis, process design, preliminary design, detailed design, design of mechanical equipment, control system design, construction monitoring, project management of design teams, contract documentation and construction monitoring. Zutari completed Phase 1 which consisted of new inlet works of 100 Ml/d hydraulic capacity, two primary settling tanks, one BNR reactor of 50 Ml/d, 3 clarifiers, disinfection and the sludge dewatering plant. This included civil, structural, mechanical, electrical and control disciplines. Zutari was also responsible for overall project management and oversight and management of the electrical and control designer. Responsible for the preliminary and detailed design of the dewatering building, including a sludge drying area and composting shed and loading areas. (Emfuleni Local Municipality (ELM)).

Upgrade of Isipingo WWTW (WWTW) (KwaZulu-Natal Province, South Africa) 10/2022 – Date. *Lead Civil Engineer/Design Reviewer.* The Water and Sanitation Department of eThekweni Municipality (EWS) is undertaking improvement of works on the Isipingo WWTW – i.e., no overall capacity increase. The plant is ageing with old infrastructure and process deficiencies have been identified. Therefore, functional improvements to selected processes are implemented to operate the plant at its design capacity of 18 ML/d. The project entails planning, refurbishment and improvement of IWWTW. It entails the planning, preliminary design, detail design, procurement and construction monitoring of new inlet works, upgrade of the biofilter pump station, new second class water system (washwater), treated effluent disinfection, roads, stormwater and general civil works. Responsible for overseeing and reviewing the civil and hydraulic design of the project, including new inlet works and second-class water system. (eThekweni Water and Sanitation).

Upgrade of the Wolseley Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 10/2022 – Date. *Lead Civil Engineer/Design Reviewer.* Zutari was appointed for the design and construction supervision of the upgrade of Wolseley WWTW to 2.5 ML/day (ADWF), due to a critical need for upgraded process and capacity. The project is to be executed in two phases. The first phase will cover the critical works, while the second phase will increase capacity and provide improvements. The preliminary design included a new Inlet Works, sludge dewatering, sludge holding tank, a new biological reactor, a new admin building, as well as associated buildings and infrastructure. From these structures, the Inlet Works has been identified as the most critical structure to be constructed under the first phase. To date, the detailed design and construction of the civil infrastructure of the Inlet Works as well as the civil infrastructure of the Inlet Works MCC Building has been completed. Responsible for leading the civil design as well as reviews and verification of construction drawings. (Witzenberg Local Municipality)

Upgrading and Extension of Pniel Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 01/2018 - 06/2022. *Design Reviewer.* The project involved the upgrading and extension of the Pniel WWTW from a Modified Ludzack Ettinger (MLE) configuration works of 1.35 ML/d to a 4.5 ML/d full biological nutrient and excess phosphate removal (BNEPR) configuration. The plant includes new inlet works with screening and de-gritting, an un-aerated basin converted from an existing reactor, a new aeration basin with a fine bubble diffused aeration (FBDA) system, a new secondary settling tank (SST), ultraviolet (UV) disinfection and sludge dewatering via linear screens, and belt presses. Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and evaluation, and construction supervision. Responsible for the civil design review and verification of construction drawings. (Stellenbosch Local Municipality).

Upgrading and Extension of the Sannieshof Wastewater Treatment Works (WWTW) (North West Province, South Africa) 03/2018 - 07/2021. *Professional Engineering Technologist (Civil).* Zutari was appointed for the design, procurement and construction management of a new wastewater treatment facility to replace the existing oxidation pond system at Sannieshof. This project involved the extension of the wastewater treatment works (WWTW) to 2.4 ML/d, to address future treatment requirements of Sannieshof and surrounding areas. It comprised the construction of a new inlet works, a biological reactor, secondary settling tanks (SSTs), a wash-water pump station, and a sludge recycling pump station, and the refurbishment of the Agisanang raw sewage pump station. It also entailed a treated effluent outfall pipeline, a motor control centre (MCC) building, flow diversion and collection chambers, interconnecting pipework, internal roads, stormwater, fencing, and minor modifications to existing structures. Responsible for design reviews of the new inlet works, a biological reactor, clarifier, recycle pump station and interconnecting pipework. (Ngaka Modiri Molema District Municipality (NMMDM)).

Upgrading and Refurbishment of the Caledon Wastewater Treatment Works (WWTW) – Phase 1 and 2 (Western Cape Province, South Africa) 07/2017 - 06/2021. *Design Technologist/Project Leader/Project Manager.* The project entails the preliminary design, detailed design and tender administration for a new inlet works lane, a biological reactor and two clarifiers as well upgrades to the existing raw sewage lift pump station. The existing wastewater treatment works will be extended by adding a 3 ML/d treatment lane. The existing treatment lane will also be refurbished. Responsible for the process design, hydraulic and detail design of new process units. Also responsible for contract administration and acted as engineer for Phase 1, project invoicing, financial controls and reporting, project governance reports and preparation of fee variation orders. Duties also included project resourcing in terms of site personnel, design reviews and scope change, client and project team meetings. (Theewaterskloof Local Municipality).

North-Eastern Wastewater Treatment Works (WWTW) Phase 2 (Free State Province, South Africa) 02/2015 – 04/2018. *Lead Civil Engineer.* The project involved the Design, procurement, construction management and site supervision services for the extension of the North-Eastern WWTW. The Mangaung Metropolitan Municipality identified the need to extend the North-Eastern wastewater treatment works

(WWTW) with a further 30 Ml/day to increase the overall capacity to 45 Ml/day. Zutari was responsible for the design and construction of various components of the works. Responsible for the hydraulic design of the process pipelines and civil design of structures. (Mangaung Metropolitan Municipality).

New Wastewater Treatment Works (WWTW) and Upgrade to Existing WWTW in Walvis Bay (Erongo Region, Namibia) 10/2015 - 06/2019. Design Technologist. Zutari has been appointed for the preliminary and detailed design and tender administration for the new WWTW and upgrades to the existing WWTW in Walvis Bay. The existing works is operating beyond its design capacity of 8.5 Ml/d, yet there is a steady increase in flow due to population growth and development in the municipal area. Zutari proposed an increase in the capacity of the existing works to 11 Ml and constructing the new works in three phases of 7 Ml each. When the new works are in place, the existing works will be decommissioned, as the lifespan of the structures at the existing WWTW will have expired. Responsible for the hydraulic and detailed design of the new process units and design specifications for the civil refurbishments of the existing structures. Also responsible in the overall project management, contract documentation, and overseeing and managing the production of tender and construction drawings. (Walvis Bay Municipality).

Steynsrus Wastewater Treatment Works (WWTW) (Free State Province, South Africa) 05/2014 - 06/2017. Design Technologist. The new 2 Ml per day WWTW will meet the future demand to treat the domestic wastewater from the town of Steynsrus. The construction includes a primary settlement tank; chlorine contact tank and sludge disposal areas. It involved converting existing facultative ponds into an activated sludge plant incorporating the sewage microbial amendment reactor (SMART) units of the hybrid activated sludge (HYBACS) process to meet future demand. Responsible for the process and detailed design of the new biological reactor employing the Modified Ludzack-Ettinger (MLE) process. (Moghaka Local Municipality).

Maintenance of Homevale Wastewater Treatment Works (WWTW) (Northern Cape Province, South Africa) 06/2013 - 11/2016. Design Technologist. This project entailed the procurement of a suitable service provider to assist the Sol Plaatje Local Municipality with the maintenance of a 33 Ml/d WWTW for a period of three years, including training and skills development. Responsible for the preliminary and detail design of the dewatering building including sludge holding tank, a sludge drying slab, sludge loading areas, access roads and drainage facilities. Responsible for managing the production of construction drawings. (Sol Plaatje Local Municipality).

Stellenbosch Wastewater Treatment Works (WWTW) refurbishment (Western Cape Province, South Africa) 09/2010 - 01/2017. Engineering Technologist / Civil Designer. Zutari was appointed to provide professional consultancy services for the refurbishment of the 20 Ml/d wastewater treatment works (WWTW) in Stellenbosch, which required extensive improvements to function properly and efficiently. The refurbishment entailed the emptying, inspection and structural repair of the primary and secondary settling tanks (PSTs and SSTs), including the replacement of bridges on the settling tanks. It also involved the complete refurbishment and configuration of sludge pump stations and the installation of new motors and gearboxes for the fixed aerators. New floating aerators and screens were also installed at the inlet works. Responsible for concept designs and the evaluation of process options, such as membrane biological reactors (MBR's) and the optimisation of existing sludge streams. (Stellenbosch Local Municipality).

Capacity Extension at Driftsands Wastewater Treatment Works (WWTW) (Eastern Cape Province, South Africa) 04/2009 - 06/2017. Technologist. The Nelson Mandela Metropolitan Municipality identified the need to increase the treatment capacity of the Driftsands WWTW. Zutari was appointed to conduct an investigation for the upgrading of the WWTW and prepare a planning report, the preliminary and detail design as well as the preparation of tenders and to monitor activities during the construction stage. The project entailed the construction of a 10 Ml/d separate treatment lane, comprising a new biological reactor, two secondary settling tanks, gravity thickener and associated structures. Responsible for the process, hydraulic and detailed design of the new works, including contract documentation as well as the overseeing and managing of tender and construction drawings. (Nelson Mandela Bay Metropolitan Municipality (NMBMM)).

Assessment of the Zeerust Wastewater Treatment Works (WWTW) (North West Province, South Africa) 08/2009 – Date. Lead Civil Engineer/Design Reviewer. Zutari has been appointed to assess the current and future state of the Zeerust WWTW after concerns were raised concerning the plant's non-compliance with the statutory standards. The upgrading strategy was divided into an immediate, medium-term and long-term strategy. The upgrading strategy involves refurbishing the existing WWTW, constructing a new activated sludge (AS) biological reactor and associated secondary settling tanks (SSTs) beside the existing Orbal biological reactor and constructing a new biological reactor with a capacity of 5 Ml/d in the place of the existing Orbal reactor. Responsible as the lead civil designer, including hydraulic, civil and detailed design of the new concrete structures and building works, including overseeing and reviewing the tender and construction

drawings. (Ngaka Modiri Molema District Municipality (NMMDM)).

Upgrading and Extension of the Wellington Wastewater Treatment Works (WWTW) to 16 Ml/d (Western Cape Province, South Africa) 11/2009 - 11/2019. Lead Civil Engineer / Design Reviewer. The project entails the extension of the existing Wellington WWTW from 6 Ml/d to 16 Ml/d by means of an activated sludge process (ASP) to serve a population of 188 000. The location and extreme weather conditions on site offered many design challenges. Zutari's preliminary and detailed design had to take into consideration different technologies to address the site challenges. Responsible for the detailed design of the new inlet works featuring the 360-degree degritter concept design. (Drakenstein Local Municipality).

Consulting Services for the Upgrade of the Homevale Wastewater Treatment Works (WWTW) (Northern Cape Province, South Africa) 02/2008 - 07/2017. Design Technologist. Sol Plaatje Municipality appointed Zutari to provide professional services for the upgrade of the Homevale WWTW. Zutari provided professional services which included: designs, tender documentation, project management, contract administration and site supervision for the upgrade of the WWTW. The project has been divided into three key phases: an emergency contract to address crucial problems at the plant; a full upgrade to restore the works to its original design capacity; and an extension of the works to address future wastewater treatment requirements in the area. Responsible for the preparation of the operation and maintenance contract documents as well as the process units' operational guidelines. (Sol Plaatje Local Municipality).

Caledon Wastewater Treatment Works (WWTW) Feasibility Study (Western Cape Province, South Africa) 05/2008 - 12/2009. Technologist. The project involved a feasibility study and preliminary planning for the upgrading, refurbishment and extension of the existing Caledon WWTW with a view of using treated sewage effluent for irrigation purposes at the Blue Crane Golf Course Estate. Responsible for site investigations of the existing works' status quo; reviewing existing process operations; and assessing future flow projections and proposals for the refurbishment and treatment process configuration for the upgrading. (Theewaterskloof Local Municipality).

Design of the New North East Wastewater Treatment Works (WWTW) (Free State Province, South Africa) 06/2008 - 07/2008. Civil Designer. The project involved the preliminary and detailed design of the new greenfield site 15 Ml/d North East WWTW to alleviate the continuous overloading of the existing Bloemspruit WWTW. Responsible for the hydraulic design of the process pipelines and structures. (Mangaung Metropolitan Municipality).

Upgrade and Extension of Potsdam Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 08/2007 - 10/2009. Civil Technologist. The project involved the design and construction of a new 30 Ml/d BNR reactor to extend the capacity of the Potsdam WWTW, as well as primary settling tanks (PSTs), secondary settling tanks (SSTs), recycle pump stations, ultraviolet (UV) disinfection, sludge thickening (DAF Units), sludge stabilisation (aerobic digesters), sludge dewatering facilities (mechanical and electrical scope), odour treatment and general civil works. Responsible for the hydraulic, civil and detailed design of the new inlet works structure, SSTs, flow division boxes, bypass culverts, feed channels and a motor control centre (MCC) room (City of Cape Town).

Upgrading of St Albans Wastewater Treatment Works (WWTW) (Eastern Cape Province, South Africa) 02/2005 - 06/2017. Engineering Technologist. The existing St Albans WWTW treats domestic sewage emanating mainly from the St Albans Prison. A sewerage master plan (SMP) study was undertaken in October 2008. The SMP indicated that a new catchment area at the Greenbushes which comprises residential units and industrial outlets will be developed east of the St Albans Prison. This catchment drains in a northerly direction by means of well-defined valleys. The transfer process from the DPW to the custody of the NMBM is currently in progress. It is envisaged that the flows from this catchment will increase from 2.2 Ml/day in 2010 to 24 Ml/day in 2030. This prompted NMBM to plan the transfer and phased upgrading of the existing St Albans WWTW to accommodate this anticipated flow. Responsible for the preliminary, hydraulic and detailed design of the new works including contract documentation, as well as the overseeing and managing of tender drawings. (Nelson Mandela Bay Metropolitan Municipality (NMBMM)).

Upgrading of Klapmuts Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 01/2002 - 05/2003. Technologist. The project involved the upgrading of an existing package WWTW in Stellenbosch by modifying the existing sequential batch reactor (SBR) into an activated sludge (AS) reactor (extended aeration) and incorporating a new secondary settling tank as well as effluent pond. Responsible for the detailed design of the new tank and the effluent pond. (Stellenbosch Local Municipality).

Additional Work for the Athlone Wastewater Treatment Works (WWTW) Upgrading Project (Western Cape Province, South Africa) 11/2002 - 02/2015. Design/Civil Technologist. This project formed part of a larger project for the upgrading of the Athlone WWTW. The additional work included a chlorine disinfection facility, biofiltration odour control and additional primary settling tanks (PSTs). Zutari provided design services, contract management and supervision of the additional works. The additional works allowed the plant to operate at the design capacity of 105 Ml/d. Responsible for the hydraulic, civil and detailed design of the new tanks, including contract documentation and overseeing and managing the tender and construction drawings. (City of Cape Town).

Upgrading of Athlone Wastewater Treatment Works (WWTW (Western Cape Province, South Africa) 01/1999 - 10/2008. Design/Civil Technologist. The project entailed the upgrading of the 105 Ml/d Athlone WWTW. The upgrade involved the complete mechanical refurbishment of the works as well as the upgrading of inlet works screens, screenings washings, degritting sedimentation tanks, diffusers in bioreactors, sludge thickening through gravity and dissolved air floatation (DAF), and the addition of clarifier capacity. Responsible for the civil and detailed design and construction supervision for the 1200 mm-diameter interconnecting twin pipeline. (Cape Metropolitan Council (CMC)).

Education

Ongoing	:	MEng (Water Quality) (in progress), University of Cape Town (UCT), South Africa
2002	:	BTech Civil Engineering, Cape Peninsula University of Technology (CPUT), South Africa
1998	:	NDip Civil Engineering, Cape Peninsula University of Technology (CPUT), South Africa

Career Enhancing Courses

2009	:	Construction Regulations, 2003 Course, Zutari in-house training
2008	:	Water and wastewater treatment course, Stellenbosch University, South Africa
2007	:	Technical Training: Anchor Fixing and Fastening Technology, South African Institute of Civil Engineering (SAICE)

Professional Affiliations



Languages

	Reading	Writing	Speaking
Afrikaans	Good	Fair	Poor
English	Excellent	Excellent	Excellent
Sotho	Excellent	Excellent	Excellent

Research Projects

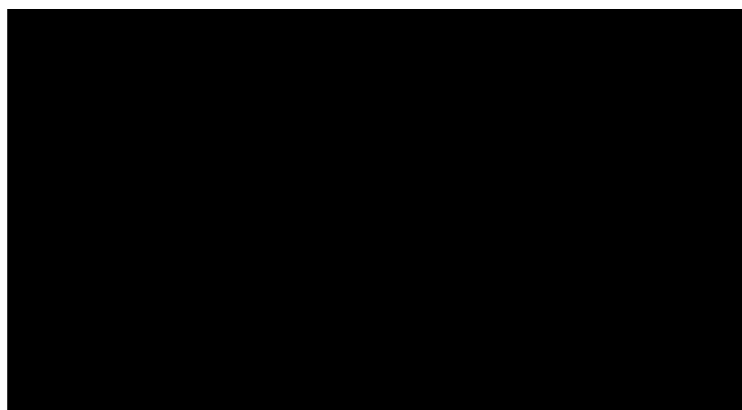


By my signature below I certify the correctness of the information above and my availability to undertake this assignment.

[Redacted Signature and Date]

Signature of Staff Member

Date





CAPE TECHNIKON

the degree
baccalaureus technologiae

ENGINEERING: CIVIL

KAAPSE TECHNIKON



CAPE TECHNIKON

Nasionale · National Diploma

INGENIEURSWESE: SIVIEL

ENGINEERING: CIVIL

Engineering Council of South Africa



Water Institute of Southern Africa



Curriculum Vitae:

Name
 Date of Birth
 Profession/Specialisation
 Years with Firm
 Nationality
 Years of experience

Key Qualifications

Employment Record

01/2024 – Date	Zutari, Resident Engineer (Contract)
01/2009 – 12/2023	Zutari, Project Manager and Resident Engineer
01/1999 – 12/1999	Peninsula Technikon, South Africa, Part-time Lecturer
07/1997 – 12/2008	Drakenstein Municipality Waste Services, Paarl, South Africa, Assistant Town Engineer
07/1994 – 06/1997	Liebenberg and Stander Consulting Engineers and Project Managers, Engineer/Project Leader
01/1991 – 06/1994	Cape Town City Council, Engineer
07/1990 – 12/1990	Hightower Development, London, United Kingdom, Site Surveyor
01/1988 – 06/1990	G, F & J (Entech) in Stellenbosch, Engineer

Experience Record

Construction of a Membrane Biological Removal Plant and Bottleneck Alleviation at Zandvliet Wastewater treatment works (WWTW): Civil Works (Zandvliet, Khayelitsha, Cape Town, Western Cape Province, South Africa) 03/2019 – 11/2021. Resident Engineer/Chief Resident Engineer. This contract formed part of the much larger project, the Upgrading of Zandvliet WWTW and associated infrastructure. The scope of this contract included the new 27 Ml/d membrane bioreactor (MBR) plant comprising three activated sludge lanes, an ultrafiltration membrane plant with pump and blower rooms, four new primary settling tanks (PSTs) new and modified interconnecting pipework to alleviate bottlenecks for the existing two 27 Ml/d conventional activated sludge (AS) plants and the refurbishment of an 18 Ml/d MBR plant, a new administration building which also house an upgraded supervisory control and data acquisition (SCADA) system. Responsible for construction monitoring and supervision of the contract work, with civil and mechanical interface, reinforced concrete, water retaining structures and pipelines. This included quality control and record keeping on the project during the construction stage, management of the contract and contractors. Also responsible for all coordination between various contracts and contractors, project budgets and program, client relations and site management. Supervised and mentored x2 full time Assistant Resident Engineer's. (City of Cape Town).



[Contract Value at Completion: R273 million]¹

Wellington WWTW Extensions (Western Cape Province, South Africa) 11/2018 – 02/2019. Resident Engineer/ Chief Resident Engineer. The project entails the extension of the existing Wellington (WWTW) to 16 Ml/d by constructing a 12 Ml/day treatment lane, comprising a new inlet works, new primary settling tanks, a biological reactor and two secondary settling tanks and associated sludge treatment facilities, including an aerobic digester, sludge holding tanks and a dewatering building. Responsible for leading the civil contract to practical completion. Coordinated between the Civil and Mechanical & Electrical contractors during this critical phase. (Drakenstein Municipality). [Contract Value at Completion: R280 million. Escalated Contract Value: R305 million]

Stellenbosch WWTW Extensions (Western Cape Province, South Africa) 03/2015 – 02/2019. Resident Engineer/Chief Resident Engineer This project consisted of refurbishing and upgrading the existing 20 Ml/day works and converting to a full biological nutrient (BNR) removal plant utilizing MBR technology. The capacity of the works was extended to 35 Ml/day. Furthermore, provision was made in the current design for it to be retrofitted with primary settling tanks (PSTs) and primary sludge facilities in the future. Thus, the inclusion of this process step will expand the current capacity from 35 Ml/day to 48.5 Ml/day. The 35 Ml/day upgrade comprises of two phases. Phase 1: A 27 Ml/day membrane bioreactor (MBR) biological nutrient and excess phosphate removal (BNEPR) lane. Phase 1 infrastructure included a new Inlet Works, full biological nutrient removal MBR reactor (sized for 27 Ml/day without PSTs and 38 Ml/day with PSTs), Machine Building (including blowers, permeate pumps and backwash pumps), sludge thickening (DAF units), Aerobic Digester, Dewatering Building (Belt presses), Sludge Silos, New Administration Building, Generator buildings, Guardhouse, Ancillary structures and general civil works. Phase 2: The conversion of existing lane to 8 Ml/day activated sludge process (ASP) BNEPR lane, including associated civil, mechanical and electrical works. Majority of the Phase 2 infrastructure was refurbished and this included conversion of existing aeration reactors to full BNR reactors (sized for 8 Ml/day without PSTs and 10.5 Ml/day with PSTs), refurbishment of existing SSTs, and recycle pump stations, cleaning and refurbishing of the maturation ponds, new ultraviolet (UV) disinfection facilities (closed vessel in-line UV units) and ancillary structures and general civil works. The dewatering facilities were designed to accommodate the waste activated sludge from the MBR lane and the ASP lane, i.e. sludge treatment for a capacity equivalent to an ADWF of 35 Ml/day. The design also included provision for a composting slab this was not constructed due to funding constraints. It is anticipated that the future upgrade to 48.5 Ml/day will include PSTs, anaerobic digesters and an extension of the current dewatering facility to accommodate additional belt presses. Zutari's scope included feasibility and planning Study (RBIG process), planning and conceptual design, preliminary design, detailed design, tender documentation and evaluation, contract administration and construction supervision, as well as administration of the 3-year operation and maintenance contract. Zutari's scope also included management of OHS Agent and ECO officer. This project was the winner of the 2020 CESA Aon Engineering Excellence Award. Responsible for construction monitoring and supervision of the contract work, with civil and mechanical interface, reinforced concrete, water retaining structures and pipelines. This included quality control and record keeping on the project during the construction stage, management of the contract and contractors. Also responsible for all coordination between various contracts and contractors, project budgets and program, client relations and site management. He supervised and mentored x1 full time Assistant Resident Engineer's and a Student Technician. (Stellenbosch Municipality). [Contract Value at Completion: R404 million. Escalated Contract Value: R510 million]

Fort Beaufort Bulk Water Supply Upgrade (Eastern Cape Province, South Africa) 07/2014 – 03/2015. Contract Documentation Engineer. With the completion of the Bucket Eradication Programme (BEP), Fort Beaufort's water demand increased significantly. The water supply became strained and even required water restrictions to be put in place over the holiday periods. Zutari was appointed to investigate upgrade options, manage the implementation process and oversee the construction. A feasibility study was performed and the optimum arrangement for upgrading the bulk water infrastructure was determined. The solution consisted of augmenting the current supply arrangement, which comprised of abstracting water from the Kat River, pumping it to the water treatment works (WTW) before it is pumped to the command reservoir site, and from there distributed to the various suburbs of Fort Beaufort. The method by which raw water needed to be abstracted from the Kat River was determined by means of specialists within Zutari and external desilting specialists. The outcome of the study was implemented, incorporating the client's operations and maintenance (O&M) considerations into the final design. The six construction contracts involved: Installation of 9.5 km unplasticized polyvinyl chloride (uPVC) water pipes ranging in diameter from 160 mm to 500 mm; Construction of four new pump stations (between 32 l/s and 226 l/s), including a river abstraction pump station; Construction of four new

¹ All project fees/cost indicated are as the time of the project and have been escalated to 2025 values, using an escalation percentage of 6%, as shown in the formula below:

$$\text{Escalated Contract Value} = \text{Contract Value at Completion} \times (1+6\%)^x \text{ (2025 - Year Completed)}$$

concrete water storage reservoirs ranging in size from 2.2 Ml to 3 Ml; and the upgrade of an existing 7 Ml/d WTW to an approximate 16 Ml/d capacity. The scope of work included civil, structural, mechanical, electrical and electronic engineering services. The project is currently ongoing and due to be completed in 2028. Responsible for some aspects of the contract documentation. (Amathole District Municipality). [Initial Contract Value: R200 million]²

Detailed Design of Sewerage Works, Detailed Mechanical Design and Construction Supervision for the Accra Sewerage Improvement Project (ASIP) (Accra, Botswana) 05/2009 – 01/2014. *Contract Documentation Engineer.* The Accra Metropolitan Assembly (AMA) wanted to upgrade the sewerage system in the city. Zutari was appointed as sub-contractor to CPP Botswana to design the sewage works and pump stations and help during the construction supervision phase. The AMA engaged Lahmeyer to investigate the sanitation situation and develop a plan and programme to overcome the problems identified. They found that there were many isolated sewerage areas in Accra, but the systems had fallen into disuse and needed to be rehabilitated. An expansion of the network was also suggested because many of the residents had septic tanks and could connect to them, reducing pollution. AMA and the African Development Bank (AfDB) funded the study and proceeded to the construction stage. CPP from Botswana approached Zutari for the design of the sewage works and pump stations; for aiding during the supervision phase to ensure that the mechanical works were up to standard and for reviewing the designs, correcting shortcomings, putting them out to tender and supervising contracts. The first contract dealt with sewage works to treat 7 ml/d, four pump stations and associated rising mains, two gravity sewers and a marine outfall to take treated sewage offshore. Contract 2 involved sewage works to treat 6 Ml/d, four pump stations and associated rising mains and a gravity sewer and gravity outfall. Contract 3 rehabilitated and expanded the sewerage network, while Contract 4 entailed purchasing equipment so that the city could maintain its infrastructure. CPP provided most of the construction supervision. Responsible for some aspects of the contract documentation. (CCP Botswana Pty Ltd) [Contract Value at Completion: R129 million. Escalated Contract Value: R231 million]

River Club Development: Construction of External Roads and Civil Infrastructure (Observatory, Cape Town, Western Cape Province, South Africa) 12/2021 – 12/2023. *Resident Engineer.* The main components of this contract were the construction of bulk earthworks, external roads, signalized intersections, connection to M5 and bridge over Black River (all handed over to City of Cape Town). As well as internal roads, internal services and significant work in eastern and western arms of Liesbeek River. With full-time Assistant Resident Engineer, he was responsible for all aspects of quality control and record keeping, managing the contract, payment certificates and coordination with other contractors, clients and City of Cape Town. (Liesbeek Leasure Properties Trust).

Infrastructure for SKA (SA) for the MeerKAT Site (Carnarvon, Northern Cape Province, South Africa) 04/2012 - 05/2014. *Resident Engineer.* The project comprised various contracts of which the roads, buildings and the foundations contracts were his main responsibilities. The roads contract involved a 1.3 km airstrip - layer-works with Cape Seal; two construction camps with 15 kl/day water supply as well as wastewater treatment plants and standby generators; a 3.16 km raised gravel road with 12 storm-water culverts and 24.7 km secondary gravel roads with 71 storm-water drifts for access to the 64 raised antennae platforms. It also entailed 148 km of optic fiber ducting and electrical power cables which are 28.7 km of 22 kV and 4.9 km of 33 kV with associated mini sub-stations, transformers, ring main units (RMU's) and other switch gear. The buildings contract entailed a new office and workshop with a floor area of 443 m², constructed close to town and 90 km from main site, extension to the dish assembly shed to 1 233 m² with offices and stores of 246 m², a new pedestal integration building of 274 m² with offices and stores of 97 m², a new Karoo Array Processor Building (KAPB) of 2 111 m², which is a semi underground power and data management center. It also included associated bulk earthworks, roads, pavements, storm-water management, ducting, electrical, plumbing, sewer fire detection and suppression, cranes as well as lifting equipment, heating ventilation and air-conditioning (HVAC). The foundations contract involved 64 antennae foundations with anchor bolt cages of 70 t each, totaling 512 piles of 750 mm diameter by 10 m deep. It further included pile caps comprising a total of 2 200 m³ concrete and 300 t of reinforcing and special earthing with a maximum specification of 1 Ohm as well as special construction tolerances. Responsible for all quality control, and record keeping of the contracts and contractors. Also responsible for all coordination between contracts and contractors as well as the radio frequency interference (RFI) shielding contract, the local area network (LAN) contract, the building management system contract and the diesel rotary uninterruptable power supply (UPS) contract. His staff component on site were two assistant resident engineers, one technician, an office clerk and three site clerks. (Square Kilometer Array (SKA) – South Africa).

² All project fees/cost indicated are as the time of the project and have been escalated to 2025 values, using an escalation percentage of 6%, as shown in the formula below:

$$\text{Escalated Contract Value} = \text{Contract Value at Completion} \times (1+6\%)^{\wedge} (2025 - \text{Year Completed})$$



Cape Flats Digester Refurbishment (Western Cape Province, South Africa) 01/2009 - 03/2012. *Project Manager.* The project comprised the replacement of the concrete roofs and lining the new roofs with Anchor Knob Sheetting (AKS) to protect against gases as well as other structural refurbishment of three 20 m-high by 20 m diameter anaerobic digester as well as the installation of an external pump mixing system for each digester. Responsible for managing project budgets and programming, client relations and site management. (City of Cape Town)

Green Point Sewer Pump Station Refurbishment (Western Cape Province, South Africa) 01/2009 - 01/2011. *Project Manager.* The project comprised civil rehabilitation (replace 1200 mm diameter interconnecting pipe work being the largest single item), the installation of two new, 20 mm mechanical screens, one 3mm mechanical screen and refurbishment of a 3 mm screen as well as the installation of an odour extraction and treatment system utilizing an organic scrubber and carbon filter. Responsible for managing project budgets and programs, client relations and site management. (City of Cape Town).

Meulwater Water Treatment Works and Civil Works (Paarl, Western Cape Province, South Africa) 03/2009 - 01/2011. *Project Manager.* The project comprised the construction of all the civil and water retaining structures for an 8 Ml/d water treatment works on Paarl Mountain. Responsible for managing project budgets and programming, client relations and site management. (Drakenstein Municipality)

Cape Flats Regional Sludge Plant (Western Cape Province, South Africa) 07/2010 - 03/2012. *Project Manager.* The project comprised a sludge mixing tank, sludge holding tank, sludge pump station, sludge blending tank with mechanical mixing and pumping equipment to accept dewatered sludge for redistribution into the anaerobic digesters at the Cape Flats WWTW. Responsible for managing project budgets and programming, client relations and construction site management. (City of Cape Town).

Wellington WWTW Extensions (Western Cape Province, South Africa) 09/2010 - 03/2012. *Engineer/Project Manager.* The project comprised the design, tender procurement, and construction supervision of 10 Ml/d extensions to the Wellington treatment works. Responsible for project coordination, preliminary design and approval of the phasing. (Drakenstein Municipality).

Academic Experience

Peninsula Technikon. *Lecturer.* Lecturer in Municipal reticulation design and management for the B Tech course. Covered all aspects of water and sewage reticulation design and management systems; water networks; reservoirs; sewer networks; sewage pumping stations; storm water networks and balancing ponds.

Education

- | | |
|------|---|
| 1992 | Postgraduate Diploma (Wastewater Treatment and Project Management), University of Cape Town (UCT), South Africa |
| 1987 | BEng Engineering (Civil), University of Stellenbosch, South Africa |

Career Enhancing Courses

- | | |
|------|--|
| 2011 | Short Course on the General Conditions of Contract 2011, Binnington Copeland & Associates (BCA) Training |
| 2010 | Short Course on the General Conditions of Contract 2004, Binnington Copeland & Associates (BCA) Training |
| 2007 | Short Course in Water Resource Management, University of Stellenbosch, South Africa |
| 2002 | Short Course in Project Management Development, University of Stellenbosch, South Africa |
| 1992 | Short Course on Contract Law, University of Cape Town (UCT), South Africa |
| 1987 | Short Course on Project Management for Builders, University of Stellenbosch, South Africa |

Professional Affiliations



Languages

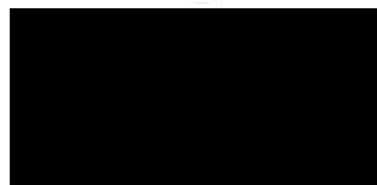
	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

Publications

By my signature below I certify the correctness of the information above and my availability to undertake this assignment.

Signature of Staff Member

Date



Sub-Consultancy Letter of Association

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

Tender No.: 266C/2024/25

[REDACTED]

required outcomes for the project, Tender No.: 266C/2024/25, for which part the said firm is responsible as part of the professional team of Zutari (Pty)Ltd.

I am committed to provide the resources and the time to complete the required activities and deliverables for the duration of the project and will ensure achievement to milestones and delivery of the products and reports, as required. If staff changes are to be made during the course of the project, this shall be done only with prior approval and to the satisfaction of the Client.

Please do not hesitate to contact me should you require any further information.

Signed at **Betties Bay**, on this 6th day of **June 2025**.

[REDACTED]

1 July 2025

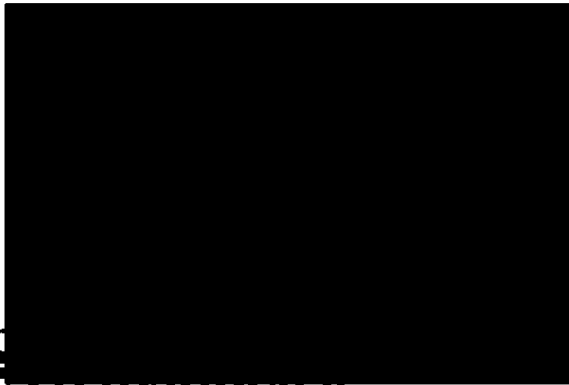
Dear Sir/Madam

TENDER NO.: 266C/2024/25 - PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

Letter of Undertaking for Chief/Lead Resident Engineer

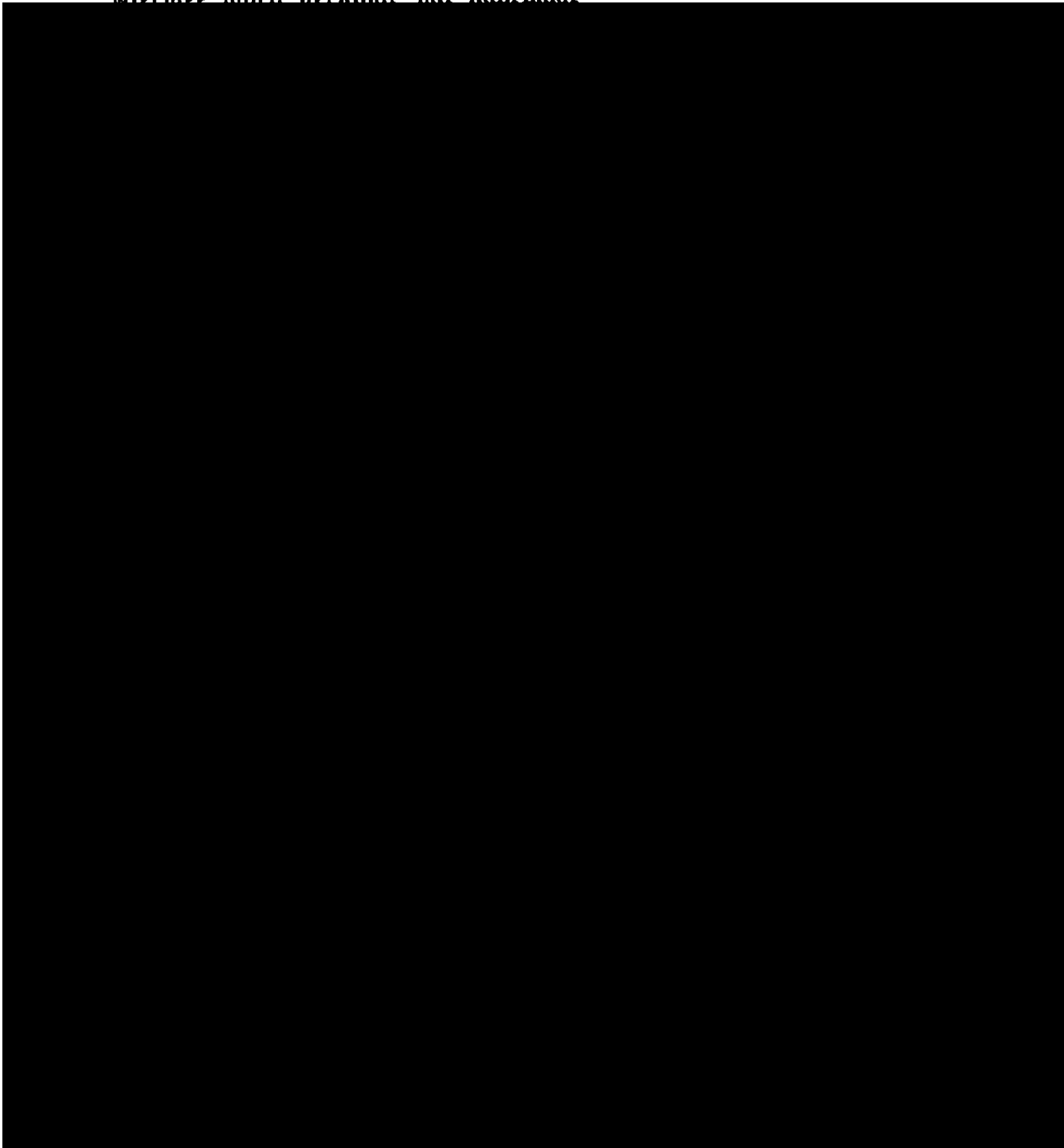
We, the undersigned, **Zutari (Pty) Ltd**, hereby confirm our undertaking **[REDACTED]** proprietor (as a sub-consultant to Zutari), for the dedicated role of Chief/Lead Resident Engineer for the entire duration of this Contract. In the event that a staff change is required for the Chief/Lead Resident Engineer for circumstances beyond our control, a candidate with equal or better qualifications and experience shall be recommended and this shall be done only with the prior approval and to the satisfaction of the City of Cape Town.

We trust that this confirmation meets the City's requirements.



Die Universiteit van Leiden

Hiermee wordt verklaard dat nademaal





UNIVERSITY OF CAPE TOWN

W. J. van der Merwe, M. A. (Ed.)

Suid-Afrikaanse Raad vir Ingenieurswese



From: ECSA Communications <ecsainfo@ecsa.co.za>
Date: Tue, 1 Jul 2025 at 16:57
Subject: Outcome of Renewal Application CRM:0396839
To: Dawid Malan <dawidmln@gmail.com>



1st Floor, Waterview, 2 Ernest
Private Bag X691 Bruma Johann

01-Jul-2025 17:57

ECSA Profile number:

E-mail:

Dear Dawid Malan CS.1

Part C5: Returnable Documents
Documents
Reference No. 266C/2024/25

**CONFIRMATION OF THE RENEWAL OF REGISTRATION IN TERMS OF SECTION 22(1) OF
THE ENGINEERING PROFESSIONS ACT, 2000 (ACT 46 OF 2000)**

The Engineering Council of South Africa is pleased to inform you that your application for the renewal of your registration, in accordance with Section 22(1) of the Engineering Profession Act, 2000 (Act 46 of 2000), has been approved.

Your registration has been successfully renewed for an additional five (5) years and will be valid until , provided that you continue to pay your annual fees.

Thank you for your commitment to your professional development and for adhering to the rules and standards of our profession.

Congratulations! We look forward to your continued contributions to the field and to maintaining your recognised status with the Engineering Council of South Africa.

Yours faithfully,



Senior Manager: Registration and Compliance

[unsubscribe](#)

Curriculum Vitae:

Name
 Date of Birth
 Profession/Specialisation
 Years with Firm
 Nationality
 Years experience

Key Qualifications

Employment Record

11/2020 - Date	Zutari, Associate
11/2016 - 10/2020	Zutari, Professional Mechanical Engineer
09/2011 - 10/2016	Zutari, Mechanical Engineer
08/2010 - 04/2011	University of KwaZulu-Natal (UKZN), Practical Demonstrator/Mentor/Tutor
08/2009 - 04/2010	University of KwaZulu-Natal (UKZN), Practical Demonstrator
08/2007 - 03/2008	Eskom, Engineer-in-Training

Experience Record

Macassar Wastewater Treatment Works (WWTW) upgrade and extension (South Africa, Western Cape)
11/2021 - Date. Deputy Project Leader and Lead Mechanical Engineer. The current design capacity of the Macassar WWTW is 48 Ml/day (ADWF). The project scope includes the upgrade and capacity extension of the existing WWTW to 80 Ml/day (ADWF) which will include a new liquid stream (inlet works, PSTs, BNR reactors, SSTs, UV and chlorine disinfection) and a new sludge stream (gravity thickeners, anaerobic digesters, gas holding tanks, sludge holding tanks, CHP gas engines, dewatering facilities with linear screens and belt presses). Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and evaluation of the first phase of the project, which entails a design capacity of 80 Ml/day (ADWF). Responsible for the project co-ordination between the different disciplines (civil, electrical and mechanical) and leading the mechanical design during stages 1-4. Involved in engaging with the client through the planning phase to determine the preferred treatment option and equipment selection. Involved in compiling the condition assessment report, inception report, technical memorandums and various other activities (technology selection for complex equipment and equipment redundancy allowance) at the planning phase. Also involved in the tender evaluation process. (City of Cape Town)

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 1 (Western Cape Province, South Africa) 08/2023 - Date [Anticipated Completion Date: 01/2026]. Lead Mechanical Engineer and Engineer for the Mechanical and Electrical Contract. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 1 entails the upgrade and refurbishment of the liquid stream (new inlet works, primary settling tanks, new administration building, new guard house, new chlorine contact tank for disinfection and general civil services including all interconnecting pipework, roads and stormwater. The scope includes project management, process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. An emergency construction phase was undertaken before Package 1 between July 2016 and June 2019 which included the upgrade of the aeration system, refurbishment of the mixers and upgrade of the recycle pumps. Responsible for leading the mechanical design. Acted as the Employer's Agent (Engineer) for the Package 1 Mechanical and Electrical Works (as defined in FIDIC Conditions of Contract for Plant and

Design-Build, Yellow Book) (Sept 2023 to Date). Acted as the Employer's Agent (Engineer) (as defined in FIDIC Conditions of Contract for Plant and Design-Build, Yellow Book) for the Emergency Phase Mechanical and Electrical Contract (Feb 2017 and June 2019). (Drakenstein Municipality)

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 2 (Western Cape Province, South Africa) 06/2025 – Date [Anticipated Completion Date: 02/2028]. Mechanical Engineer Reviewer. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 2 entails the construction of a new centralised sludge treatment facility which caters for sludge treatment (primary sludge and waste activated sludge) from Paarl WWTW (35 Ml/day), Wellington WWTW (16 Ml/day) and future Paarl South WWTW (28 Ml/day), hence a combined ADWF of 79 Ml/day. The sludge treatment process includes sludge holding tanks, gravity thickeners, mesophilic anaerobic digesters, gas holding tanks, gas cleaning facility, combined heat and power (CHP), new dewatering plant with belt presses and sludge silos, and general civil services including all interconnecting pipework, roads and stormwater. The scope includes project management, process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Responsible for reviewing the mechanical design. (Drakenstein Municipality)

Upgrading and Extension of the Stellenbosch Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 11/2013 - 03/2020. Mechanical Engineer on Phase 1 (27 Ml/d MBR Plant) and Lead Mechanical Engineer on Phase 2 (8 Ml/d ASP). This project consisted of refurbishing and upgrading the existing 20 Ml/day works and converting to a full biological nutrient (BNR) removal plant utilizing MBR technology. The capacity of the works was extended to 35 Ml/day. Furthermore, provision was made in the current design for it to be retrofitted with primary settling tanks (PSTs) and primary sludge facilities in the future. Thus, the inclusion of this process step will expand the current capacity from 35 Ml/day to 48.5 Ml/day. The 35 Ml/day upgrade comprises of two phases. Phase 1: A 27 Ml/day membrane bioreactor (MBR) biological nutrient and excess phosphate removal (BNEPR) lane. Phase 1 infrastructure included a new Inlet Works, full biological nutrient removal MBR reactor (sized for 27 Ml/day without PSTs and 38 Ml/day with PSTs), Machine Building (including blowers, permeate pumps and backwash pumps), sludge thickening (DAF units), Aerobic Digester, Dewatering Building (Belt presses), Sludge Silos, New Administration Building, Generator buildings, Guardhouse, Ancillary structures and general civil works. Phase 2: The conversion of existing lane to 8 Ml/day activated sludge process (ASP) BNEPR lane, including associated civil, mechanical and electrical works. Majority of the Phase 2 infrastructure was refurbished and this included conversion of existing aeration reactors to full BNR reactors (sized for 8 Ml/day without PSTs and 10.5 Ml/day with PSTs), refurbishment of existing SSTs, and recycle pump stations, cleaning and refurbishing of the maturation ponds, new ultraviolet (UV) disinfection facilities (closed vessel in-line UV units) and ancillary structures and general civil works. The dewatering facilities were designed to accommodate the waste activated sludge from the MBR lane and the ASP lane, i.e. sludge treatment for a capacity equivalent to an ADWF of 35 Ml/day. The design also included provision for a composting slab this was not constructed due to funding constraints. It is anticipated that the future upgrade to 48.5 Ml/day will include PSTs, anaerobic digesters and an extension of the current dewatering facility to accommodate additional belt presses. Zutari's scope included feasibility and planning Study (RBIG process), planning and conceptual design, preliminary design, detailed design, tender documentation and evaluation, contract administration and construction supervision, as well as administration of the 3-year operation and maintenance contract. Zutari's scope also included management of OHS Agent and ECO officer. Responsible for portions of the mechanical design on Phase 1 and leading the Mechanical Design on Phase 2. Also supported the Engineer (FIDIC) where responsibilities also included financial management, contract and site administration, review and verification of contractor's design and drawings, and conducting equipment and snag inspections. (Stellenbosch Local Municipality)

Upgrading of Zandvliet Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 03/2014 - 12/2020. Mechanical Engineer. Zutari was appointed to analyse, plan and design equipment and infrastructure for the capacity extension and refurbishment of Zandvliet WWTW and associated infrastructure refurbishment from 72 Ml/d to 90 Ml/d at ADWF. The new nominal design capacity of 90 Ml/d was achieved through the construction of the following main unit processes: a new and enlarged inlet works, four new PSTs, a new biological nutrient removal (BNR) reactor using a membrane bioreactor (MBR) with a nominal capacity of 27 Ml/d at ADWF, a chlorine dosing building and chlorine contact tank, interconnecting pipelines, a WAS holding tank, two primary sludge holding tanks, sludge dewatering facilities (WAS and primary sludge belt presses) and two dewatered sludge silos. Furthermore, the existing 2 x 27 Ml/d conventional activated sludge (AS) plants and the 18 Ml/d MBR plant were refurbished with new mechanical equipment. New buildings entail a new machine building and a new administration building to house an upgraded supervisory control and data acquisition (SCADA) system. An on-site irrigation network using treated effluent. The project further included a sludge treatment feasibility study which considered conventional and advanced sludge treatment options,

including combined heat and power. Zutari's services provided included Planning, conceptual and preliminary design, detailed design, contract documentation and procurement, construction monitoring, and project close out (ECSA Stages 1-6). Zutari's scope includes process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Zutari's scope also included management of OHS Agent and ECO officer. Responsible for portions of the mechanical design, including the hydraulic and pipework design and modelling of the MBR pump station, and the compilation of the mechanical specification for the pump station. (City of Cape Town)

Sterkwater Wastewater Treatment Works (WWTW) Phase 3 (South Africa, Free State) 11/2020 - 12/2023. *Project Manager and Lead Mechanical Engineer.* The project consisted of the design, technical specifications and tender documentation writing for the 20 Ml/d extension of the Sterkwater WWTW. The extension included new inlet works, biological reactor, blower building and equipment for fine bubble diffused aeration (FBDA) system settling tanks, a chlorine contact tank and building numerous pump stations. Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and construction supervision. The project also included a second sub-phase which included additional scope comprising of primary settling tanks and associated civil infrastructure. Responsible for managing the project, compiling the tender document, the mechanical design, and compilation of the mechanical specifications and the bill of quantities. (Mangaung Metropolitan Municipality).

Upgrade of Isipingo WWTW (KwaZulu-Natal Province, South Africa) 10/2022 – Date. *Project Leader and Lead Mechanical Engineer.* The Water and Sanitation Department of eThekweni Municipality (EWS) is undertaking improvement of works on the Isipingo WWTW – i.e., no overall capacity increase. The plant is ageing with old infrastructure and process deficiencies have been identified. Therefore, functional improvements to selected processes are implemented to operate the plant at its design capacity of 18 Ml/d. The project entails planning, refurbishment and improvement of WWTW. It entails the planning, preliminary design, detail design, procurement and construction monitoring of new inlet works, upgrade of the biofilter pump station, new second class water system (washwater), treated effluent disinfection, roads, stormwater and general civil works. Responsible for managing the project and procurement process (tender documentation and evaluation), liaising with the Client and sub-consultant as well as overseeing and reviewing the mechanical design of the project, including new inlet works, second class water system, biofilter pump station and treated effluent disinfection. (eThekweni Water and Sanitation).

Cape Flats WWTW: Mixer Failure Review Study (South Africa, Western Cape) 04/2025 – Date. *Project Leader and Lead Mechanical Engineer.* The 200 Ml/d Cape Flats Wastewater Treatment Works started experiencing gearbox failures on the vertical shaft mixers in the bioreactors shortly after new mixers were installed in 2021. The new mixers made use of inline gearboxes with axial downflow impellers. The mixer failures occurred in only the anaerobic and primary anoxic zones of the eight reactor basins. Since 2021, a number of investigations have taken place to determine the cause of these failures. The City of Cape Town has now appointed Zutari as a third party to provide additional insight into the mixer failures at Cape Flats WWTW. The purpose of this study is as follows: (i) determine the cause of the mixer gearbox failures and (ii) recommend possible solutions to prevent further failures. Responsible for managing the project and leading the review (City of Cape Town Water & Sanitation).

Upgrading and Extension of Pniel Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 01/2018 - 06/2022. *Lead Mechanical Engineer and Engineer for the Mechanical and Electrical Contract.* The project involves the upgrading and extension of the Pniel WWTW from a Modified Ludzack Ettinger (MLE) configuration works of 1.35 Ml/d to a 4.5 Ml/d full biological nutrient and excess phosphate removal (BNEPR) configuration. The plant will include new Inlet works with screening and de-gritting, conversion of existing reactor to unaerated basin, new aeration basin with a fine bubble diffused aeration (FBDA) system, new secondary settling tank (SST), ultraviolet (UV) disinfection and sludge dewatering via linear screens and belt presses. Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and evaluation, and construction supervision. Responsible for the design and compilation of the mechanical specifications and bill of quantities (BoQ). Also responsible for review and verification of contractor's design, drawings and conducting equipment and snag inspections, compiling payment certificates, chairing the monthly mechanical and electrical meeting. Acted as the Employer's Agent (as defined in FIDIC Conditions of Contract for Plant and Design-Build, Yellow Book) for the Mechanical and Electrical Contract (January 2020 and March 2024). (Stellenbosch Local Municipality)

Sannieshof Wastewater Treatment Works (WWTW) (South Africa, North-West) 03/2018 - 06/2022. *Mechanical Engineer.* The project involves the extension of the wastewater treatment capacity in Sannieshof and surrounding areas to address future treatment requirements. It comprises the construction of a new inlet works, a biological reactor, secondary settling tanks, wash-water pump station, sludge recycle pump station

and the refurbishment of the Agisanang raw sewage pump station. It also entails a treated effluent outfall pipeline, MCC building, flow diversion and collection chambers, interconnecting pipework, internal roads, stormwater, fencing and minor modifications to existing structures. Responsible for reviewing the mechanical design and drawings submitted by the Contractor. (Ngaka Modiri Molema District Municipality)

Hitachi RemixWater Demonstration Plant at the Central Wastewater Treatment Works (WWTW) (South Africa, KwaZulu-Natal) 03/2017 - 01/2018. Lead Mechanical Engineer. Zutari was appointed as employer's representative and mechanical and electrical design engineer for the engineering phase of the 6.25 Ml/d demonstration plant at the Central WWTW, using Hitachi's patented RemixWater system. This system combines seawater desalination and wastewater reuse to produce potable water. Hitachi received funding from the New Energy and Industrial Technology Development Organization (NEDO) to implement the project. Zutari's services included project management, mechanical and electrical preliminary design, tender documentation, and tender evaluation. Responsible for compiling the mechanical specification and bill of quantities (BoQ). (Hitachi)

Rouse Hill WWTP Inlet Works Renewal (Sydney, New South Wales, Australia) 01/2017 – 06/2018. Project Leader. Zutari undertook the design and construct (D&C) of the upgrade of inlet screens and a grit system at the Rouse Hill WWTW. Responsible for managing the drafting, which included checking and marking up drawings regarding technical details and computer-aided design (CAD) standards prior to submitting drawings to the Client. (Abergeldie Complex Infrastructure).

Burwood Beach Wastewater Treatment Works (WWTW) Ultraviolet (UV) Upgrade Project (Australia, New South Wales (NSW)) 10/2015 - 11/2016. Mechanical Engineer. The project involved the installation of an ultraviolet (UV) disinfection system at the Burwood Beach WWTW to improve water quality at Newcastle's beaches. The system deactivates bacteria, viruses and protozoa. Aurecon was appointed by Abergeldie Complex Infrastructure as lead designer on this project and carried out the design of interconnecting piping, hydraulic designs, roads, drainage, mechanical services, electrical power supply and control systems, earthworks, construction, and commissioning technical advice. The designs of the platforms, roads, structures, sizing, levels, was handled by the Aurecon's Australian design team, while the South African team translated their design into 3D models and produced the drawing outputs. Responsible for managing a drafting team composed of various engineering disciplines and checking and marking up drawings regarding technical details and computer-aided design (CAD) standards prior to submitting drawings to the Australian design team. Also responsible for frequent and close collaboration with Australian team. (Hunter Water Corporation (HWC)/Abergeldie Complex Infrastructure)

Extension of Wellington Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 11/2009 - 07/2021. Mechanical Engineer and Engineer for the Mechanical and Electrical Contract. The project entails the extension of the existing Wellington (WWTW) to 16 Ml/d by constructing a 12 Ml/day treatment lane, comprising a new inlet works, new primary settling tanks, a biological reactor and two secondary settling tanks and associated sludge treatment facilities, including an aerobic digester, sludge holding tanks and a dewatering building. Responsible for the design and modelling of the main sludge pump station, reviewing the Contractor's design and drawings, compiling payment certificates, chairing the monthly mechanical and electrical meeting, and conducting equipment and snag inspections. Acted as the Employer's Agent (Engineer) (as defined in FIDIC Conditions of Contract for Plant and Design-Build, Yellow Book) for the Mechanical and Electrical Contract (January 2018 and August 2020). (Drakenstein Local Municipality)

Upgrading of Zeerust Wastewater Treatment Works (WWTW) (South Africa, North-West) 08/2009 - 01/2023. Mechanical Engineer. Zutari was appointed to assess the current and future state of the Zeerust WWTW. The works has been identified as a plant that raised concerns due to its non-compliance with the statutory standards, which resulted in the works being identified by the Department of Water Affairs and Environment (DWAE) as a works that should get priority attention on refurbishment. The upgrading strategy was divided into an immediate, medium-term and long-term strategy. For the immediate and medium term, it was proposed that the existing WWTW be refurbished to enable the works to produce an effluent that complies with the DWAE general limit. The medium-term strategy further entailed the construction of a new activated sludge biological reactor and associated secondary settling tanks beside the existing Orbal biological reactor, with an average dry weather flow (ADWF) capacity of 5.0 Ml/d. For the long term, the strategy included the construction of a new biological reactor with a capacity of 5.0 Ml/d in the place of the existing Orbal reactor, making use of the existing two 20.7 m secondary settling tanks. Responsible for reviewing the Contractor's design and drawings. (Ngaka Modiri Molema District Municipality)

Engineering Services for the Mangaung North-Eastern Wastewater Treatment Works (WWTW) (South Africa, Free State) 06/2008 - 12/2014. Mechanical Engineer. The project entailed the construction of a 15

the Bloemfontein WWTW and a 1.8 km outfall sewer just north of the Bloemfontein Air Force Base (AFB) to relieve the pressure on the Bloemfontein WWTW. Zutari was appointed to provide the planning, design, procurement and construction supervision on the project. The project also included numerous bulk outfall sewers ranging in diameters from 200 mm to 800 mm, approximately 14 km. Responsible for the heating, ventilation and air conditioning (HVAC) design of the pump and the motor control centre (MCC) at the wastewater pump station. (Mangaung Metropolitan Municipality)

Education

2011 MSc Mechanical Engineering (Mechatronics), University of KwaZulu-Natal (UKZN), South Africa
2007 BSc Mechanical Engineering, University of KwaZulu-Natal (UKZN), South Africa

Career Enhancing Courses

2014 C++ Programming HEQF Level 5, University of South Africa (UNISA)

Professional Affiliations

Languages

	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Afrikaans	Fair	Poor	Poor

Publications

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**UNIVERSITY OF
KWAZULU-NATAL**

**INYUVESI
YAKWAZULU-NATALI**



UNIVERSITY OF KWAZULU-NATAL

The Universities of Durban-Westville and Natal merged
to become the University of KwaZulu-Natal on 1 January 2004

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Engineering Council of South Africa





SAIMEchE

24 March 2017

The South African Institution of Mechanical Engineering

1st Floor, West Wing
Voltex Building
3 River Road
Bedfordview, 2007

National Office

Curriculum Vitae:

Name :
 Date of Birth :
 Profession/Specialisation :
 Years with Firm :
 Nationality :
 Years experience :

Key Qualifications

Employment Record

2024 – Date	Zutari, Technical Director
2020 - 2024	Zutari, Associate
02/2009 – 2020	Zutari, Electrical & Electronic Engineer

Experience Record

Macassar Wastewater Treatment Works (WWTW) Upgrade and Extension (South Africa, Western Cape) 11/2021 – Date. Electronic Engineer. The current design capacity of the Macassar WWTW is 48 M³/day (ADWF). The project scope includes the upgrade and capacity extension of the existing WWTW to 80 M³/day which will include a new liquid stream (inlet works, PSTs, BNR reactors, SSTs, UV and chlorine disinfection) and a new sludge stream (gravity thickeners, anaerobic digesters, gas holding tanks, sludge holding tanks, CHP gas engines, dewatering facilities with linear screens and belt presses). Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and evaluation of the first phase of the project, which entails a design capacity of 80 M³/day (ADWF). As Digital and Electronic Leader, Kenney was responsible for automation and data design including a fully automated plant with centralised control room, historian, data warehouse, business intelligence and communication to the larger enterprise decision support system at the Water & Sanitation head office. A proof of concept of a virtual centralised control room was developed during the detail design to test design assumptions and implementation readiness of new technologies. The POC included PLCs, SCADA, a 3D model, with BIM data and aggregated data from the historian, and a VR/AR model with live data embedded in the models. (City of Cape Town)

Upgrading of Zandvliet Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 2014/03 - 2025/10. Electrical/Electronic Engineer. Zutari was appointed to analyse, plan and design equipment and infrastructure for the capacity extension and refurbishment of Zandvliet WWTW and associated infrastructure refurbishment from 72 M³/d to 90 M³/d at ADWF. The new nominal design capacity of 90 M³/d was achieved through the construction of the following main unit processes: a new and enlarged inlet works, four new PSTs, a new biological nutrient removal (BNR) reactor using a membrane bioreactor (MBR) with a nominal capacity of 27 M³/d at ADWF, a chlorine dosing building and chlorine contact tank, interconnecting pipelines, a WAS holding tank, two primary sludge holding tanks, sludge dewatering facilities (WAS and primary sludge belt presses) and two dewatered sludge silos. Furthermore, the existing 2 x 27 M³/d conventional activated sludge (AS) plants and the 18 M³/d MBR plant were refurbished with new mechanical equipment. New buildings entail a new machine building and a new administration building to house an upgraded supervisory control and data acquisition (SCADA) system. An on-site irrigation network using treated effluent. The project further included a sludge treatment feasibility study which considered conventional and advanced sludge treatment options, including combined heat and power. Zutari's services provided included Planning, conceptual and preliminary design, detailed design, contract documentation and procurement, construction monitoring, and project close out (ECSA Stages 1-6). Zutari's scope includes process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Zutari's scope also included management of OHS Agent and ECO officer.

Responsible for design of electrical (including MV, LV and motor control centres) and electronic systems (incl. control, instrumentation, networks, SCADA, Reporting and data management) and full supervision of reporting system implementation. (City of Cape Town).

Upgrading and Extension of the Stellenbosch Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 11/2013 - 03/2020. Lead Electrical/Electronic Engineer. This project consisted of refurbishing and upgrading the existing 20 M³/day works and converting to a full biological nutrient (BNR) removal plant utilizing MBR technology. The capacity of the works was extended to 35 M³/day. Furthermore, provision was made in the current design for it to be retrofitted with primary settling tanks (PSTs) and primary sludge facilities in the future. Thus, the inclusion of this process step will expand the current capacity from 35 M³/day to 48.5 M³/day. The 35 M³/day upgrade comprises of two phases. Phase 1: A new 27 M³/day membrane bioreactor (MBR) biological nutrient and excess phosphate removal (BNEPR) lane. Phase 1 infrastructure included a new Inlet Works, full biological nutrient removal MBR reactor (sized for 27 M³/day without PSTs and 38 M³/day with PSTs), Machine Building (including blowers, permeate pumps and backwash pumps), sludge thickening (DAF units), Aerobic Digester, Dewatering Building (Belt presses), Sludge Silos, New Administration Building, Generator buildings, Guardhouse, Ancillary structures and general civil works. Phase 2: The conversion of existing lane to 8 M³/day activated sludge process (ASP) BNEPR lane, including associated civil, mechanical and electrical works. Majority of the Phase 2 infrastructure was refurbished and this included conversion of existing aeration reactors to full BNR reactors (sized for 8 M³/day without PSTs and 10.5 M³/day with PSTs), refurbishment of existing SSTs, and recycle pump stations, cleaning and refurbishing of the maturation ponds, new ultraviolet (UV) disinfection facilities (closed vessel in-line UV units) and ancillary structures and general civil works. The dewatering facilities were designed to accommodate the waste activated sludge from the MBR lane and the ASP lane, i.e. sludge treatment for a capacity equivalent to an ADWF of 35 M³/day. The design also included provision for a composting slab this was not constructed due to funding constraints. It is anticipated that the future upgrade to 48.5 M³/day will include PSTs, anaerobic digesters and an extension of the current dewatering facility to accommodate additional belt presses. Zutari's scope included feasibility and planning Study (RBIG process), planning and conceptual design, preliminary design, detailed design, tender documentation and evaluation, contract administration and construction supervision, as well as administration of the 3-year operation and maintenance contract. Zutari's scope also included management of OHS Agent and ECO officer. Responsible for design and supervision of electrical (MV and LV) and electronic systems (incl. control, instrumentation, networks, SCADA, Reporting and data management). (Stellenbosch Local Municipality)

Detailed Design of the Lower Thukela Bulk Water Supply Scheme (LTBWSS) (KwaZulu-Natal Province, South Africa) 09/2011 - 10/2016. Lead Electrical/Electronic Engineer. Zutari was appointed to undertake the detailed design and preparation of contract documentation of all the infrastructure associated with the Lower Thukela Bulk Water Supply Scheme (LTBWSS). The project involved the design of a new weir, abstraction works, a 55 Ml/d water treatment works (WTW), a low and high lift pump station, 30 Ml reservoir and 30 km of 900 mm diameter pipeline. Responsible for the full design and construction supervision of the medium-voltage (MV) electrical control and instrumentation of the WTW. The plant is fully automated with a programmable logic control (PLC) and plant-wide supervisory control and data acquisition (SCADA) system. A backup generator was provided for portions of the plant, and building services such as small power and lighting, closed-circuit television (CCTV) and fire detection access control were also included in the design. Responsible for the design and supervision of Electrical (MV and LV) and Electronic (incl. control, instrumentation, networks, SCADA, Reporting and data management) systems. (Umgeni Water).

Tete Wellfields and Water Scheme (Mozambique) 01/2021 - Date. Lead Electrical, Control and Instrumentation, Data. Zutari's scope of services involve the detailed design of electromechanical equipment of approximately 60 new and existing boreholes, rehabilitation and expansion works of the water treatment plant from 12 Ml/d to 24 Ml/d and new pumping stations, approximately 1 MW installed capacity, in Tete; and the supervision thereof. Services will include review of existing equipment to be used in designs for electrical, mechanical and civil works; improvements, bidding documents and support during the bid evaluation process. Responsible for the design and supervision of Electrical (MV and LV) and Electronic (incl. control, instrumentation, networks, SCADA, Reporting and data management) systems. (FIPAG, Mozambique).

New Bioreactor for Melbourne Water (Melbourne, Australia) - 11/2018 - 06/2020. Lead Electrical/Electronic Engineer. Melbourne Water's Western Treatment Plant (WTP) treats 500 ML/d of wastewater from most of Melbourne's population using an integrated system of lagoons and activated sludge plants for treatment prior to discharge to Port Phillip Bay or as recycled water, both on site and externally to market gardens. Zutari, in conjunction with Black & Veatch and working closely with Melbourne Water, undertook extensive planning, investigation and modelling to assess a range of treatment process options for a new nutrient removal plant (NRP) to be integrated with the lagoons. The preferred process option was based on innovative short-cut

nitrogen removal techniques which has not been built before to the scale required of this project. Following site selection, a functional design was developed together with a cost estimate. Responsible for the electrical and electronic concept design. (Melbourne Water).

Voëlklei High Lift Pump Station Upgrade (Western Cape Province, South Africa) - 05/2017 - 12/2020.

Lead MV Designer. The mechanical and electrical equipment at the plant's high lift pump station (HLPS) was 45 years old and kept failing. Furthermore, the rising main pipeline had a long history of pipe failures. Zutari is replacing the existing 5x1210 kW and 1x550 kW pumps (180MLD) with the addition of medium voltage variable frequency converters (MV VFC)s (3.3 kV), more modern non-return valves (NRVs) and an adjusted control method to limit surge on the pipeline. Specialist harmonic and water surge/hammer studies that impacted design are done. The project will ensure reliable operation and water supply to the City of Cape Town area. Responsible for the design and construction supervision of all MV related aspects. (City of Cape Town)

Upgrading of Malmesbury Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 10/2004 - 10/2016. Lead Electrical/Electronic Engineer.

Due to sustained growth in the town of Malmesbury, the WWTW, which treats both domestic and industrial wastewater, 10 Ml/d membrane bioreactor (MBR) plant was added, and the rest of the plant M&E works were replaced. Zutari conducted a feasibility study for the upgrade of the facility. The upgrading of the plant to a MBR system satisfied all the objectives and, by utilising existing infrastructure, significant cost savings were realised. The upgrade was carried out in a step-by-step manner and as a result, interruption to the operation of the existing plant was minimised. The system is designed to accommodate seasonal flow variation and provide operational flexibility and energy saving. The upgrade increases the plant's hydraulic capacity to 10Ml/d, while achieving the prescribed effluent requirements, thereby serving as a lasting asset to the community. The innovative MBR approach has reduced the overall cost of the upgrade through maximising use of existing infrastructure and reducing peak-wet-weather loading on the membranes. Responsible for the full design and construction supervision of the electrical and electronic portion of the WWTW. The design included MV switchgear, three motor control centres (MCCs) of 600 kVA, 1 200 kVA and 200 kVA; programmable logic control (PLC); human-machine interface (HMI); a plant-wide supervisory control and data acquisition (SCADA) system and instrumentation such as flow, turbidity, pressure and level metering. (Swartland Municipality)

Education

2011 : MSc Industrial Engineering, University of Stellenbosch, South Africa
2006 : BEng Industrial: Electronic, University of Stellenbosch, South Africa

Professional Affiliations



Languages

	Reading	Writing	Speaking
Afrikaans	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

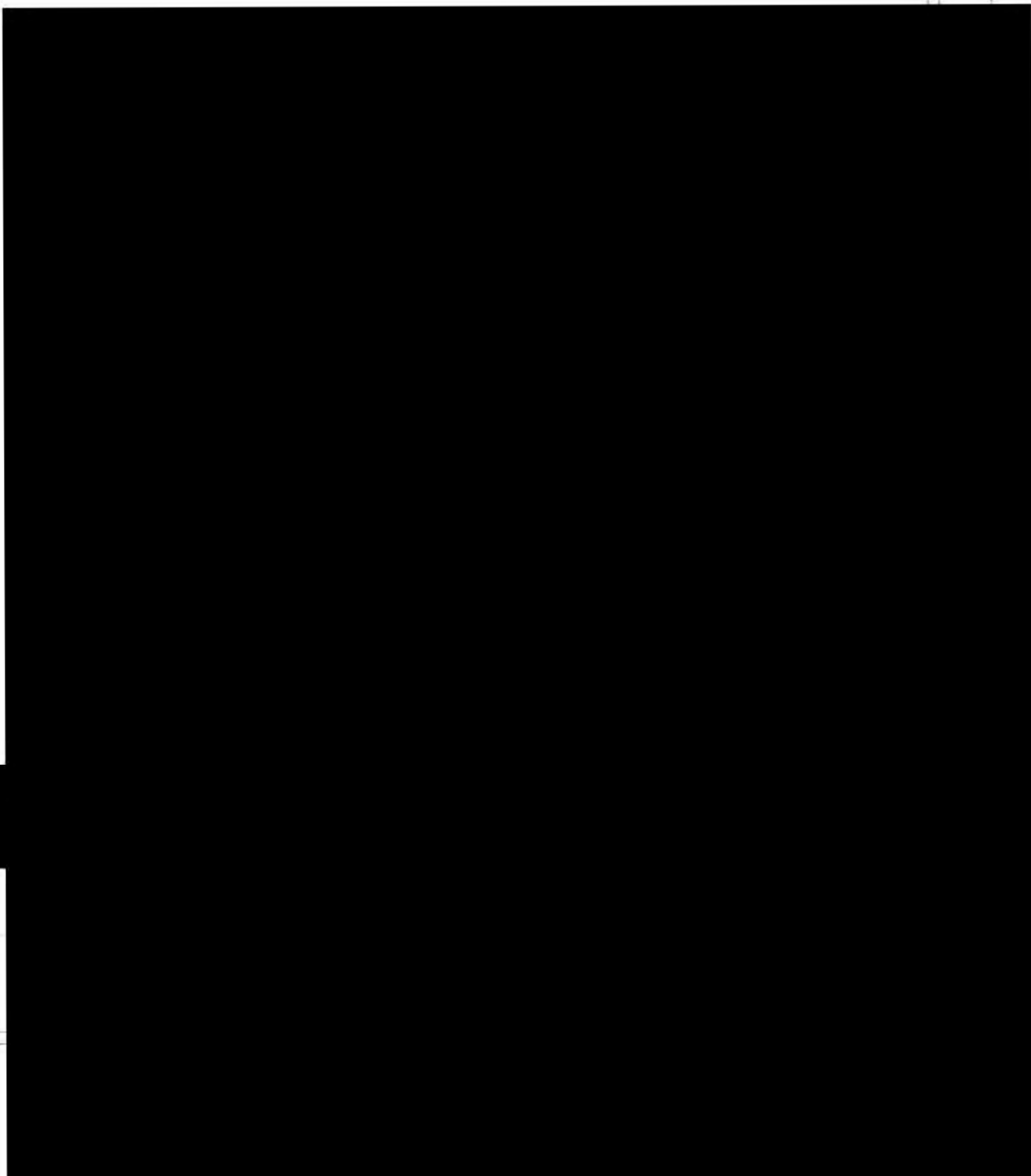
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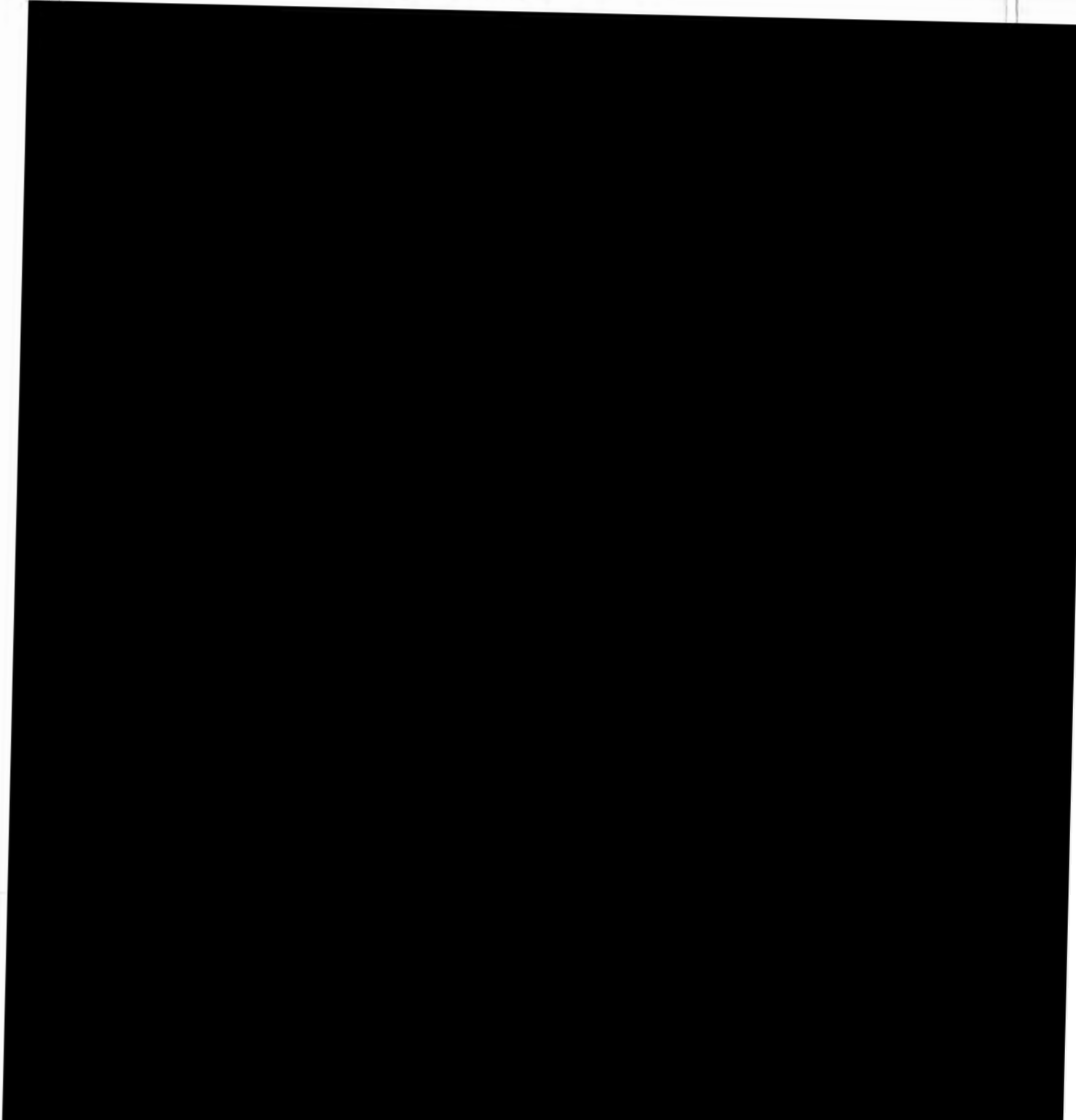




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Engineering Council of South Africa



SCHEDULE 12.b: OTHER PERSONNEL

Curriculum Vitae:

Name
Date of Birth
Profession/Specialisation
Years with Firm
Nationality
Years experience

Key Qualifications

Employment Record

2023 – Date	Zutari, Technical Specialist – Water-Retaining Structures
2021 – 2023	Zutari, Associate Structural Engineer
2013 – 2021	Zutari, Structural Engineer

Experience Record

Macassar Wastewater Treatment Works (WWTW) Upgrade And Extension (South Africa, Western Cape)
11/2021 – Date. **Lead Structural Engineer.** The current design capacity of the Macassar WWTW is 48 Ml/day (ADWF). The project scope includes the upgrade and capacity extension of the existing WWTW to 80 Ml/day which will include a new liquid stream (inlet works, PSTs, BNR reactors, SSTs, UV and chlorine disinfection) and a new sludge stream (gravity thickeners, anaerobic digesters, gas holding tanks, sludge holding tanks, CHP gas engines, dewatering facilities with linear screens and belt presses) such that the ultimate design capacity is 120 Ml/day (ADWF). Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and evaluation of the first phase of the project, which entails a design capacity of 80 Ml/day (ADWF). Responsible for leading the concept design and structural detailed design of new structures. (City of Cape Town Water & Sanitation)

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 1 (Western Cape Province, South Africa) 01/2016 – Date [Anticipated Completion Date: 01/2026]. Lead Structural Engineer. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 1 entails the upgrade and refurbishment of the liquid stream (new inlet works, primary settling tanks, new administration building, new guard house, new chlorine contact tank for disinfection and general civil services including all interconnecting pipework, roads and stormwater. An emergency construction phase was undertaken before Package 1 between July 2016 and June 2019 which included the upgrade of the aeration system, refurbishment of the mixers and upgrade of the recycle pumps. Acted as a resident engineer on the emergency construction phase. Responsible for leading the concept design and structural detailed design of new structures. (Drakenstein Municipality)

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 2 (Western Cape Province, South Africa) 01/2016 – Date [Anticipated Completion Date: 02/2028]. Lead Structural Engineer. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 2 entails the construction of a new centralised sludge treatment facility which caters for sludge treatment (primary sludge and waste activated

sludge) from Paarl WWTW (35 Ml/day), Wellington WWTW (16 Ml/day) and future Paarl South WWTW (28 Ml/day), hence a combined ADWF of 79 Ml/day. The sludge treatment process includes sludge holding tanks, gravity thickeners, mesophilic anaerobic digesters, gas holding tanks, gas cleaning facility, combined heat and power (CHP), new dewatering plant with belt presses and sludge silos, and general civil services including all interconnecting pipework, roads and stormwater. Acted as a resident engineer on the project. Responsible for leading the concept design and structural detailed design of new structures. (Drakenstein Municipality)

Upgrading of Zandvliet Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 03/2014 - 12/2024. Lead Structural Engineer. Zutari was appointed to analyse, plan and design equipment and infrastructure for the capacity extension and refurbishment of Zandvliet WWTW and associated infrastructure refurbishment from 72 Ml/d to 90 Ml/d at ADWF. The new nominal design capacity of 90 Ml/d was achieved through the construction of the following main unit processes: a new and enlarged inlet works, four new PSTs, a new biological nutrient removal (BNR) reactor using a membrane bioreactor (MBR) with a nominal capacity of 27 Ml/d at ADWF, a chlorine dosing building and chlorine contact tank, interconnecting pipelines, a WAS holding tank, two primary sludge holding tanks, sludge dewatering facilities (WAS and primary sludge belt presses) and two dewatered sludge silos. Furthermore, the existing 2 x 27 Ml/d conventional activated sludge (AS) plants and the 18 Ml/d MBR plant were refurbished with new mechanical equipment. New buildings entail a new machine building and a new administration building to house an upgraded supervisory control and data acquisition (SCADA) system. An on-site irrigation network using treated effluent. The project further included a sludge treatment feasibility study which considered conventional and advanced sludge treatment options, including combined heat and power. Zutari's services provided included Planning, conceptual and preliminary design, detailed design, contract documentation and procurement, construction monitoring, and project close out (ECSA Stages 1-6). Zutari's scope includes process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Zutari's scope also included management of OHS Agent and ECO officer. Responsible for the structural design, detailing and deliverables for the new concrete structures/ sludge dewatering facilities (this included new lower screw pump station, inlet works, primary settling tanks, flow splitters, sludge holding tanks, dewatering building). Services included the construction monitoring of the 1400 mm thick raft slab of the new lower screw pump station via temperature monitoring, to determine best shutter stripping time. (City of Cape Town)

Upgrading and Extension of the Stellenbosch Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 11/2013 - 12/2023. Lead Structural Designer/Assistant Resident Engineer (ARE). This project consisted of refurbishing and upgrading the existing 20 Ml/day works and converting to a full biological nutrient (BNR) removal plant utilizing MBR technology. The capacity of the works was extended to 35 Ml/day. Furthermore, provision was made in the current design for it to be retrofitted with primary settling tanks (PSTs) and primary sludge facilities in the future. Thus, the inclusion of this process step will expand the current capacity from 35 Ml/day to 48.5 Ml/day. The 35 Ml/day upgrade comprises of two phases. Phase 1: A 27 Ml/day membrane bioreactor (MBR) biological nutrient and excess phosphate removal (BNEPR) lane. Phase 1 infrastructure included a new Inlet Works, full biological nutrient removal MBR reactor (sized for 27 Ml/day without PSTs and 38 Ml/day with PSTs), Machine Building (including blowers, permeate pumps and backwash pumps), sludge thickening (DAF units), Aerobic Digester, Dewatering Building (Belt presses), Sludge Silos, New Administration Building, Generator buildings, Guardhouse, Ancillary structures and general civil works. Phase 2: The conversion of existing lane to 8 Ml/day activated sludge process (ASP) BNEPR lane, including associated civil, mechanical and electrical works. Majority of the Phase 2 infrastructure was refurbished and this included conversion of existing aeration reactors to full BNR reactors (sized for 8 Ml/day without PSTs and 10.5 Ml/day with PSTs), refurbishment of existing SSTs, and recycle pump stations, cleaning and refurbishing of the maturation ponds, new ultraviolet (UV) disinfection facilities (closed vessel in-line UV units) and ancillary structures and general civil works. The dewatering facilities were designed to accommodate the waste activated sludge from the MBR lane and the ASP lane, i.e. sludge treatment for a capacity equivalent to an ADWF of 35 Ml/day. The design also included provision for a composting slab this was not constructed due to funding constraints. It is anticipated that the future upgrade to 48.5 Ml/day will include PSTs, anaerobic digesters and an extension of the current dewatering facility to accommodate additional belt presses. Zutari's scope included feasibility and planning Study (RBIG process), planning and conceptual design, preliminary design, detailed design, tender documentation and evaluation, contract administration and construction supervision, as well as administration of the 3-year operation and maintenance contract. Zutari's scope also included management of OHS Agent and ECO officer. Responsible for the compilation of the tender document structural work components, approval of concrete mix design, design and detailing of structural steel and reinforced concrete (RC) structures and construction supervision activities. (Stellenbosch Local Municipality)

Construction of Gordons Bay Sewage Pump Station and Rising Main (Cape Town, South Africa) 04/2024 – Date. Lead Structural Engineer / Designer. Zutari was appointed to design and implement of the construction of a sewage pump station and pumping main in Gordons Bay, including civil works and mechanical and electrical installation. The project scope consisted of the reinforced concrete pump station sump and buildings, construction of a sand trap and interconnecting pipework from the existing WWTW, the construction of a ND 700 mm GRP pumping main, 7500 meters long with air and scour valves complete with reinforced concrete chambers, as well as micro tunnelling under roads and water courses. Responsible for leading the concept design and structural detailed design. (City of Cape Town)

Muldersvlei 300 ML Reservoir (Western Cape Province, South Africa) 11/2021 – 01/2024. Lead Structural Engineer / Designer. The City of Cape Town (CoCT) initiated the Bulk Water Augmentation Scheme (BWAS) to increase the City's bulk water supply capacity. The BWAS aims to implement new infrastructure to increase the CoCT's water treatment and bulk storage capacity and to increase the flexibility of the bulk water distribution network. Zutari was appointed to do preparatory work to complete the existing preliminary design for the Muldersvlei 300 ML Reservoir and associated infrastructure and undertake the detailed design, implementation and site supervision stage. Services included environmental assessments of the proposed pipelines on the neighbouring farmlands. Geotechnical test pit drawings, and incoming and outgoing pipeline long section drawings. Responsible for leading the structural detailed design. (City of Cape Town).

Tete Wellfields and Water Scheme (Mozambique) 01/2021 – Date. Lead Structural Engineer / Designer. Zutari's scope of services involve the detailed design of electromechanical equipment of approximately 60 new and existing boreholes, rehabilitation and expansion works of the water treatment plant from 12 Ml/d to 24 Ml/d and new pumping stations, approximately 1 MW installed capacity, in Tete; and the supervision thereof. Services will include review of existing equipment to be used in designs for electrical, mechanical and civil works; improvements, bidding documents and support during the bid evaluation process. Responsible for leading the structural detailed design. (FIPAG, Moazmbique)

Athlone Wastewater Treatment Civil Works Refurbishment (South Africa, Western Cape) 09/2023 - 05/2027. Structural Engineer and Design Reviewer. The project entailed the refurbishment of selected civil components of the existing wastewater treatment works on the Athlone WWTW. Responsible for inspections of concrete quality of existing bioreactor walls, as well as workshopping and making recommendations for repairs / lining of walls, floors and localised patch repairs on concrete elements as needed. (City of Cape Town)

Upgrading and Extension of the Sannieshof Wastewater Treatment Works (WWTW) (South Africa, North West) 03/2018 - 07/2021. Lead Structural Engineer. The project involved the extension of the WWTW to address future treatment requirements of Sannieshof and surrounding areas. It comprised the design and construction of a new inlet works, a biological reactor, secondary settling tanks (SSTs), a wash-water pump station, and a sludge recycling pump station, and the refurbishment of the Agisanang raw sewage pump station. It also entailed a treated effluent outfall pipeline, a motor control centre (MCC) building, flow diversion and collection chambers, interconnecting pipework, internal roads, stormwater, fencing, and minor modifications to existing structures. Responsible for managing the workflow consisting of structural design and structural detailing, as well as producing technical deliverables such as drawings, structural bills of quantities (BoQs), and structural specifications of reinforced concrete (RC) structures and structural steel elements. (Ngaka Modiri Molema District Municipality)

Upgrading of Water and Sanitation Services in Dordrecht (South Africa, Eastern Cape) 10/2015 - 06/2021. Structural Engineer. This project was divided into four projects, including the construction of new wastewater treatment facilities, the construction of new reticulation in Dordrecht, immediate water supply upgrades, and long-term bulk water supply upgrades. A feasibility study showed that a conjunctive approach, which involves water being supplied from both surface water and groundwater sources, would be the most feasible for water supply. The project aimed to increase volumes of good quality drinking water and improve the level of service (LOS) for the communities in the area. Responsible for the detailed design and supervision of structural deliverables for the new pump station structure. (Chris Hani District Municipality)

New Wastewater Treatment Works (WWTW) and upgrading of the existing WWTW in Walvis Bay (Namibia, Erongo Region) 10/2015 - 07/2019. Structural Designer. Zutari was appointed for the preliminary and detailed design and tender administration for the new WWTW and upgrades to the existing WWTW in Walvis Bay. The existing works was operating beyond its design capacity of 8.5 Ml/d, yet there was a steady increase in flow due to population growth and development in the municipal area. Zutari proposed an increase in the capacity of the existing works to 11 Ml and constructing the new works in three phases of 7 Ml each. Responsible for the structural design of new reinforced concrete (RC) structures as well as for specification of repair and refurbishment strategies of existing structures. (Walvis Bay Municipality)

Upgrading of Moorreesburg Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 09/2013 - 06/2024. Lead Structural Engineer. The project involves the upgrading of the Moorreesburg WWTW, which had a hydraulic treatment capacity of 1.5 Ml/d. Zutari was appointed to provide professional engineering consultancy services, including a status quo assessment and planning study to make projections regarding future flows, developing solutions, and using Zutari's steady state activated sludge (AS) models to determine key process parameters. The assessment found that major civil structures might fail within the next eight to ten years, which has resulted in the consideration of numerous operational, refurbishment and upgrade options at a conceptual level and the evaluation of these in terms of technical and economic prefeasibility criteria. Responsible for the concept design and detailed design of the new concrete structures, including an elevated inlet works, bioreactor, aerobic digester, dewatering building, secondary settling tank, machine building, various pump stations, chlorine contact tank, as well as the refurbishment of existing concrete structures on the plant site. (Swartland Local Municipality)

Upgrading of the Homevale Wastewater Treatment Works (WWTW) (South Africa, Northern Cape) 02/2008 - 06/2018. Structural Designer. Zutari provided professional services for the upgrading of the Homevale WWTW, including designs, tender documentation, project management, contract administration, and site supervision for the upgrade. The project was divided into three key phases, namely an emergency contract to address crucial problems at the plant, a full upgrade to restore the works to its original design capacity, and an extension of the works to address future wastewater treatment requirements in the area. An environmental impact assessment (EIA) was also carried out for the extension. Responsible for the structural design and reinforcement detailing of water retaining and ancillary structures. Also responsible for the structural design and drafting of steel roof systems for ancillary structures. (Sol Plaatje Local Municipality)

Academic Experience

2019 Undergraduate Civil Engineering Course - Module on introduction to Design (Limit State Approach). Matteo lectured the 3rd year undergraduate class in April of 2019 and in March of 2021.

Education

2012 MSc Structural Engineering and Concrete Materials, University of Cape Town (UCT), South Africa
2010 BSc Civil Engineering, University of Cape Town (UCT), South Africa

Professional Affiliations

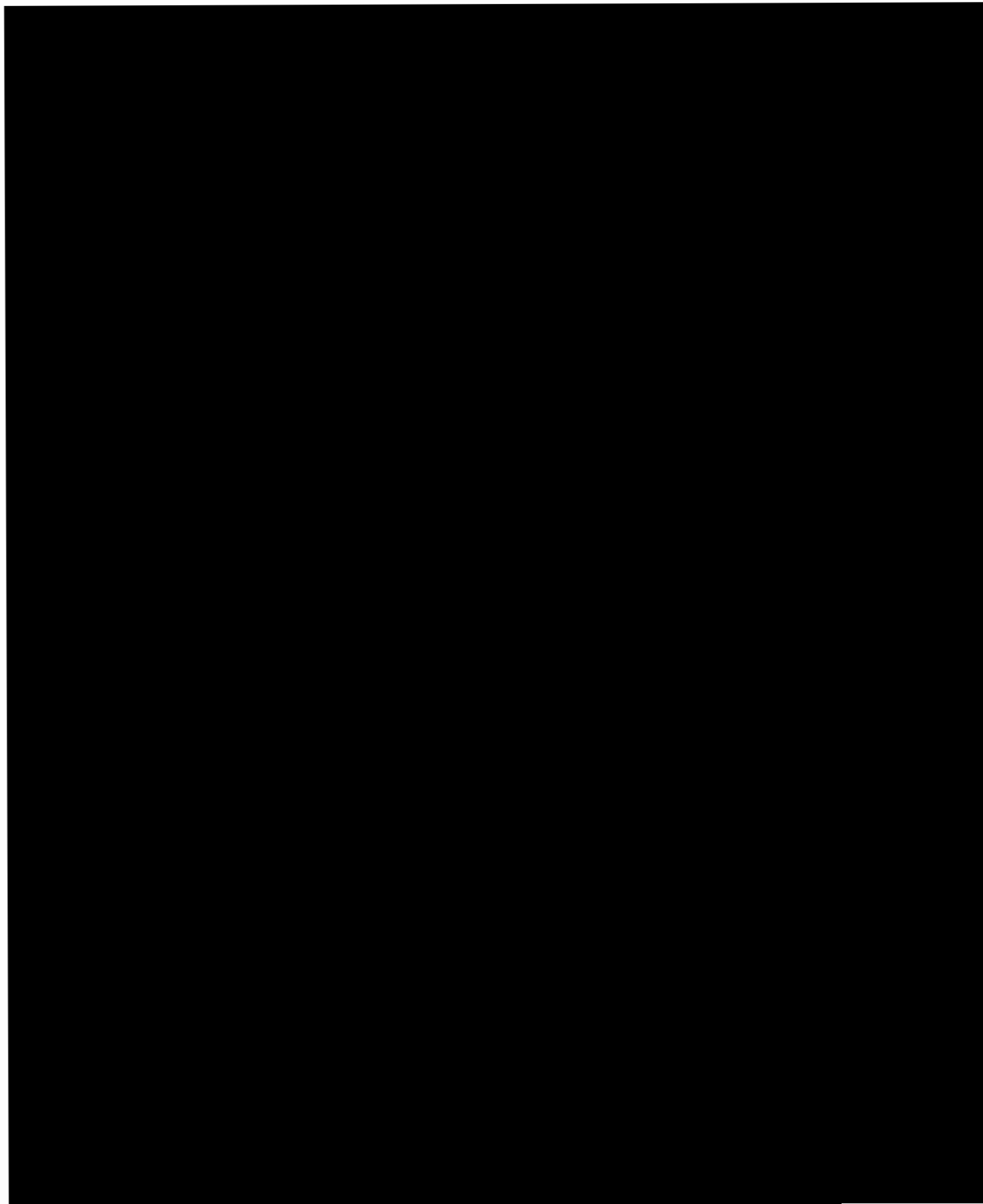
Professional Engineer, Engineering Council of South Africa (ECSA) – Reg No. 20180152
Member, South African Institution of Civil Engineering (SAICE)

Languages

	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Italian	Excellent	Good	Excellent
Afrikaans	Fair	Fair	Fair

Publications

By my signature below I certify the correctness of the information above and my availability to undertake this assignment.







Engineering Council of South Africa



Curriculum Vitae:

Name
 Date of Birth
 Profession/Specialisation
 Years with Firm
 Nationality
 Years experience

Key Qualifications

Employment Record

2024 – Date	Zutari, Technical Specialist
2009 - 2024	Zutari, Technical Director
2000 - 2003	University of Stellenbosch, South Africa, Senior Lecturer (part time)
1996 - 2009	Zutari, Associate
1990 - 1996	Zutari, Engineer

Management Experience

06/2024 – present	Technical specialist, focussing on leading specialist engineering design work and projects in the wastewater treatment engineering field.
03/2009 – 06/2024	Technical director at Zutari, responsible for company financial management, leading project design and implementation and managing a specialist design group.
05/1996 - 02/2009	Associate and project leader at Zutari, responsible for the management of projects and project teams.

Experience Record

Scoping and Feasibility studies for land-based treatment of three outfall sewers at Greenpoint, Camps Bay and Hout Bay (Western Cape South Africa) 02/2023 - Date. Project Manager and Hydraulic / Process Design Engineer. The City of Cape Town appointed Zutari for the Scoping, Feasibility and Concept design stages for land-based treatment options of three sea outfall sewers comprising a total flow of 55 Ml/day at present, which will increase to 90Ml/day by 2072. The Scoping stage was completed in June 2024 and included the investigation of more than 60 options or combination of options. Nine scenarios were eventually selected, based on financial and feasibility criteria, to be taken into feasibility. The Scoping stage also included an appeals decision report as was required by the Department of Fisheries, Forestry and Environment. The Feasibility stage is close to completion and includes a multi criteria decision analysis and refurbishment contract for the existing infrastructure. Responsible for hydraulic design, process design,

capital and life cycle cost analysis, project planning, report writing and public participation process. (City of Cape Town).

Gammams Wastewater Treatment Plant Upgrade (Namibia) 11/2013 - 12/2016. *Project Director and Hydraulic / Process Specialist.* The project entailed the upgrading the plant from 25 Ml/d to 55 Ml/d by adding a new inlet works, membrane biological reactor (MBR), sludge handling plant and various pump stations. Zutari was appointed to carry out the detailed design of the infrastructure associated with the proposed extensions, as well as to compile the tender documentation. Responsible for overseeing the process, civil and hydraulic designs and planning as well as financial and technical management. (City of Windhoek).

Additional Work for the Athlone Wastewater Treatment Works (WWTW) Upgrading Project (Western Cape Province, South Africa) 05/2007 - 07/2014. *Project Leader and Hydraulic / Process Engineer.* This project formed part of a larger project for the upgrading of the Athlone WWTW. The additional work included a chlorine disinfection facility, biofiltration odour control and additional primary settling tanks (PSTs). Zutari provided design services, contract management and supervision of the additional works. The additional works allowed the plant to operate at the design capacity of 105 Ml/d. Responsible for compiling process flow diagrams, capacities and hydraulics of existing process units, compiling the final planning report, as well as design and implementation of inlet works, primary sedimentation, secondary sedimentation and effluent re-use infrastructure. (City of Cape Town).

Upgrading and Extension to Potsdam Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 11/2003 - 07/2012. *Project Leader and Hydraulic / Process / Civil Engineer.* The Potsdam WWTW processes wastewater from the Table View/Blaauwberg area. The treated effluent at the works flowed into the Milnerton Lagoon, subjecting the treatment process and effluent quality to strict environmental monitoring. The works were also designed to enable biological nutrient removal (BNR). The project required an interim increase in capacity. Zutari compiled a feasibility report for the proposed upgrading and extensions to the works. The report recommended the addition of an activated sludge treatment stream with a capacity of 30 Ml/d; the improvement of sludge dewatering facilities; the disinfection of the final effluent; and the provision of odour control. Based on the recommendations, the City of Cape Town appointed Asch Consulting Engineers and Zutari to implement the project. Responsible for the design of the inlet works, activated sludge treatment plant, sludge thickening, effluent reticulation and plant hydraulics. (City of Cape Town).

Upgrading of Athlone Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 10/1999 - 10/2008. *Project Leader and Hydraulic / Process Engineer.* The project entailed the upgrading of the 105 Ml/d Athlone WWTW. The upgrade involved the complete mechanical refurbishment of the works as well as the upgrading of inlet works screens, screenings washings, degritting sedimentation tanks, diffusers in bioreactors, sludge thickening through gravity and dissolved air floatation (DAF), and the addition of clarifier capacity. Responsible for compiling process flow diagrams, capacities and hydraulics of existing process units, compiling the final planning report, as well as design and implementation of inlet works, primary sedimentation, secondary sedimentation and effluent re-use infrastructure. (Cape Metropolitan Council (CMC))

New Wastewater Treatment Works (WWTW) and Upgrading of the Existing WWTW in Walvis Bay (Erongo Region, Namibia) 10/2015 - 08/2018. *Project Director and Hydraulic / Process Engineer.* Zutari has been appointed for the preliminary and detailed design and tender administration for the new WWTW and upgrades to the existing WWTW in Walvis Bay. The existing works is operating beyond its design capacity of 8.5 Ml/d, yet there is a steady increase in flow due to population growth and development in the municipal area. Zutari proposed an increase in the capacity of the existing works to 11 Ml and constructing the new works in three phases of 7Ml each. When the new works are in place, the existing works will be decommissioned, as the lifespan of the structures at the existing WWTW will have expired. Responsible for process capacity determination, review of hydraulic, civil and mechanical designs as well as technical and financial management. (Walvis Bay Municipality).

Maun Water and Sanitation Works (North-West District, Botswana) 10/2019 - 12/2022. *Reviewer / Final Hydraulics & Detailed Design Approver.* Zutari was appointed for the detailed design of the Maun water distribution network, consisting of primary, secondary and tertiary pipelines and valves; zonal tanks; booster pump stations, including pumps at the outlet of each zonal tank to feed the zones and telemetry services, including a control and instrumentation (C&I) system. The appointment also included any associated works to the sanitation reticulation. Responsible for final review and approval of the hydraulic design and sewer pipeline drawings. (Zhengtai Group Botswana).

Extension of the Driftsands Wastewater Treatment Works (WWTW) (Eastern Cape Province, South Africa) 06/2007 - 03/2018. Hydraulic / Process Engineer. Zutari was appointed to conduct an investigation into the upgrading of the Driftsands WWTW, prepare a planning report, undertake preliminary and detailed design and prepare tenders and monitor activities during the construction stage. The project was divided into four phases; Phase 1 consists of a condition assessment, including site inspections, compiling the maintenance backlog and asset register, applying for funding, liaising with the Department of Water and Sanitation (DWS), conducting an environmental impact assessment (EIA) and the licence application and planning for Phase 4. It also includes the preliminary and detailed design of the works and the procurement and construction stages. Phase 2 involves composting resource motivation and sludge treatment, and disposal and Phase 3 entails a long-term strategy. Phase 4 of the project is for future extensions of the works. Responsible for the functional and conditional assessment, planning, as well as hydraulic, process and detailed design. (Nelson Mandela Bay Metropolitan Municipality (NMBMM)).

Assessment of the Zeerust Wastewater Treatment Works (WWTW) (North-West Province, South Africa) 08/2009 - 09/2017. Hydraulic / Process Specialist. Zutari has been appointed to assess the current and future state of the Zeerust WWTW after concerns were raised concerning the plant's non-compliance with the statutory standards. The upgrading strategy was divided into an immediate, medium-term and long-term strategy. The upgrading strategy involves refurbishing the existing WWTW, constructing a new activated sludge (AS) biological reactor and associated secondary settling tanks (SSTs) beside the existing Orbal biological reactor and constructing a new biological reactor with a capacity of 5 Ml/d in the place of the existing Orbal reactor. Responsible for conditional assessment, process review and capacity determination. Also responsible for providing daily process advice to process operators for a three-month period to improve and optimize all treatment processes. (Ngaka Modiri Molema District Municipality (NMMDM)).

Upgrading of the Homevale Wastewater Treatment Works (WWTW) (Northern Cape Province, South Africa) 02/2008 - 06/2015. Project Director and Hydraulic Engineer. Zutari was appointed to provide professional services for the upgrading of the Homevale WWTW, including designs, tender documentation, project management, contract administration and site supervision for the upgrade. The project was divided into three key phases, namely an emergency contract to address crucial problems at the plant; a full upgrade to restore the works to its original design capacity and an extension of the works to address future wastewater treatment requirements in the area. An environmental impact assessment (EIA) was carried out for the extension. Responsible for the planning, hydraulic and process design of the upgrading, including technical and financial management. (Sol Plaatje Local Municipality).

Upgrading of Franskraal Water Treatment Works (WTW) (Western Cape Province, South Africa) 10/2006 - 05/2010. Project Leader and Hydraulic Engineer. Major growth in the Gansbaai-Franskraal area put pressure on the available capacity of municipal services, especially during the dry summer months which coincide with the holiday season. The project comprised the planning, design, construction and commissioning of a new WTW adjacent to the existing WTW north of Franskraal. The treatment capacity of the new works is 75 l/s. The new works comprises a chemical dosing building, flocculation channel, settling tanks, gravity sand filtration, chlorine disinfection, 2 000 kl storage reservoir and concrete sludge drying beds. Responsible for process and hydraulic design, as well as project management. (Overstrand Local Municipality).

Olifantsvlei Wastewater Treatment Works (WWTW) (Gauteng Province, South Africa) 1993 -1996. Supervising Hydraulic Engineer. The project dealt with process pipelines for the Olifantsvlei WWTW in the southern side of Johannesburg. Responsible for solving outstanding hydraulic design and process queries and claims regarding process pipelines. (Greater Johannesburg Metropolitan Council).

Olifantsvlei Wastewater Treatment Works (WWTW) (Gauteng Province, South Africa) 1990 - 1993. Design Engineer / Hydraulic Engineer. The project entailed the construction of the Olifantsvlei wastewater purification works Unit 3, with a capacity of 150Ml/d. Responsible for the hydraulics; process and detail design of most process pipelines; the detail design of six primary settling tanks, two balancing tanks, flow measuring devices, three biological reactors, various submersible and dry-well pump stations, nine secondary settling tanks, various sludge thickeners and relevant mechanical equipment. (Greater Johannesburg Metropolitan Council).

Oxidation ponds for the towns of Redelinghuys and Aurora (Western Cape, South Africa) 04/2025 - Date. Process Design Engineer. Zutari was appointed to prepare a technical feasibility report for the sewer systems, as well as wastewater treatment facilities for the Towns of Aurora and Redelinghuys to apply for national grant funding. The concept design of two sets of oxidation ponds, treating between 250kl/day and 350kl/day, have been completed and the technical feasibility is being written at present. Responsible for process design, ponds layout, cost estimates and report writing. (Berg River Municipality).

Master Plan for water and wastewater infrastructure for the City of Windhoek (Windhoek, Namibia). 09/2021 - 02/2025. Process Design Engineer. Zutari was appointed for a three-phased master plan study for the City of Windhoek, for both water supply, as well as wastewater conveyance and treatment, include re-use opportunities for direct potable re-use of treated wastewater. Responsible for the master planning for the phased upgrading of wastewater infrastructure from current total capacity of 45ML/day to ultimately 155ML/day by 2048, including multi criteria decision analysis, process requirements determination, as well as capital and life cycle cost analysis. (City of Windhoek).

Investigation for the upgrading of Kleinmond wastewater treatment works (WWTW) (Western Cape Province, South Africa) 08/2020 - 06/2022. Project Director. Zutari was appointed for the technical feasibility and detailed design of the Kleinmond WWTW to 2 ML/day treatment capacity. The extension included a new aeration basin, chlorine contact tank, various pump stations, upgrading of dewatering facilities, SCADA system and upgrading of civil infrastructure. Responsible for planning, process design, detailed design, tender adjudication and contract management. (Overstrand Local Municipality).

Melbourne Western Treatment 55E Activated Sludge Plant (Melbourne, Australia) 11/2018 - 02/2020. Functional Design Manager. The project comprised the functional design requirements for a 170 ML/day nutrient removal wastewater treatment works which included feed wastewater pump stations, conventional activated sludge plant for nitrogen removal, secondary disinfection and treated water pump stations. The engineering disciplines included hydraulic, civil, structural, mechanical, electrical, and electronic engineering design. Responsible for hydraulic design components, as well as coordinating and reviewing design deliverables of a team of 16 people who was responsible for concept and functional design, including preparation of functional design report. (Melbourne Water Corporation).

North-Eastern Wastewater Treatment Works (WWTW), Phase 2 (Free State Province, South Africa) 08/2014 - 12/2017. Process Specialist. The project entailed extending the North-Eastern WWTW with a further 30 ML/d to increase the overall capacity to 45 ML/d. Zutari was appointed for the design and construction of various components of the works. Responsible for planning, process design, detailed design, tender adjudication and contract management. (Mangaung Metropolitan Municipality).

Sterkwater Wastewater Treatment Works (WWTW) Phase 3 (Free State Province, South Africa) 08/2014 - 12/2017. Technical Leader. The project consisted of the design, technical specifications and tender documentation writing for the 20 ML/d extension of the Sterkwater WWTW. The extension included a new inlet works, biological reactor, settling tanks and numerous pump stations. Responsible for planning and process design. (Mangaung Metropolitan Municipality).

Upgrade and Extension of the Stellenbosch Wastewater Treatment Works (WWTW) to 35 ML/d (Western Cape Province, South Africa) 11/2013 - 06/2016. Project Director. The project comprised the upgrading and expansion of the existing works to a capacity of 35 ML/d, in order to improve the quality of treated effluent released into the Veldwachters River (a tributary of the Eerste River) to cater for existing and future growth within the catchment area. Responsible for conditional assessment, process option selection, hydraulic design, process design and quality assurance of design. (Stellenbosch Local Municipality).

Refurbishment of Stellenbosch Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 09/2010 - 12/2013. Project Director. Zutari was appointed to carry out the refurbishment of the 20 ML/d Stellenbosch WWTW. The refurbishment entailed the emptying, inspection and structural repair of the primary and secondary settling tanks (PSTs and SSTs) and the replacement of bridges on the PSTs and SSTs as well as the complete refurbishment and configuration of sludge pump stations and new motors and gearboxes for the installed fixed aerators. New floating aerators and screens were installed at the inlet works. The capacity of the refurbished works was extended to 35 ML/d. Responsible for conditional assessment, process option selection, process design and quality assurance of design. (Stellenbosch Local Municipality).

Upgrading of Somerset East Wastewater Treatment Works (WWTW): Phases 2 and 3 (Eastern Cape Province, South Africa) 06/2012 - 12/2020. Process Design Engineer. The project entailed the upgrading of the Somerset East WWTW. The upgrade includes improvements and new facilities, incorporating the inlet works, bioreactor, secondary settling tanks, process pipelines, return activated sludge (RAS) and effluent pump stations, irrigation, chlorination and control buildings. Zutari compiled a technical report outlining the shortcomings of the existing works, the parameters to which such a WWTW should comply and the needs to meet these parameters. The report formed the basis of a municipal infrastructure grant (MIG) application. Responsible for process selection, hydraulic design, process design, as well daily process advice during a 6-month commissioning period. (Blue Crane Route Municipality (BCRM)).

Refurbishment and Upgrading of Preekstoel Water Treatment Works (WTW) (Western Cape Province, South Africa) 10/2009 - 07/2015. *Project Director.* Zutari was appointed to provide consulting services for the upgrading of the 28 Ml/d Preekstoel WTW. Services included the planning, investigation and report for the refurbishment and modernisation of the existing infrastructure, which varied between 18 and 35 years. The investigation included pilot trials, capacity and design checks and detailed inspections of the existing infrastructure and equipment. Services also entailed the extension of the capacity of the WTW to deal with the growing demand from the greater Hermanus area, while the new raw water source (groundwater) also had to be assessed. Responsible for project management and budget requirements. (Overstrand Local Municipality).

Upgrading of the St Albans Wastewater Treatment Works (WWTW) (Eastern Cape Province, South Africa) 02/2005 - 04/2014. *Process Engineer.* The existing St Albans WWTW mainly serves the St Albans Prison. A sewerage master plan (SMP) study undertaken in 2008 indicated that a new catchment area at Greenbushes, which comprises residential units and industrial outlets, will be developed east of the prison. It is envisaged that the flows from this catchment will increase from 2.2 Ml/d to 24 Ml/d, which prompted the Nelson Mandela Bay Metropolitan Municipality (NMBMM) to plan the transfer and phased upgrading of the existing St Albans WWTW to accommodate this anticipated flow. Zutari was appointed for the design of a 6 Ml/d works at the site of the existing works. This design took into consideration the use of existing infrastructure on site as well as accommodation of the flows from the prison during the construction stage. Responsible for the assessment, concept, process and hydraulic design for a new activated sludge WWTW. (Nelson Mandela Bay Metropolitan Municipality (NMBMM)).

Klapmuts Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 02/2002 - 02/2005. *Project Leader and Process Engineer.* The project entailed the refurbishment and upgrading of an existing package WWTW. Responsible for planning and design. (Stellenbosch Local Municipality).

Mitchell's Plain Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 04/2000 - 06/2001. *Project Leader.* The project involved new raw sewage screening and sludge conveying equipment, and related civil equipment. Responsible for process, hydraulic and detail design and construction supervision for the project. (City of Cape Town).

Kraaifontein Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 02/2000 - 09/2000. *Project Leader and Process Engineer.* The project entailed an extension to the existing WWTW. Responsible for preliminary design, cost estimates, and writing the planning report. (City of Cape Town).

Northern Wastewater Treatment Works (WWTW) (Gauteng Province, South Africa) 1995 - 1998. *Team Leader.* The project entailed the design of three new vortex degritters to replace existing degritters at Unit 3. Responsible for leading the project. (Greater Johannesburg Metropolitan Council).

Morpeth Wastewater Treatment Works (WWTW) (New South Wales, Australia) 1998. *Team Leader/Hydraulic Engineer.* The project entailed the preparation of preliminary design drawings for a new 15 Ml/day WWTW. Responsible for the process and hydraulic design of the preliminary treatment, the inlet pump station, the activated sludge process, UV disinfection and sludge treatment, consisting mainly of aerobic digestion and centrifugation. A sequential batch reactor and belt press were submitted as alternatives. (Sydney Water).

KwaMashu Wastewater Treatment Works (WWTW) (KwaZulu-Natal Province, South Africa) 1997 - 1999. *Project Leader.* The project entailed upgrading the existing works. Responsible for leading the team in strategic planning for an 80 Ml/day extension; preliminary, hydraulic and process design of 65 Ml/day future extensions; preliminary, process, detail design and preparation of tender documents for the upgrading of the existing works from 50 Ml/day to 65 Ml/day. (Durban Metropolitan Council).

Dewatering Extension to Goudkopple Wastewater Treatment Works (WWTW) (Gauteng Province, South Africa) 1992 - 1994. *Design Engineer.* The project entailed extensions to the dewatering facility at Goudkopple WWTW. Responsible for the design of screenings, dewatering building, stormwater channels, the pump station, and grit drying beds, and for potable and wash water. (Greater Johannesburg Metropolitan Council).

Driefontein Wastewater Treatment Works (WWTW) (South Africa) 1993. *Design Engineer.* The project dealt with the functional and process design of two flotation units. Responsible for the design. (Mkhondo Local Municipality).



Extensions to Mothulung Sewage Treatment Works (STW) (Gauteng Province, South Africa) 1993. *Design Engineer.* The project entailed extensions to the Mothulung sewage purification works. Responsible for the detailed design of an Inlet channel. (Madibeng Local Municipality).

Northern Wastewater Treatment Works (WWTW) (Gauteng Province, South Africa) 1992. *Design Engineer.* The project entailed the preliminary design and cost estimates for extensions to the Northern WWTW. Responsible for balancing tanks, biological reactors and the sludge thickening processes. (Greater Johannesburg Metropolitan Council).

Extensions to Gammans Sewage Treatment Works (STW) (Windhoek, Namibia) 1991. *Design Engineer.* The project dealt with providing extensions to the Gammans sewage purification works. Responsible for upgrading an existing biological reactor, four additional waste sludge thickeners, various channels, pipelines and flow measuring devices. (City of Windhoek).

Extensions to the Medical University of Southern Africa (Medunsa) Sewage Treatment Works (STW) (South Africa) 1990. *Detailed / Hydraulic Design Engineer.* The project entailed extensions to the Medical University of Southern Africa's (Medunsa) STW. Responsible for the design for a biological reactor, secondary settling tank, three pump stations, hydraulics and detail design of all process pipelines. (City of Tshwane Metropolitan Municipality).

Academic Experience

University of Stellenbosch, South Africa

- 2012 - 2015: External examiner for third- and fourth-year water related subjects.
- 2000 - 2003: Senior lecturer (part-time) for third (Water Engineering) and final year (Water Utilisation and Environmental Engineering) undergraduate students, and topic leader for final year research projects in the water treatment and utilisation field. Responsible for preparing and presenting lectures and organising a two-day municipal infrastructure course (2002) aimed at practising engineers and post graduate students. Acted as the topic leader for final year research projects in the water treatment and utilisation field.

Education

1996 : MEng Water Utilisation, University of Pretoria, South Africa
1991 : BEng (Hons) Hydraulics, University of Pretoria, South Africa
1987 : BEng Civil, University of Pretoria, South Africa

Professional Affiliations



Languages

	Reading	Writing	Speaking
Afrikaans	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

Research Projects



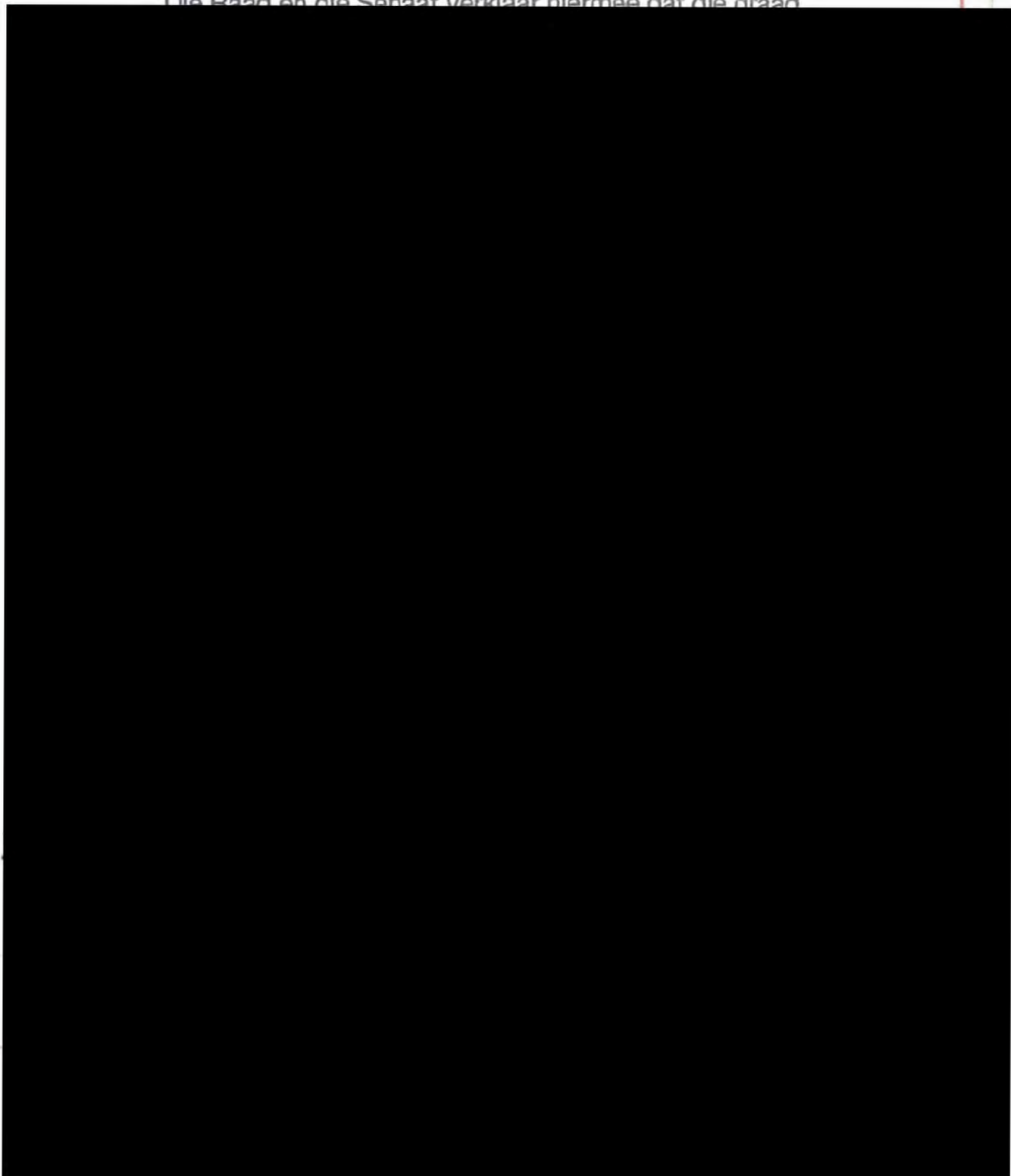
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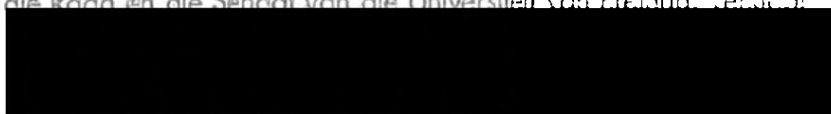


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Suid-Afrikaanse Raad vir Ingenieurswese





Die Suid-Afrikaanse Instituut van Siviele Ingenieurswese

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Water Institute of Southern Africa

This is to certify that



Curriculum Vitae: M

Name
 Date of Birth
 Profession/Specialisation :
 Years with Firm :
 Nationality :
 Years experience :

Key Qualifications

Employment Record

03/2021 – Date	Zutari, Technical Director
07/2016 - 02/2021	Zutari, Associate
01/2016 - 06/2016	Zutari, Principal Senior Engineer
07/2015 - 12/2015	Zutari, Senior Electrical Engineer
09/2013 - 06/2015	Zutari, Electrical Engineer
01/2013 - 08/2013	Shofar Christian Church, Office Manager/Community Projects Developer
01/2008 - 12/2012	Zutari, Electrical Engineer

Management Experience

08/2019 – Date	Project Manager for the Voëlvier high-lift pump station, including civil, mechanical, electrical, and control and instrumentation (C&I) construction contract in role of FIDIC Engineer.
07/2016 - Date	Management of internal electrical, control and instrumentation (EC&I) team

Experience Record

Macassar WWTW Capacity Extension and Associated Infrastructure Refurbishment (South Africa, Western Cape) 11/2021 – Date, Lead Electrical / Electronic Engineer. The current design capacity of the Macassar WWTW is 48 M³/day (ADWF). The project scope includes the upgrade and capacity extension of the existing WWTW which will include a new liquid stream (inlet works, PSTs, BNR reactors, SSTs, UV and chlorine disinfection) and a new sludge stream (gravity thickeners, anaerobic digesters, gas holding tanks, sludge holding tanks, CHP gas engines, dewatering facilities with linear screens and belt presses) such that the ultimate design capacity is 120 M³/day (ADWF). Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and evaluation of the first phase of the project, which entails a design capacity of 80 M³/day (ADWF). Responsible for the entire electrical, control and instrumentation (EC&I) scope design, drawings, and technical specifications. The electrical scope includes tie into Eskom supply substation at 11kV (6.5MVA NMD supply), Eskom self-build design package, medium-voltage (MV) switchgear, isolation transformers, step-down transformers, low-voltage (LV) distribution, motor control centres (MCCs), small power, and lighting. Two SSEG plants (diesel generators of 6.5MVA) and Biogas Engines, including step-up transformers and 11kV collector substations. The control and instrumentation (C&I) scope include programmable logic controllers (PLCs), human-machine interfaces (HMIs), supervisory control

and data acquisition (SCADA), telemetry, control networks, and field instrumentation. Also responsible for liaising with the supply authority, namely Eskom. (City of Cape Town)

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 1 (Western Cape Province, South Africa) 01/2016 – Date [Anticipated Completion Date: 01/2026]. Lead Electrical / Electronic Engineer. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 1 entails the upgrade and refurbishment of the liquid stream (new inlet works, primary settling tanks, new administration building, new guard house, new chlorine contact tank for disinfection and general civil services including all interconnecting pipework, roads and stormwater. The scope includes project management, process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Responsible for the entire electrical, control and instrumentation (EC&I) scope design, drawings, and technical specifications. The electrical scope includes overhead lines (OHLs), medium-voltage (MV) switchgear, transformers, low-voltage (LV) distribution, motor control centres (MCCs), small power, and lighting. The control and instrumentation (C&I) scope include programmable logic controllers (PLCs), human-machine interfaces (HMIs), supervisory control and data acquisition (SCADA), telemetry, control networks, and field instrumentation. Also responsible for liaising with the supply authority, namely Drakenstein Local Municipality's electrical department. (Drakenstein Municipality).

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 2 (Western Cape Province, South Africa) 01/2016 – Date [Anticipated Completion Date: 02/2028]. Lead Electrical / Electronic Engineer. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 2 entails the construction of a new centralised sludge treatment facility which caters for sludge treatment (primary sludge and waste activated sludge) from Paarl WWTW (35 Ml/day), Wellington WWTW (16 Ml/day) and future Paarl South WWTW (28 Ml/day), hence a combined ADWF of 79 Ml/day. The sludge treatment process includes sludge holding tanks, gravity thickeners, mesophilic anaerobic digesters, gas holding tanks, gas cleaning facility, combined heat and power (CHP), new dewatering plant with belt presses and sludge silos, and general civil services including all interconnecting pipework roads and stormwater. The scope includes project management, process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Responsible for the entire electrical, control and instrumentation (EC&I) scope design, drawings, and technical specifications. The electrical scope includes overhead lines (OHLs), medium-voltage (MV) switchgear, transformers, low-voltage (LV) distribution, motor control centres (MCCs), small power, and lighting. The control and instrumentation (C&I) scope include programmable logic controllers (PLCs), human-machine interfaces (HMIs), supervisory control and data acquisition (SCADA), telemetry, control networks, and field instrumentation. Also responsible for liaising with the supply authority, namely Drakenstein Local Municipality's electrical department. (Drakenstein Municipality).

Upgrading of Zandvliet Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 03/2014 – 12/2024. Lead Electrical / Electronic Engineer. Zutari was appointed to analyse, plan and design equipment and infrastructure for the capacity extension and refurbishment of Zandvliet WWTW and associated infrastructure refurbishment from 72 Ml/d to 90 Ml/d at ADWF. The new nominal design capacity of 90 Ml/d was achieved through the construction of the following main unit processes: a new and enlarged inlet works, four new PSTs, a new biological nutrient removal (BNR) reactor using a membrane bioreactor (MBR) with a nominal capacity of 27 Ml/d at ADWF, a chlorine dosing building and chlorine contact tank, interconnecting pipelines, a WAS holding tank, two primary sludge holding tanks, sludge dewatering facilities (WAS and primary sludge belt presses) and two dewatered sludge silos. Furthermore, the existing 2 x 27 Ml/d conventional activated sludge (AS) plants and the 18 Ml/d MBR plant were refurbished with new mechanical equipment. New buildings entail a new machine building and a new administration building to house an upgraded supervisory control and data acquisition (SCADA) system. An on-site irrigation network using treated effluent. The project further included a sludge treatment feasibility study which considered conventional and advanced sludge treatment options, including combined heat and power. Zutari's services provided included Planning, conceptual and preliminary design, detailed design, contract documentation and procurement, construction monitoring, and project close out (ECSA Stages 1-6). Zutari's scope includes process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Zutari's scope also included management of OHS Agent and ECO officer. Responsible for the entire electrical, control and instrumentation (EC&I) scope design, drawings, and technical specifications. The electrical scope includes overhead lines (OHLs), medium-voltage (MV) switchgear, transformers, low-voltage (LV) distribution, motor control centres (MCCs), small power, and lighting. The control and instrumentation (C&I) scope include programmable logic controllers (PLCs), human-machine interfaces (HMIs), SCADA, telemetry, control networks, and field

instrumentation. Also responsible for liaising with the supply authority, namely Eskom. (City of Cape Town).

Refurbishment and Extension of the Gammams Wastewater Treatment Works (WWTW) (Namibia, Khomas Region) 11/2013 - 01/2020. Assistant Electrical Engineer. The project involved extending the existing Gammams wastewater treatment works (WWTW), including the upgrading of the plant from 25 Ml/d to 55 Ml/d by adding a new inlet works, membrane biological reactor (MBR), sludge handling plant, and various pump stations. Zutari carried out the detailed design of the infrastructure associated with the proposed extensions and compiled tender documents. Responsible for all electrical design work, drawings and technical specification related to the new MBR. (City of Windhoek)

Zandvliet Wastewater Treatment Works (WWTW) reclamation Phase 1 (South Africa, Western Cape) 09/2017 - 06/2022. Lead Electrical Engineer. As part of the planning for day zero, the City of Cape Town initiated the installation of a 10 Ml/d advanced wastewater reclamation plant at the Zandvliet WWTW to treat effluent to a potable quality. The project consists of extensions to the existing WWTW to upgrade the capacity from 72 Ml/d to 90 Ml/d, including the construction of a modular reverse osmosis (RO) plant. The treated water is pumped from the WWTW to the bulk water main. The process consists of coagulation, sedimentation, media filtration, ultrafiltration, RO, and ultraviolet (UV) advanced oxidation and disinfection. Responsible for verifying the detailed electrical and control design carried out by the technology provider. Also responsible for liaising with the client's internal electrical department to ensure power is supplied to the plant in very short timeframes. (City of Cape Town)

Extension of the Sterkwater Wastewater Treatment Works (WWTW), Phase 3 (South Africa, Free State) 08/2014 - 12/2017. Electrical Engineer. The project consisted of the design, technical specifications and writing of tender documentation for the 20 M/d extension to the Sterkwater WWTW. The extension included new inlet works, a biological reactor, a blower building and equipment for fine bubble diffused aeration (FBDA) system settling tanks and a chlorine contact tank as well as building numerous pump stations. Responsible for the electrical design. (Mangaung Metropolitan Municipality)

Upgrading of the KwaNomzamo Wastewater Treatment Works (WWTW) (South Africa, Eastern Cape) 07/2014 - 06/2024. Lead Electrical Engineer. The existing KwaNomzamo WWTW was organically and hydraulically overloaded and required urgent refurbishment to ensure that the effluent released back into the environment conforms to the prescribed standards. The capacity also needed to be upgraded to cater for further residential development in Humansdorp. Zutari carried out a condition assessment of existing infrastructure components, determined existing treatment capacity constraints, investigated upgrading options, and suggested the most appropriate technology for improving plant performance and increasing treatment capacity. Responsible for all electrical design work, drawings, and technical specifications. (Department of Rural Development and Land Reform (DRDLR))

Omaruru Wastewater Treatment Works (WWTW): new plant (Namibia, Erongo Region) 06/2012 - 12/2012. Electrical Engineer. The project consisted of the design and writing of technical specifications for the new Omaruru WWTW in Namibia. The new works include new motor control centres (MCCs), new distribution boards and control panels, small power and lighting. Responsible for the design, technical specifications and drawings of the entire electrical scope. (Ministry of Regional and Local Government, Housing and Rural Development (MRLGHRD))

Assessment of the Status of the Zeerust Wastewater Treatment Works (WWTW) (South Africa, North West) 08/2009 - 06/2021. Lead Electrical / Electronic Engineer. Zutari was appointed to assess the current and future state of the Zeerust WWTW after concerns were raised regarding the plant's non-compliance with the statutory standards. The upgrading strategy was divided into an immediate, and a medium- and a long-term strategy. The upgrading strategy involved refurbishing the existing WWTW, constructing a new activated sludge (AS) biological reactor and associated secondary settling tanks (SSTs) beside the existing Orbal biological reactor, and constructing a new biological reactor with a capacity of 5 Ml/d in the place of the existing Orbal reactor. Responsible for the entire electrical, control and instrumentation (EC&I) scope design, drawings, and technical specifications. The electrical scope included overhead lines (OHLs), mini substations, low-voltage (LV) distribution, motor control centres (MCCs), small power, and lighting. The control and instrumentation (C&I) scope include relay logic and field instrumentation. Also responsible for liaising with the supply authority, namely MunElec. (Ngaka Modiri Molema District Municipality (NMMDM))

Upgrading and Extension of Wellington Wastewater Treatment Works (WWTW) (South Africa, Western Cape) 11/2009 - 07/2021. Lead Electrical / Electronic Engineer. The project entails the extension of the existing Wellington (WWTW) to 16 Ml/d by constructing a 12 Ml/day treatment lane, comprising a new inlet works, new primary settling tanks, a biological reactor and two secondary settling tanks and associated sludge treatment facilities, including an aerobic digester, sludge holding tanks and a dewatering building. Responsible for negotiations with supply authority, detailed designs, tender documentation, and drawings for the entire electrical, control and instrumentation (EC&I) scope. (Drakenstein Local Municipality)

Upgrading of the Homevale Wastewater Treatment Works (WWTW) (South Africa, Northern Cape) 02/2008 - 07/2019. Electrical Engineer. Zutari provided professional services for the upgrading of the Homevale WWTW to 15 Ml/d, including designs, tender documentation, project management, contract administration, and site supervision for the upgrade. The project was divided into three key phases, namely an emergency contract to address crucial problems at the plant, a full upgrade to restore the works to its original design capacity, and an extension of the works to address future wastewater treatment requirements in the area. An environmental impact assessment (EIA) was also carried out for the extension. The project also involved electrical, control and instrumentation (EC&I) upgrades, including new automation systems, such as programmable logic controllers (PLCs) and supervisory control and data acquisition (SCADA); replacement of the main motor control centre (MCC); refurbishment of all satellite distribution boards and control panels; upgrading of the chlorination facility as well as upgrading of the sludge thickening and digesting facility. The extension included a new medium-voltage (MV) main intake substation, MV reticulation, a diesel generator, transformers, MCCs, PLCs and a fibre optic ring network. Responsible for inspections, designs, tender documentation, drawings for low-voltage (LV) reticulation, industrial data networks, automation and control, motor control panels, and electric actuators. (Sol Plaatje Local Municipality)

Engineering Services for the New Mangaung North-Eastern Wastewater Treatment Works (WWTW) (South Africa, Free State) 06/2008 - 12/2014. Electrical / Electronic Engineer. The project entailed the construction of a 15 Ml/d WWTW and a 1.8 km outfall sewer just north of the Bloemfontein Air Force Base (AFB) to relieve the pressure on the Bloemfontein WWTW. Zutari provided the planning, design, procurement, and construction supervision on the project. The project also included numerous bulk outfall sewers ranging in diameters from 200 mm to 800 mm, approximately 14 km, as well as new overhead lines (OHLs), transformers, and switchgear, which were installed to supply power to the site. The electrical, control and instrumentation (EC&I) scope included low-voltage (LV) distribution, motor control centres (MCCs), a programmable logic controller (PLC) and supervisory control and data acquisition (SCADA). Responsible for the design supervision for LV reticulation, industrial data networks, automation and control, motor control panels, and medium-voltage (MV) power supply upgrade. (Mangaung Metropolitan Municipality)

Education

2011	Postgraduate Diploma: Financial Planning, University of Free State (UFS), South Africa
2007	Postgraduate Diploma in Industrial Electrical Engineering, University of Stellenbosch, South Africa
2005	BEng Electrical Engineering, University of Stellenbosch, South Africa

Career Enhancing Courses

2019	NEC3/4 Contract Management, Coen Snyman International
2009	Certificate in PLCs and SCADA, IDC Technologies

Professional Affiliations



Languages

	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

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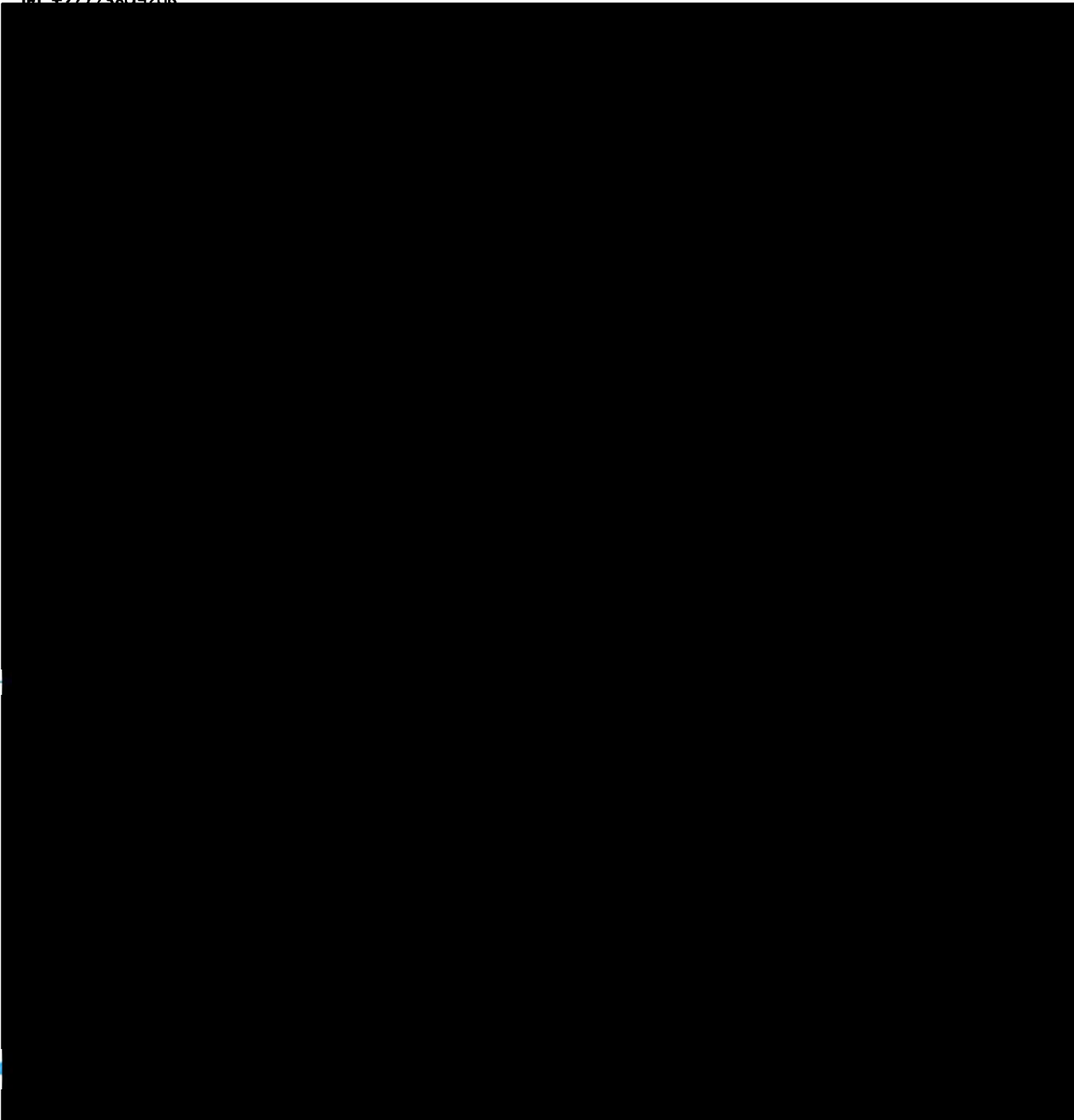
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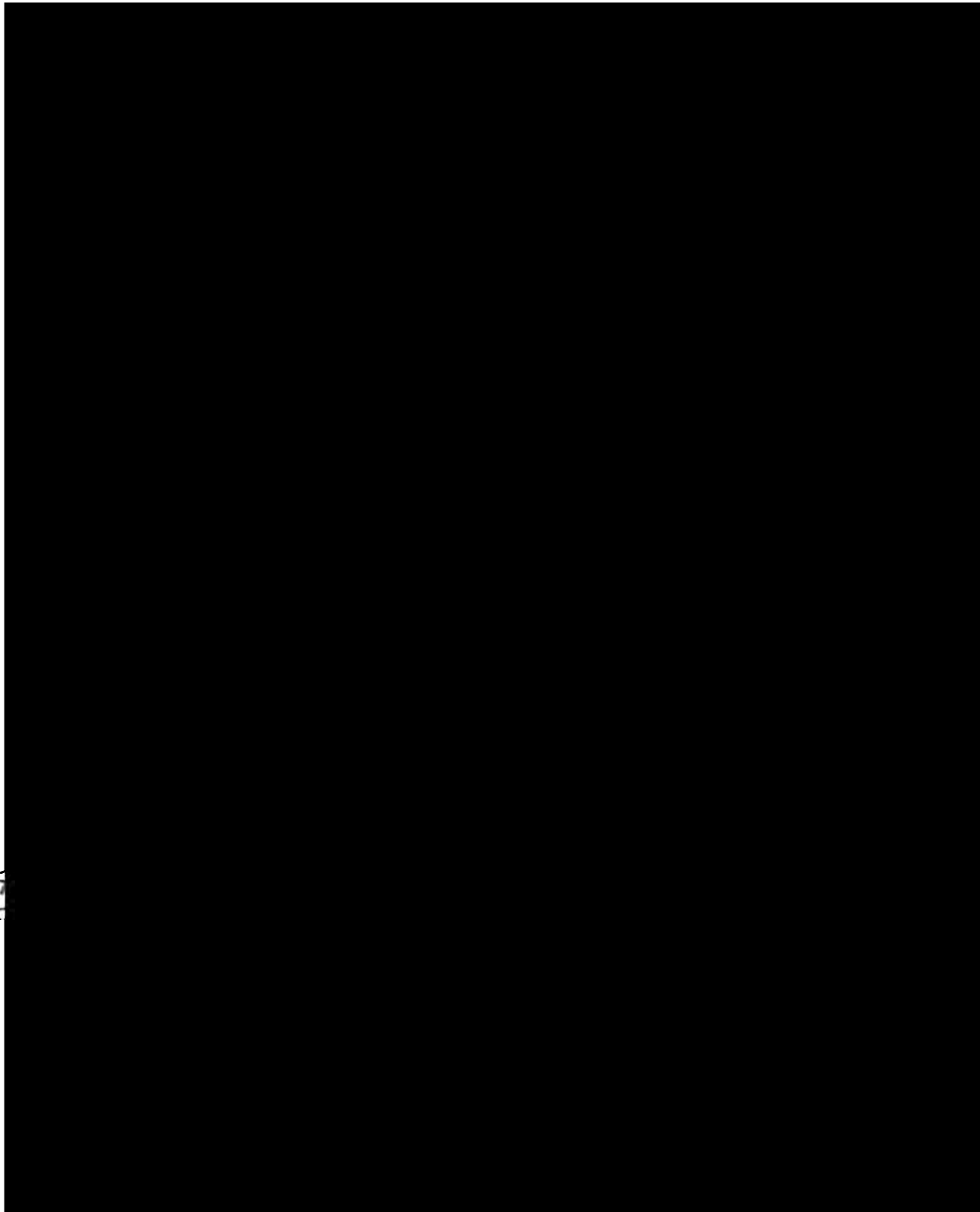
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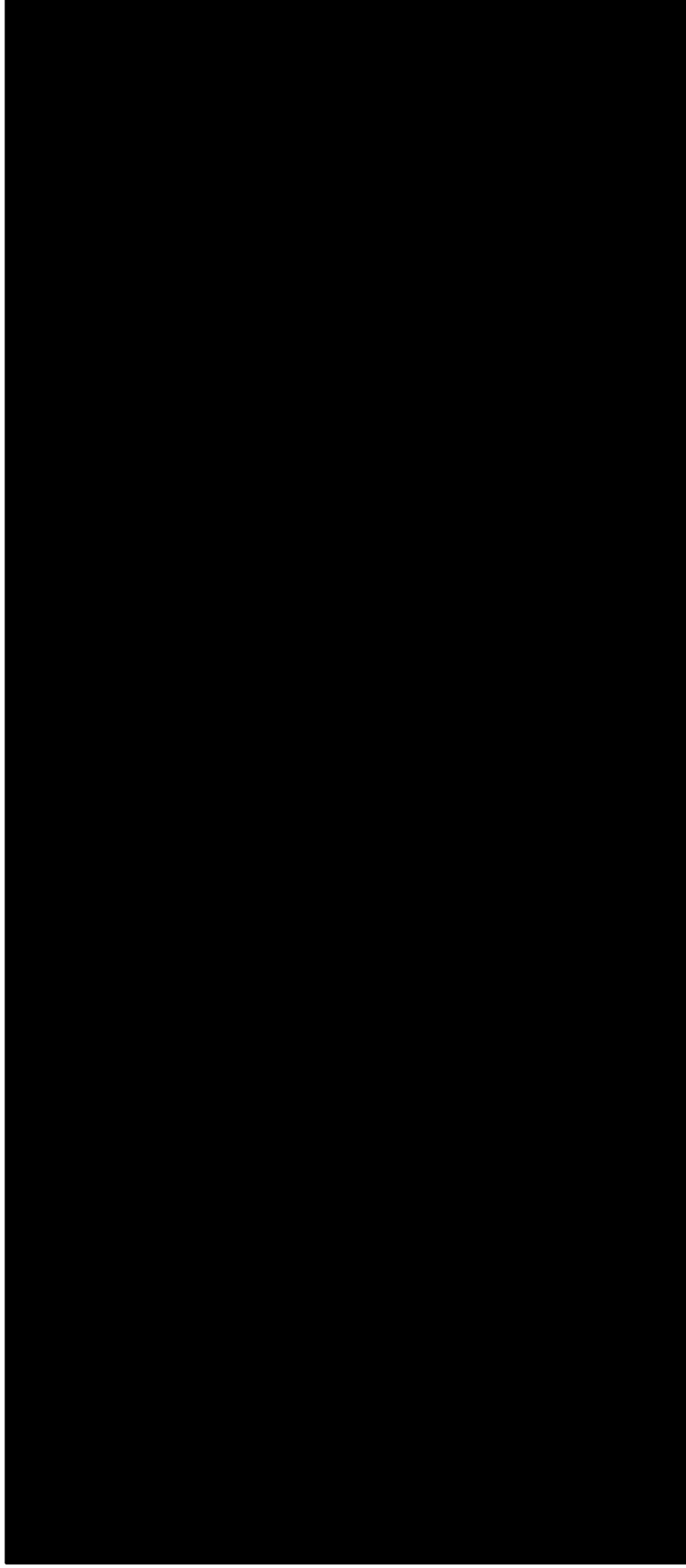
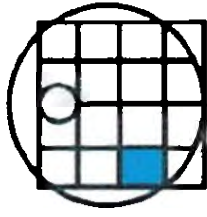




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Certificate of Completion



Curriculum Vitae:

Name
 Date of Birth
 Profession/Specialisation
 Years with Firm
 Nationality
 Years experience

Key Qualifications

Employment Record

06/2015 – Date	Zutari, Senior Civil Engineering Technologist
11/2002 – 06/2015	Zutari, Principal Engineering Technician
08/1996 - 11/2002	Roshcon Civils, Technician-in-Training

Experience Record

Construction of Gordons Bay Sewage Pump Station and Rising Main (Cape Town, South Africa) 04/2024 – Date. Engineer's Representative. Zutari was appointed to design and implement of the construction of a sewage pump station and pumping main in Gordons Bay, including civil works and mechanical and electrical installation. The project scope consisted of the reinforced concrete pump station sump and buildings, construction of a sand trap and interconnecting pipework from the existing WWTW, the construction of a ND 700 mm GRP pumping main, 7500 meters long with air and scour valves complete with reinforced concrete chambers, as well as micro tunnelling under roads and water courses. Responsible for site supervision, contract administration and payment certificates. Furthermore, he managed and trained x2 junior staff. (City of Cape Town). [Contract Appointment Value: R232.2 million]

Design of Engineering Infrastructure for the Clairwood Logistics Park (KwaZulu-Natal Province, South Africa) 01/2020 - 04/2022. Engineers Representative. Zutari has been appointed to design the engineering infrastructure required for the development of a large-scale warehouse logistics park on the 76-ha site of the former Clairwood Racecourse in the Southern Basin of Durban. The work has been split into four main contracts, comprising internal road and services (water, sewer, stormwater, electrical services, fire reticulation and communications ducts), trunk sewer relocation using a large diameter structured wall high density polyethylene (HDPE) pipe, external road and bridge upgrades and wetland rehabilitation. Construction of 60 000m2 container yard and access road. Responsible for supervisory, contract administration and payment

certificates. (Capital Property Fund). [Contract Value at Completion: R340 million. Escalated Contract Value: R405 million]¹

Eshowe Regional Bulk Water Support Services Area 1 (SSA1) (KwaZulu-Natal Province, South Africa) 07/2010 - 12/2017. Resident Engineer. Zutari was appointed for the design of reservoirs and bulk water pipelines for the implementation of a portion of a regional bulk water master plan. The project involved the implementation of a portion of the bulk water master plan for uThungulu District Municipality. It entailed approximately 20 km of large and medium bore steel pipelines, and four reinforced concrete reservoirs of 8.0 Ml capacity each, and two of 1.0 Ml capacity each. The project provides water immediately for approximately 12 900 households in Eshowe and surrounding rural villages. Responsible as senior engineer's representative (assisted by two engineers) for site monitoring, site administration, payment certificates, minor design changes on site, as well as liaising with local authorities, farmers and residents. (uThungulu District Municipality). [Contract Value at Completion: R302million. Escalated Contract Value: R349 million]¹

Sidwadweni Regional Water Supply Scheme, Phase 5A (Eastern Cape Province, South Africa) 12/2009 - 12/2015. Engineering Technician. The Sidwadweni Regional Water Supply Scheme was split into five phases to allow for the spreading of the required funds over numerous financial years. Phase 5 included nine secondary reservoirs; 43 km of distribution mains; 135 km of village reticulation, including standpipes located so that no person should walk more than 200 m to a water source. A total of 22 villages/sub-villages, with a population of 23 500, would be served. Johan was responsible for construction supervision and contract administration. (OR Tambo District Municipality (ORTDM)). [Contract Value at Completion: R33.1 million. Escalated Contract Value: R57.6 million]¹

Upgrading of Zanokhanyo Senior Primary School (SPS) (Eastern Cape Province, South Africa) 01/2007 - 03/2014. Engineer's Representative. The project entailed the upgrading of the existing Senior Primary School (SPS) in Lusikisiki, from existing mud brick structures to a modern facility for handicapped pupils. The scope of the project included the design of the civil works, consisting of the earthworks platforms, bulk water supply and reticulation, an on-site sanitation system, and stormwater management. It also included the structural design of the foundations and steel. Responsible for supervision and contract administration. (Eastern Cape Department of Roads and Public Works). [Contract Value at Completion: R24 million. Escalated Contract Value: R45.5 million]¹

Design and Construction of the Idutywa East Water Supply Scheme (Eastern Cape Province, South Africa) 05/2006 - 12/2015. Engineering Technician. The Idutywa East Water Supply Scheme (WSS), funded by a municipal infrastructure grant (MIG) and the Department of Water and Sanitation (DWS), formed part of a regional scheme, including Mbashe North, Bende, Mgwali South and Mgwali North. Raw water extraction, storage, treatment, and bulk distribution was undertaken through the Mbashe North WSS. In this scheme, raw water is extracted from Mgwali River and treated at a new water treatment plant (WTP) adjacent to the river, from which clear water is pumped from the works to three distribution reservoirs to supply the various WSS. The connection point for Idutywa East WSS is approximately 5 km northwest of the town of Idutywa. Water is supplied through a 250 mm diameter bulk gravity main to the project area to reinforced concrete storage reservoirs near the respective villages. The water is then reticulated to the beneficiaries within the various villages through standpipes that were positioned and designed to meet the DWS's Reconstruction and Development Programme (RDP) standards. Johan was responsible for construction supervision and contract administration. (Amathole District Municipality (ADM)). [Contract Value at Completion: R240 million. Escalated Contract Value: R417.4 million]

Repairs and Remedial Works for Ndulinde Water Supply Scheme (KwaZulu-Natal Province, South Africa) 05/2017 - 06/2019. Senior Engineer's Representative. The project entailed remedial works to the existing scheme and pump station (Phase A) and augmentation of an existing scheme to convert standpipes to yard connections (Phase B). This included pipe leak detection of 2.6 Km X Dia 250 ductile iron pipe, 9.0 Km X Dia 200 ductile iron pipe, excavation for inspection and verification of leak detection, repair to pipeline, installation of bends, fittings, valves, thrust blocks, construction of chambers, commissioning of existing pump station, hydrostatic testing and repairs to existing reticulation system various diameters ± 55 Km. Responsible as senior engineers' representative assisted by a resident engineer for site monitoring, site administration, payment certificates, minor design changes on site, detailed site investigation, as well as liaising with local authorities and communities. (iLembe District Municipality). [Contract Value at Completion: R18.8 million. Escalated Contract Value: R26.6 million]¹

¹ All project fees/cost indicated are as the time of the project and have been escalated to 2025 values, using an escalation percentage of 6%, as shown in the formula below:

Escalated Contract Value = Contract Value at Completion x (1+6%) ^ (2025 – Year Completed)



Completion of Main Road P726 Phase 2; 05/2022 - 09/2022. Engineers Representative. BJFC Engineering & Environmental Consultants was appointed to complete the project, taking over from another Consulting Firm. The Project scope consisted of Earthworks, Kerbing, V-drains, SW infrastructure, 11 m high Terramesh gabion retaining wall and asphalt surfacing. Johan was seconded to BJFC to perform the function of the Engineers Representative on site. Responsible for site supervision, contract administration and payment certificates. 4 Junior staff was managed and trained. (BJFC Engineering & Environmental Consultants). [Contract Value at Completion: R 53 million. Escalated Contract Value: R63.1 million]²

Rehabilitation Surfaced Road P242, Premix Asphalt, Drainage and Ancillary Works on P242 from Km 0+000 to 9+620 (Durban Region, South Africa) 09/2022 to 12/2023. Engineers Representative. BJFC Engineering & Environmental Consultants was appointed to design and implement the rehabilitation of this project. The scope was mainly to resurface the existing surface road, but after commencement on site it was established that the existing site conditions were worse than originally anticipated. Johan was responsible for undertaking the site investigation again looking at the existing stormwater infrastructure, making recommendations and guiding the design team to address drainage and crossfall issues on site to ensure the resurfacing is done correctly. This project included dealing with extremely poor in-situ ground conditions and recommendations to ground improvement solutions to overcome the problem. Responsible for site supervision, contract administration and payment certificates. 3 Junior staff was managed and trained. With 2 additional students from the client on site for training. (BJFC Engineering & Environmental Consultants). [Contract Value at Completion: R160 million. Escalated Contract Value: R179.7 million]²

Dark Fibre Africa: Rollout of Fibre Optic Network (South Africa) 08/2011 - 02/2015. Assistant Project Manager. Zutari was appointed to provide civil engineering services associated with the country-wide roll out of a fibre optic network, which will help to ensure the current broadband limitations in South Africa are resolved. Responsible for route planning (desktop studies), route surveys, preliminary and detailed designs. Other duties included bill of quantities (BoQ); project administration and management; site supervision and contract administration; wayleave applications; contractor and site staff training; as-built drawings; environmental and occupational health and safety compliance; as well as quality assurance. (Dark Fibre Africa). [Contract Value at Completion: R90 million. Escalated Contract Value: R 174.6 million]²

Design and Construction of Sewer and Water Reticulation in Ntabankulu (Eastern Cape Province, South Africa) 07/2010 - 05/2015. Engineering Technician. Zutari was appointed for the design and construction supervision of sewer reticulation and a 1.2 ML wastewater treatment works (WWTW) in the town of Ntabankulu. The aim was to address the challenges faced by the Alfred Nzo District Municipality (ANDM) due to dilapidated sanitation infrastructure and water shortages in the town as well as to cater for future demand. Johan was responsible for site investigation and survey for proposed main sewer collector. (Alfred Nzo District Municipality (ANDM)). [Contract Value at Completion: R 27.3 million. Escalated Contract Value: R 48.8 million]²

Sidwadweni Regional Water Supply Scheme (Eastern Cape Province, South Africa) 11/2002 - 06/2008. Engineer's Representative. The Nqadu Dam, situated in a private forest estate 25 km north of Umtata, was earmarked as a potential source of water supply to approximately 11 000 households (65 000 people) in 36 rural villages in the region. After Zutari had promoted the scheme and produced a business plan, the OR Tambo District Municipality, the Department of Water Affairs and Forestry (DWAF) and the Consolidated Municipal Infrastructure Programme (CMIP) all vigorously supported the project. The project consists of a 2 ML/day (400m² footprint) water treatment works with pump station and rising mains feeding two 1 ML reservoirs. Johan was responsible for site investigation and survey, as well as site supervision during construction. (OR Tambo District Municipality (ORTDM)). [Contract Value at Completion: R 17.6 million. Escalated Contract Value: R 47.4 million]²

Provision of Collector Sewers, a Bulk Water Supply Main, and Sewer Reticulation at Mount Frere (Eastern Cape Province, South Africa) 11/2002 - 12/2005. Engineer's Representative. The project included collector sewers from the different drainage zones to the wastewater treatment works (WWTW), the WWTW (1800m²) consisted of reinforced concrete water retaining structures (Aerobic Reactor), two clarifier's sludge drying beds and interconnecting pipework. Bulk water supply, including a 3 500 m gravity supply main, two reinforced concrete reservoirs, 1 700 m of pumping main; and a pump station with pump controls. Zutari was responsible for the master planning, design, documentation, and site monitoring. Johan was responsible for construction supervision, contract administration and generation of bill of quantities

² All project fees/cost indicated are as the time of the project and have been escalated to 2025 values, using an escalation percentage of 6%, as shown in the formula below:

$$\text{Escalated Contract Value} = \text{Contract Value at Completion} \times (1+6\%)^A \quad (2025 - \text{Year Completed})$$



(BoQ). (Mount Frere Municipality). [Contract Value at Completion: R 16.55 million. Escalated Contract Value: R 51.5 million]³

Education

2019 : Bachelor of Technology in Civil Engineering specialising in Water Engineering, Durban University of Technology (DUT), South Africa
1997 : National Diploma Civil Engineering, Vaal Triangle Technikon, South Africa

Professional Affiliations

Languages

	Reading	Writing	Speaking
Afrikaans	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

By my signature below I certify the correctness of the information above and my availability to undertake this assignment.

Signature of Staff Member

Date

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This is to certify that the

Degree of Bachelor of Technology in

ENGINEERING:CIVIL

Specialising in Water Engineering

VAAL TRIANGLE TECHNIKON



VAALDRIEHOEKSE TECHNIKON

NATIONAL NASIONALE DIPLOMA

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THE SOUTH AFRICAN INSTITUTION OF CIVIL ENGINEERING

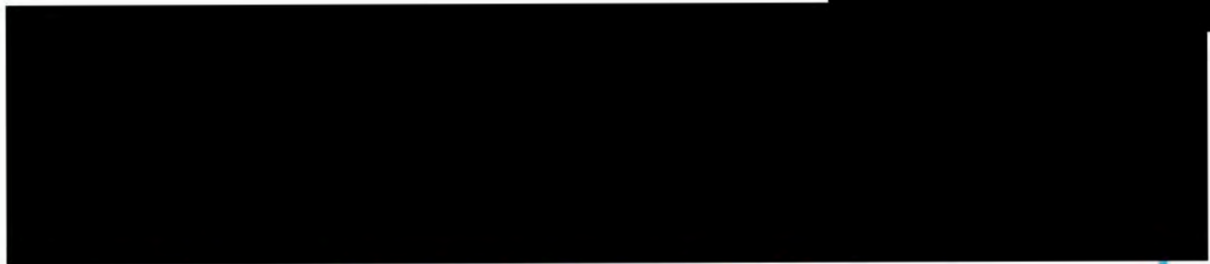
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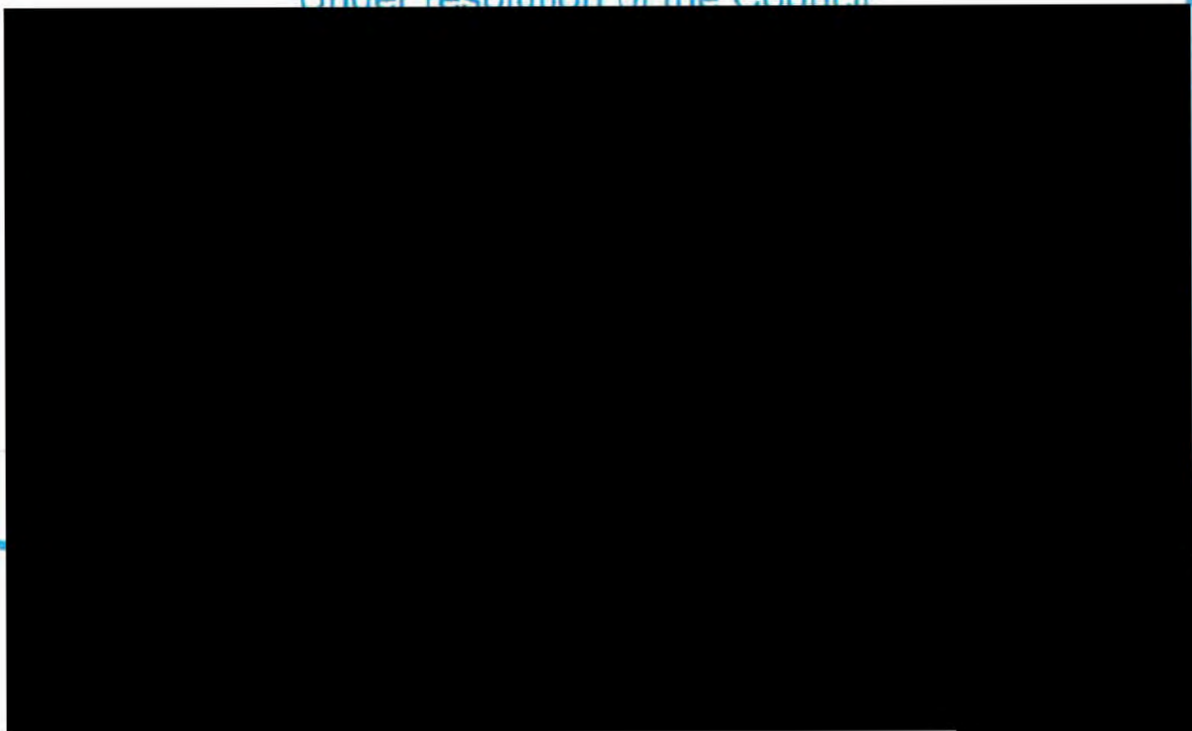


The South African Institution of Civil Engineering

on

25 June 2014

Issued under the seal of the Institution
Under resolution of the Council



Curriculum Vitae: Mr SL ROACH

Name :
 Date of Birth :
 Profession/Specialisation :
 Years with Firm :
 Nationality :
 Years experience :

Key Qualifications

Employment Record

08/2023 - Date Zutari, Senior Civil Engineer
 07/2019 - 07/2023 Cape Agulhas Municipality, Manager: Water and Sanitation
 08/2015 - 06/2019 Stellenbosch Municipality, Principal Technician
 01/2007 - 07/2015 Zutari, Technician

Management Experience

07/2019 - 07/2023 Manager: Water and Sanitation at Cape Agulhas Municipality

Experience Record

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 1 (Western Cape Province, South Africa) 08/2023 – Date [Anticipated Completion Date: 01/2026]. Resident Engineer. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 1 entails the upgrade and refurbishment of the liquid stream (new inlet works, primary settling tanks, new administration building, new guard house, new chlorine contact tank for disinfection and general civil services including all interconnecting pipework, roads and stormwater. The scope includes project management, process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Acted as a resident engineer on the project. Responsible for managing assistant resident engineers, construction supervision, contract and site administration, site investigations, payment certificates, design changes on site, communicating with Client and Contractors as well as liaising with local authorities and communities. (Drakenstein Municipality) [Contract Appointment Value: R378.1 million]

Upgrade of the Paarl Wastewater Treatment Works (WWTW) - Construction Package 2 (Western Cape Province, South Africa) 06/2025 – Date [Anticipated Completion Date: 02/2028]. Resident Engineer. The project entailed the conceptual planning, preliminary and detailed design, tender documentation and contract administration of upgrading and refurbishing the existing 35 Ml/d Paarl WWTW. The project is split into two construction phases (Package 1 and Package 2). Package 2 entails the construction of a new centralised sludge treatment facility which caters for sludge treatment (primary sludge and waste activated sludge) from Paarl WWTW (35 Ml/day), Wellington WWTW (16 Ml/day) and future Paarl South WWTW (28 Ml/day), hence a combined ADWF of 79 Ml/day. The sludge treatment process includes sludge holding tanks, gravity thickeners, mesophilic anaerobic digesters, gas holding tanks, gas cleaning facility, combined heat and power (CHP), new dewatering plant with belt presses and sludge silos, and general civil services including all




interconnecting pipework, roads and stormwater. The scope includes project management, process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. **Acted as a resident engineer on the project. Responsible for managing assistant resident engineers, construction supervision, contract and site administration, site investigations, payment certificates, design changes on site, communicating with Client and Contractors as well as liaising with local authorities and communities. (Drakenstein Municipality) [Contract Appointment Value: R850.5 million]**

Upgrade of the Wolseley Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 06/2024 – Date. Resident Engineer. Zutari was appointed for the design and construction supervision of the upgrade of Wolseley WWTW to 2.5 ML/day (ADWF), due to a critical need for upgraded process and capacity. The project is to be executed in two phases. The first phase will cover the critical works, while the second phase will increase capacity and provide improvements. The preliminary design included a new Inlet Works, sludge dewatering, sludge holding tank, a new biological reactor, a new admin building, as well as associated buildings and infrastructure. From these structures, the Inlet Works has been identified as the most critical structure to be constructed under the first phase. To date, the detailed design and construction of the civil infrastructure of the Inlet Works as well as the civil infrastructure of the Inlet Works MCC Building has been completed. **Acted as a resident engineer on the project. Responsible for managing assistant resident engineers, construction supervision, contract and site administration, site investigations, payment certificates, design changes on site, communicating with Client and Contractors as well as liaising with local authorities and communities. (Witzenberg Local Municipality). [Contract Appointment Value: R15 million].**

Water and Sanitation (Cape Agulhas Municipality) (Western Cape, South Africa) 07/2019 – 07/2025. Manager. Manage, co-ordinate and control the key performance and result indicators associated with the provisioning and maintenance of water and wastewater services, Water Safety Plan and Laboratory Services. Identify and define the immediate, short and long-term objectives/ plans of the department. Manage and monitor operational and capital projects of the department. Analyse and align operational requirements with capacity and capability of human capital. Ensure that in terms of the functionality of the department, the Municipality comply with applicable legislation. Manage the implementation of Risk Management, Supply Chain Management, and mitigation strategies across the departmental functions. Manage the preparation of capital and operating estimates and control expenditure against the approved budget allocations. Disseminate guidance and information on specific key performance areas and requirements associated with performance management of the human capital of the department. Render management and line function administrative support services to the department. Keeping abreast of current trends, legislative changes and technological developments in the rehabilitation and maintenance of Water and Wastewater Treatment Works and Reticulation Systems.

Stellenbosch Municipality (Western Cape Province, South Africa) 09/2015 – 06/2019. Principal Technician: Project Management. Responsible for the project management and implementation (funding applications, environmental processes, oversee designs, procurement, appointment, construction, quality control, community liaison etc.) of municipal infrastructure projects in the Water Services Department. These services include wastewater treatment works, water treatment works, main bulk outfall sewers, bulk water and wastewater services, reservoirs, and pump stations. **Provide project management support to the Manager: Water Services evaluation of design reports of Water and Sanitation Services ensure adherence and control of budget represent the Municipality at project and site meetings as the client representative. Administration of projects that includes minutes, reports, tender evaluation, appointment of service, Providers, recordkeeping, progress reports etc. Plan and maintain municipal Project Control System (PCS) for contracts and projects. Continuous monitoring and improvement of costing, quality and project progress through regular site visits. Manage changes to scope and assist in obtaining written approval on all changes before proceeding with work. Confer with Manager to provide technical advice and to resolve problems. Comply with all statutory requirements related to the implementation of projects. Ensure proper closeout of project (Closeout Report, As-Builts, Safety File, Asset Register etc.). Provide staff on the job training with skills training programs, with the aim of increasing worker skills and personnel development. Assist in mentorship programmes.**

Stellenbosch Wastewater Treatment Works (WWTW) Refurbishment (South Africa, Western Cape) 09/2010 - 09/2013. Resident Engineer. Zutari was appointed to provide professional consultancy services for the refurbishment of the 20 ML/d WWTW in Stellenbosch, which required extensive improvements to function properly and efficiently. The refurbishment entailed the emptying, inspection and structural repair of the primary and secondary settling tanks (PSTs and SSTs), including the replacement of bridges on the settling tanks. It also involved the complete refurbishment and configuration of sludge pump stations and the installation of new motors and gearboxes for the fixed aerators at the two bioreactors. Modification to the Inlet works which include new screens and a degritting system. A new sludge emergency pond (concrete lined) was also constructed. A new fence was also installed. **Acted as a resident engineer on the project. Responsible for managing assistant**

resident engineers, construction supervision, contract and site administration, site investigations, payment certificates, design changes on site, communicating with Client and Contractors as well as liaising with local authorities and communities. (Stellenbosch Local Municipality) [Contract Value at Completion: R34.9million. Escalated Contract Value: R67.1 million]¹

Dordrecht Water and Sanitation Services Upgrade (South Africa, Eastern Cape) 10/2015 - 06/2024. Design Engineer. This project is divided into four future projects, which includes the construction of new sewage treatment facilities; the construction of new reticulation in Dordrecht; immediate water supply upgrades and long-term bulk water supply upgrades. The wastewater works upgrade comprises upgrading the existing 1 Ml/d plant to an ADWF of 2.8 Ml/d plant with disinfection. A new inlet works, chlorination installation with a chlorine contact tank and storage pond was required to meet future capacity requirements. Responsible for design of all Inlet works, chlorination system and chlorine contact tank, drawing up specification, bill of quantities for tender document and approving final construction before completion. (Chris Hani District Municipality). [Contract Value at Completion: R1.3 million. Escalated Contract Value: R12.64 million]¹

Preekstoel Water Treatment Works (WTW) (South Africa, Western Cape) 10/2009 - 07/2014. Technician/ Resident Engineer. The Greater Hermanus area in South Africa is supplied by a combination of surface water from De Bos Dam and ground water from a series of well fields. Overstrand Municipality appointed Zutari to provide the full scope of consulting services for the upgrading of their 28 Ml/d potable water treatment works. The plant treats organically coloured water with high levels of iron and manganese and could not meet the design capacity. Additionally, much of the equipment had deteriorated with age. Involved in calculations, design drawings and layout designs. Also responsible for drawing up the bill of quantities and technical data sheets of the structures and equipment. In addition, he was responsible for all supervision work during the refurbishment and construction of the works, measuring quantities, checking construction drawings, quality control, drawing up payment certificates, contract administration and communicating with the Client and the Contractor. (Overstrand Local Municipality) [Contract Value at Completion: R14 million. Escalated Contract Value: R26.5 million]¹

Homevale Wastewater Treatment Works (WWTW) (South Africa, Northern Cape) 02/2008 - 06/2018. Design Technician. The Sol Plaatje Municipality is serviced by three WWTWs, namely Homevale, Ritchie and Beaconsfield. All treatment plants are presently operating at or over their design capacity. It is expected that both population growth and housing developments in the area are adding additional pressure to provide wastewater treatment. Sol Plaatje Municipality appointed Zutari to provide professional services for the upgrade of the Homevale wastewater treatment works (WWTW). Responsible for flow calculations, design drawings, sizing of the pumps, pump duty curves and pipe layout designs. Also responsible for drawing up the bill of quantities and technical data sheets of the structure. He was also responsible for the design, calculations and drawings of mechanical equipment related to the new extension; as well as drawing up the data sheets, bill of quantities and specifications related to the mechanical equipment. (Sol Plaatje Municipality). [Contract Value at Completion: R236 million. Escalated Contract Value: R354.8 million]¹

Athlone Wastewater Treatment Works (WWTW) Additional Work (South Africa, Western Cape) 11/2002 - 02/2015. Technician. This project formed part of a larger project for the upgrading of the Athlone WWTW. The additional work included a chlorine disinfection facility, biofiltration odour control and additional primary settling tanks (PSTs). Zutari provided design services, contract management and supervision of the additional works. The additional works allowed the plant to operate at the design capacity of 105 Ml/d. Responsible for drawing up the mechanical works and design of pipe layout. (City of Cape Town). [Contract Value at Completion: R278 million. Escalated Contract Value: R497.8 million]¹

Overstrand Asset Register (AR) (South Africa, Western Cape) 01/2007 - 04/2010. Technician. The purpose of the project was to compile an asset register for the Overstrand Municipality, covering water, sanitation, transportation and electrical services. The deliverables included surveyed assets with fair values. Responsible for being involved in field capturing and data recording. (Overstrand Local Municipality)

Education

2019 Postgraduate Diploma: Project Management, Stellenbosch University, South Africa
2015 Bachelors in Technology: Civil Engineering (Water), Cape Peninsula University of Technology

¹ All project fees/cost indicated are as the time of the project and have been escalated to 2025 values, using an escalation percentage of 6%, as shown in the formula below:

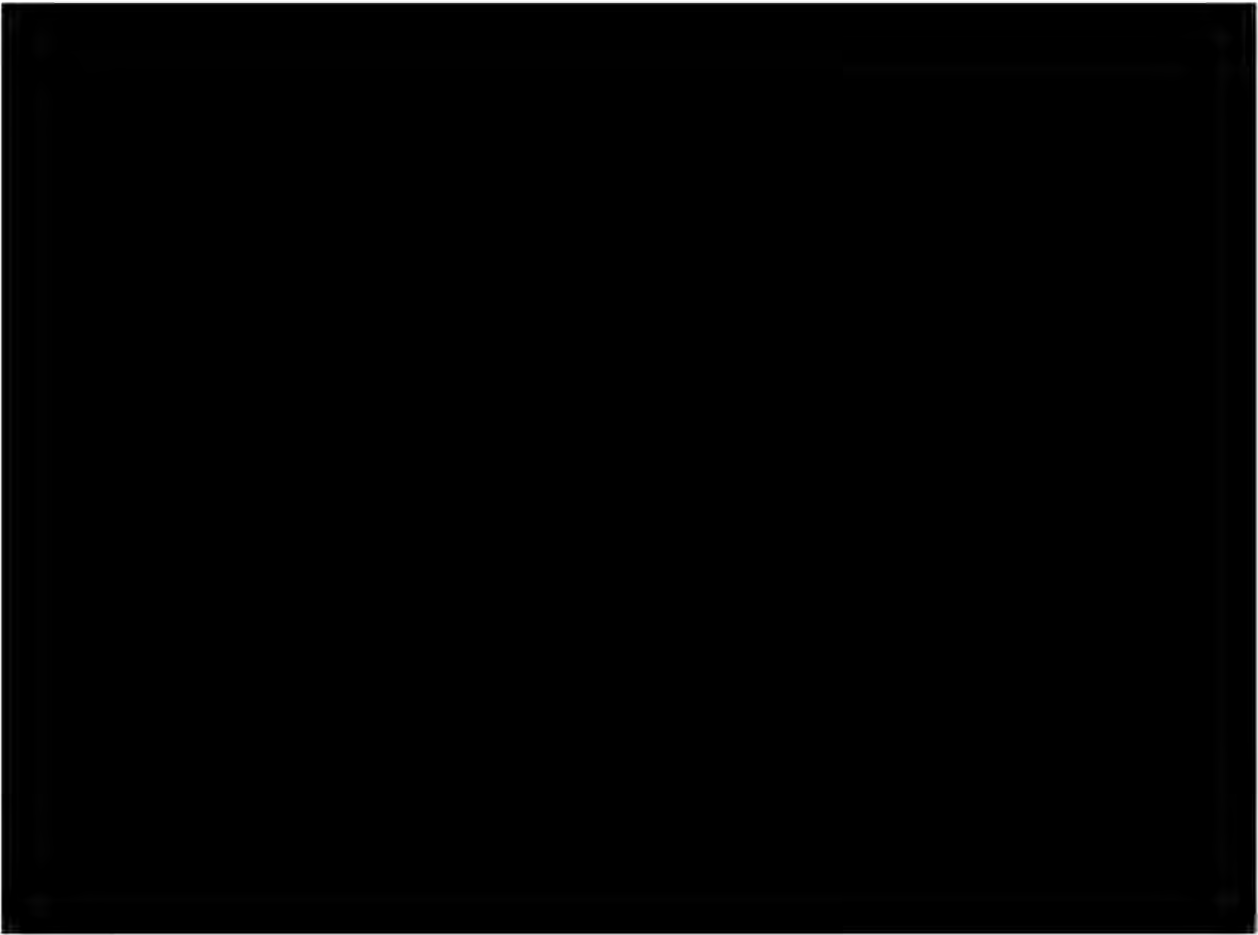
$$\text{Escalated Contract Value} = \text{Contract Value at Completion} \times (1+6\%)^{\wedge} (2025 - \text{Year Completed})$$





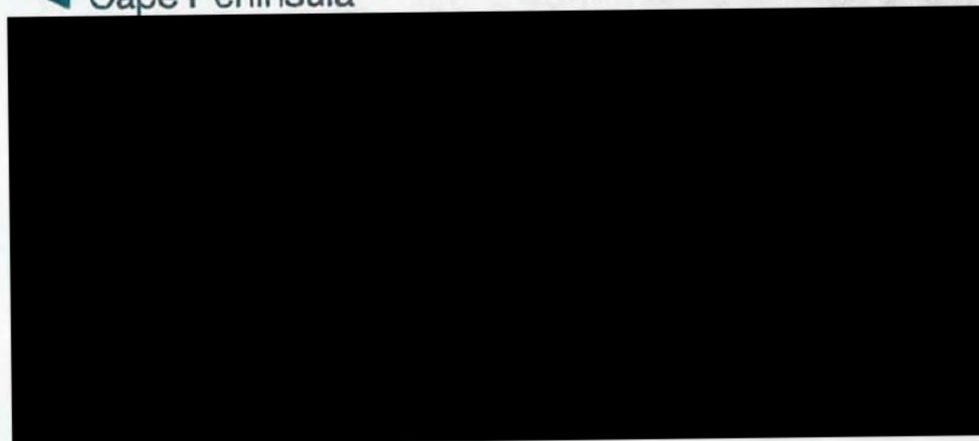
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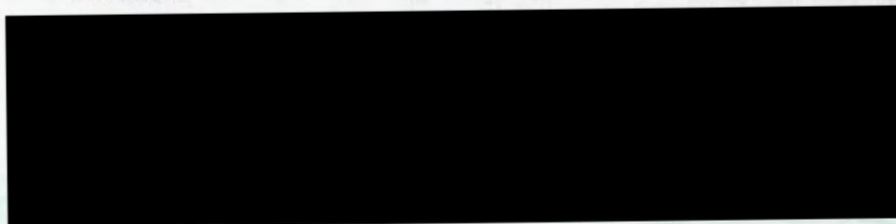
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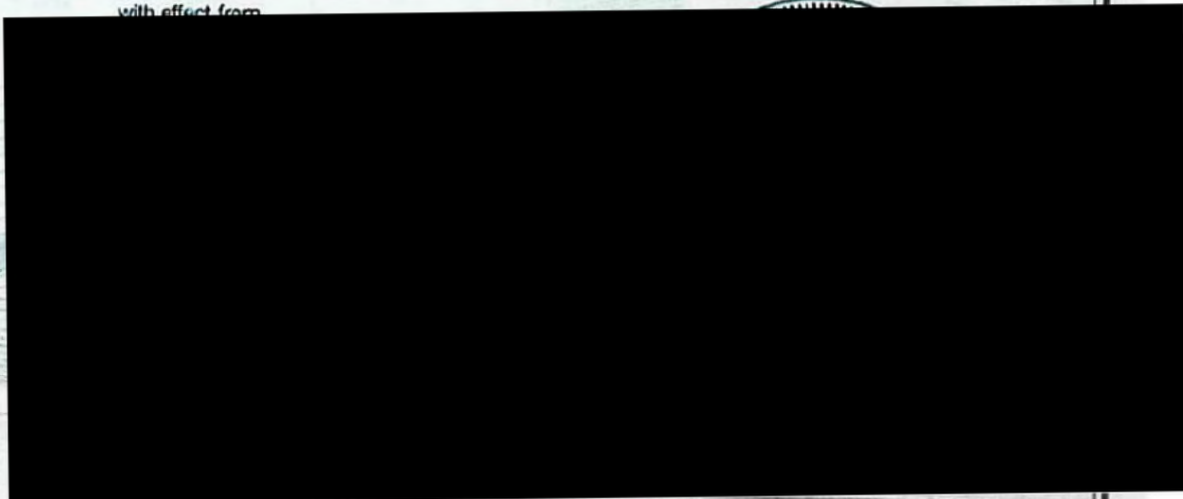
DEGREE
BACCALAUREUS TECHNOLOGIAE

ENGINEERING: CIVIL (WATER)

is awarded to



with effect from





UNIVERSITY OF STELLENBOSCH

This is to certify that



*had complied with all the conditions prescribed
in the Act, Statute and Rules of the University,
and the qualification*

POSTGRADUATE DIPLOMA IN PROJECT MANAGEMENT
(PGDip (ProjMan))

with all the rights and privileges pertaining thereto was awarded



Curriculum Vitae

Name
Date of Birth
Profession/Specialisation
Years with Firm
Nationality
Years experience

Key Qualifications

Employment Record

2017 – Date	Zutari, Specialist Quantity Surveying
1990 – 2016	Zutari, Technical Director/Quantity Surveyor
1979 – 1990	Blokker, Hibbert & Grobbelaar, QS Partner
1978 – 1979	Department of Transport (Marion Island), Research Team Member
1974 – 1977	PJS du Plessis & Partners, Quantity Surveyor Student-in-Training

Management Experience

1990 – Date	Management of internal Quantity Surveying Resources
06/2005 – 06/2010	Principal Agent for Nkomazi School Project in Mpumalanga

Experience Record

Muldersvlei 300 ML Reservoir (Western Cape Province, South Africa) 05/2024 – Date. *Quantity Surveyor.* The City of Cape Town (CoCT) initiated the Bulk Water Augmentation Scheme (BWAS) to increase the City's bulk water supply capacity. The BWAS aims to implement new infrastructure to increase the CoCT's water treatment and bulk storage capacity and to increase the flexibility of the bulk water distribution network. Zutari was appointed to do preparatory work to complete the existing preliminary design for the Muldersvlei 300 ML Reservoir and associated infrastructure and undertake the detailed design, implementation and site supervision stage. Services included environmental assessments of the proposed pipelines on the neighbouring farmlands. Geotechnical test pit drawings, and incoming and outgoing pipeline long section drawings. Responsible for QS services to provide Tender Bill of Quantities and Project Specifications. (City of Cape Town) [Contract Appointment Value: R1.2 billion]




Macassar Wastewater Treatment Works (WWTW) (City of Cape Town, Western Cape Province, South Africa) 11/2021 - Date. *Quantity Surveyor.* The current design capacity of the Macassar WWTW is 48 Ml/day (ADWF). The project scope includes the upgrade and capacity extension of the existing WWTW which will include a new liquid stream (inlet works, PSTs, BNR reactors, SSTs, UV and chlorine disinfection) and a new sludge stream (gravity thickeners, anaerobic digesters, gas holding tanks, sludge holding tanks, CHP gas engines, dewatering facilities with linear screens and belt presses) such that the ultimate design capacity is 120 Ml/day (ADWF). Zutari has been appointed for the conceptual design and planning, preliminary and detailed design, tender documentation and evaluation of the first phase of the project, which entails a design capacity of 80 Ml/day (ADWF). Specialist QS reviewing QS services up until procurement of contractors. (City of Cape Town) [Contract Appointment Value: R4.39 billion]

Upgrading of Stellenbosch Wastewater Treatment Works (WWTW), (Western Cape Province, South Africa) 10/2014 - 12/2014. *Quantity Surveyor.* This project consisted of refurbishing and upgrading the existing 20 Ml/day works and converting to a full biological nutrient (BNR) removal plant utilizing MBR technology. The capacity of the works was extended to 35 Ml/day. Furthermore, provision was made in the current design for it to be retrofitted with primary settling tanks (PSTs) and primary sludge facilities in the future. Thus, the inclusion of this process step will expand the current capacity from 35 Ml/day to 48.5 Ml/day. The 35 Ml/day upgrade comprises of two phases. Phase 1: A 27 Ml/day membrane bioreactor (MBR) biological nutrient and excess phosphate removal (BNEPR) lane. Phase 1 infrastructure included a new Inlet Works, full biological nutrient removal MBR reactor (sized for 27 Ml/day without PSTs and 38 Ml/day with PSTs), Machine Building (including blowers, permeate pumps and backwash pumps), sludge thickening (DAF units), Aerobic Digester, Dewatering Building (Belt presses), Sludge Silos, New Administration Building, Generator buildings, Guardhouse, Ancillary structures and general civil works. Phase 2: The conversion of existing lane to 8 Ml/day activated sludge process (ASP) BNEPR lane, including associated civil, mechanical and electrical works. Majority of the Phase 2 infrastructure was refurbished and this included conversion of existing aeration reactors to full BNR reactors (sized for 8 Ml/day without PSTs and 10.5 Ml/day with PSTs), refurbishment of existing SSTs, and recycle pump stations, cleaning and refurbishing of the maturation ponds, new ultraviolet (UV) disinfection facilities (closed vessel in-line UV units) and ancillary structures and general civil works. The dewatering facilities were designed to accommodate the waste activated sludge from the MBR lane and the ASP lane, i.e. sludge treatment for a capacity equivalent to an ADWF of 35 Ml/day. The design also included provision for a composting slab this was not constructed due to funding constraints. It is anticipated that the future upgrade to 48.5 Ml/day will include PSTs, anaerobic digesters and an extension of the current dewatering facility to accommodate additional belt presses. Zutari's scope included feasibility and planning Study (RBIG process), planning and conceptual design, preliminary design, detailed design, tender documentation and evaluation, contract administration and construction supervision, as well as administration of the 3-year operation and maintenance contract. Zutari's scope also included management of OHS Agent and ECO officer. This project was the winner of the 2020 CESA Aon Engineering Excellence Award. Responsible for QS services. (Stellenbosch Municipality). [Contract Value at Completion: R404 million. Escalated Contract Value: R510 million]¹

Upgrading of Zandvliet Wastewater Treatment Plant (WWTW) (South Africa, Western Cape) 03/2014 – 12/2024. *Quantity Surveyor.* Zutari was appointed to analyse, plan and design equipment and infrastructure for the capacity extension and refurbishment of Zandvliet WWTW and associated infrastructure refurbishment from 72 Ml/d to 90 Ml/d at ADWF. The new nominal design capacity of 90 Ml/d was achieved through the construction of the following main unit processes: a new and enlarged inlet works, four new PSTs, a new biological nutrient removal (BNR) reactor using a membrane bioreactor (MBR) with a nominal capacity of 27 Ml/d at ADWF, a chlorine dosing building and chlorine contact tank, interconnecting pipelines, a WAS holding tank, two primary sludge holding tanks, sludge dewatering facilities (WAS and primary sludge belt presses) and two dewatered sludge silos. Furthermore, the existing 2 x 27 Ml/d conventional activated sludge (AS) plants and the 18 Ml/d MBR plant were refurbished with new mechanical equipment. New buildings entail a new machine building and a new administration building to house an upgraded supervisory control and data acquisition (SCADA) system. An on-site irrigation network using treated effluent. The project further included a sludge treatment feasibility study which considered conventional and advanced sludge treatment options, including combined heat and power. Zutari's services provided included Planning, conceptual and preliminary design, detailed design, contract documentation and procurement, construction monitoring, and project close out (ECSA Stages 1-6). Zutari's scope includes process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Zutari's scope also included management of OHS Agent and ECO officer. Responsible for QS services. (City of Cape Town). [Contract Appointment Value: R1.2 billion]

¹ All project fees/cost indicated are as the time of the project and have been escalated to 2025 values, using an escalation percentage of 6%, as shown in the formula below:

$$\text{Escalated Contract Value} = \text{Contract Value at Completion} \times (1+6\%)^{\wedge} (2025 - \text{Year Completed})$$



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Sebokeng Wastewater Treatment Works (WWTW) (Gauteng Province, South Africa) 11/2010 – 03/2023. *Lead Quantity Surveyor.* Zutari was also appointed for the design and construction monitoring of the works comprising a new inlet works, a balancing tank, a primary settling tank, two 50 Ml/d biological nutrient removal activated sludge units, clarifiers, disinfection, sludge treatment and disposal for the complete facility. Lead QS responsible for QS services. (Emfuleni Local Municipality) [Contract Value at Completion: R755 million. Escalated Contract Value: R 1.01 billion]²

Design and Construction Supervision of the Olifants River Water Resources Development Project, Phase 2 (ORWRDP-2) (Western Cape Province, South Africa) 12/2009 - 11/2016. *Lead Quantity Surveyor.* This project entailed an extensive water resource development project to supply water for domestic and industrial use in the Limpopo Province, South Africa. The Trans-Caledon Tunnel Authority (TCTA). The project is divided into two main schemes. The first (Phase 2B) comprised a 70km long, 800mm diameter pumping main from the Flag Boshielo Dam to Mokopane and three pump stations of 6MW. The second scheme (Phase 2C,D,E,F & H) comprised of the distribution of water to various end users via pipelines ranging from 1100mm to 1800mm in diameter steel pipe along the 70 km of pipeline. One 9MW high lift pump station was required with 40 km of suction main and 30km of rising main to a balancing reservoir. A further 60 km of gravity main Phases (2E&2F) will finally transfer the water to the Olifantspoort Treatment Works for augmenting the water supply to Polokwane and adjoining rural communities. Lead QS responsible for full QS services. (Trans-Caledon Tunnel Authority) [Contract Value at Completion: R1.9 billion. Escalated Contract Value: R2.13 billion]²

Additional work for the Athlone Wastewater Treatment Works (WWTW) upgrade project, (Western Cape Province, South Africa, City of Cape Town) 2002/11 - 2015/02. *Quantity Surveyor.* This project formed part of a larger project for the upgrading and extension of the Athlone WWTW. The additional work included a chlorine disinfection facility, biofiltration odour control and additional primary settling tanks (PSTs). Zutari provided design services, contract management and supervision of the additional works. Responsible for QS services. (City of Cape Town) [Contract Value at Completion: R 450 million. Escalated Contract Value: R 854.2 million]²

Sunderland Ridge Wastewater Treatment Works (WWTW) (Gauteng Province, South Africa) 2007/12 - 2013/10. *Quantity Surveyor.* City of Tshwane appointed Zutari to extend the Sunderland Ridge WWTW to 30 Ml/d. The project included feasibility studies, environmental impact assessments, process design, detailed engineering, contract documentation, tendering, construction supervision, and commissioning. Zutari also investigated future expansions of the WWTW. Responsible for QS services. (City of Tshwane Metro Municipality). [Contract Value at Completion: R200 million. Escalated Contract Value: R379.6 million]²

Matsapha Industrial Site Wastewater Treatment Works (WWTW) (Matsapha, Eswatini) 2009/03 - 2017/06. *Quantity Surveyor.* Zutari, as the lead consultant, partnered with Bigen Africa to design and construct a new WWTW for the industrial town of Matsapha, Eswatini. The new facility was needed to replace ineffective oxidation ponds, which failed to meet environmental standards and posed risks due to attracting birds near an airport. The new WWTW aimed to provide improved treatment processes and effluent quality. Responsible for QS services. (Eswatini Water Services Corporation). [Contract Value at Completion: R96.8 million. Escalated Contract Value: R154.2 million]²

New Northam Wastewater Treatment Works (WWTW) (Limpopo, South Africa) 2011/07 - 2017/05. *Quantity Surveyor.* The mining town of Northam was serviced with a waterborne sewage system that drained to oxidation ponds. Due to mine expansions, the capacity of the ponds was exceeded, and a processing plant was required. Zutari was appointed for the design and construction supervision of a new 10Ml/d WWTW. Responsible for QS services. (Amplats Management Services). [Contract Value at Completion: R120 million. Escalated Contract Value: R191 million]²

Polokwane Wastewater Treatment Plant Upgrade (North West Province, South Africa) 2006/01 - 2016/12. *Quantity Surveyor.* Polokwane Municipality's wastewater treatment works (WWTW) faced capacity issues due to rapid population growth. Zutari's R80 million refurbishment project expanded the plant's capacity to handle up to 41 Ml/d, extending its operational lifespan by five years. Partnering with a local mining group for funding, the project included a new biological reactor, upgraded inlet works, and a chlorine dosing facility. This upgrade will enhance treatment capacity and provide treated effluent for local mining operations.

² All project fees/cost indicated are as the time of the project and have been escalated to 2025 values, using an escalation percentage of 6%, as shown in the formula below:

Escalated Contract Value = Contract Value at Completion x (1+6%) ^ (2025 – Year Completed)



2

JK

Responsible for QS services. (Rustenburg Platinum Mines). [Contract Value at Completion: R80 million. Escalated Contract Value: R131.28 million]³

Upgrade of Thabazimbi Wastewater Treatment Works (WWTW) (Limpopo, South Africa) 2011/07 - 2014/12. Quantity Surveyor. The project entailed the upgrading of the Thabazimbi WWTW to 7 Ml/d. Zutari and KSMD Consulting Engineers were appointed for the design and construction monitoring of the extension works. Responsible for QS services. (Thabazimbi Local Municipality). [Contract Value at Completion: R4.4 million. Escalated Contract Value: R8.11 million]³

Stellenbosch Wastewater Treatment Works (WWTW) Refurbishment (Western Cape Province, South Africa) 2010/09 - 2013/12. Quantity Surveyor. Zutari was appointed to provide professional consultancy services for the refurbishment of the 20 Ml/d WWTW in Stellenbosch, which included the emptying, inspection and structural repair of the primary and secondary settling tanks (PSTs and SSTs), including the replacement of bridges on the settling tanks. It also involved the complete refurbishment and configuration of sludge pump stations and the installation of new motors and gearboxes for the fixed aerators. Responsible for QS services. (Stellenbosch Local Municipality). [Contract Value at Completion: R27.5 million. Escalated Contract Value: R49.2 million]³

Education

1979 . BSc Quantity Surveying, University of Free State (UFS), South Africa

Professional Affiliations

Registered Quantity Surveyor, South African Council for the Quantity Surveying Profession (SACQSP) – Reg No. 1450

Languages

	Reading	Writing	Speaking
Afrikaans	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

By my signature below I certify the correctness of the information above and my availability to undertake this assignment.

Signature of Staff Member

Date

Die Universiteit van die Oranje-Vrystaat



Hiermee word verklaar dat die graad

Baccalaureus Scientiae in Bourekenkunde

in die jaar 1979 toorgeken is

[Redacted name]

nadat aan die statute en regulasies van die Universiteit voldoen is.

[Redacted signature and date]

Registration Category:

Registration Number:

Certificate Expiry Date:

The South African Council for the Quantity Surveying Profession confirms that:

- Registration with the South African Council for the Quantity Surveying Profession has not been suspended or cancelled and there are no proceedings pending by the SACQSP to cancel or suspend further registration with the SACQSP.
- In terms of section 27(3) of the Act he/she must comply with the Code of Conduct and failure to do so constitutes improper conduct.
- Please note that only a Registered Person in Good Standing will appear in the database of Registered Persons which may be accessed on www.sacqsp.org.za
- CPD Requirements are applicable to Registered Professional.

IMPORTANT NOTICE

1. Any fraudulently obtained Letter of Good Standing shall constitute a criminal offence and the SACQSP shall institute criminal proceedings against any perpetrator/s. It is a criminal offence to unlawfully alter or deface this letter with the intent to defraud or misrepresent facts contained herein.
2. The SACQSP reserves the right to withdraw this letter at any time should the Registered Person not be in compliance with applicable policies and guidelines.
3. The SACQSP reserves the right to withdraw the letter at its own discretion.

The South African Council for the Quantity Surveying Profession (SACQSP) is a statutory body established in terms of Section 2 of the Quantity Surveying Profession Act of 2000 (The Act) with powers, objects and authority to regulate and administer registered persons under its

120 Ml/day (ADWF). Alex Stewart and Partners was appointed by Zutari for the architectural design of the new process operations (administration) building, the new workshop and stores building, and the new guardhouse. Responsible for architectural design, co-ordination, and interfacing between disciplines such as mechanical, structural, electrical and civil design. (City of Cape Town).

Upgrading of Zandvliet Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 02/2016 – 12/2024. Principal Architect. Zutari was appointed to analyse, plan and design equipment and infrastructure for the capacity extension and refurbishment of Zandvliet WWTW and associated infrastructure refurbishment from 72 Ml/d to 90 Ml/d at ADWF. The new nominal design capacity of 90 Ml/d was achieved through the construction of the following main unit processes: a new and enlarged inlet works, four new PSTs, a new biological nutrient removal (BNR) reactor using a membrane bioreactor (MBR) with a nominal capacity of 27 Ml/d at ADWF, a chlorine dosing building and chlorine contact tank, interconnecting pipelines, a WAS holding tank, two primary sludge holding tanks, sludge dewatering facilities (WAS and primary sludge belt presses) and two dewatered sludge silos. Furthermore, the existing 2 x 27 Ml/d conventional activated sludge (AS) plants and the 18 Ml/d MBR plant were refurbished with new mechanical equipment. New buildings entail a new machine building and a new administration building to house an upgraded supervisory control and data acquisition (SCADA) system. An on-site irrigation network using treated effluent. The project further included a sludge treatment feasibility study which considered conventional and advanced sludge treatment options, including combined heat and power. Zutari's services provided included Planning, conceptual and preliminary design, detailed design, contract documentation and procurement, construction monitoring, and project close out (ECSA Stages 1-6). Zutari's scope includes process, hydraulic, civil, structural, geotechnical, mechanical, electrical and control disciplines. Zutari's scope also included management of OHS Agent and ECO officer. Stewart and Partners was appointed by Zutari to carry out the architectural design of the new process operations (administration) building and process buildings. Responsible for architectural design, co-ordination, and interfacing between disciplines such as mechanical, structural, electrical and civil design. (City of Cape Town).

Upgrading of Stellenbosch Wastewater Treatment Works (WWTW) (Western Cape Province, South Africa) 09/2014 - 09/2019. Principal Architect. This project consisted of refurbishing and upgrading the existing 20 Ml/day works and converting to a full biological nutrient (BNR) removal plant utilizing MBR technology. The capacity of the works was extended to 35 Ml/day. Furthermore, provision was made in the current design for it to be retrofitted with primary settling tanks (PSTs) and primary sludge facilities in the future. Thus, the inclusion of this process step will expand the current capacity from 35 Ml/day to 48.5 Ml/day. The 35 Ml/day upgrade comprises of two phases. Phase 1: A new 27 Ml/day membrane bioreactor (MBR) biological nutrient and excess phosphate removal (BNEPR) lane. Phase 1 infrastructure included a new Inlet Works, full biological nutrient removal MBR reactor (sized for 27 Ml/day without PSTs and 38 Ml/day with PSTs), Machine Building (including blowers, permeate pumps and backwash pumps), sludge thickening (DAF units), Aerobic Digester, Dewatering Building (Belt presses), Sludge Silos, New Administration Building, Generator buildings, Guardhouse, Ancillary structures and general civil works. Phase 2: The conversion of existing lane to 8 Ml/day activated sludge process (ASP) BNEPR lane, including associated civil, mechanical and electrical works. Majority of the Phase 2 infrastructure was refurbished and this included conversion of existing aeration reactors to full BNR reactors (sized for 8 Ml/day without PSTs and 10.5 Ml/day with PSTs), refurbishment of existing SSTs, and recycle pump stations, cleaning and refurbishing of the maturation ponds, new ultraviolet (UV) disinfection facilities (closed vessel in-line UV units) and ancillary structures and general civil works. The dewatering facilities were designed to accommodate the waste activated sludge from the MBR lane and the ASP lane, i.e. sludge treatment for a capacity equivalent to an ADWF of 35 Ml/day. It is anticipated that the future upgrade to 48.5 Ml/day will include PSTs, anaerobic digesters and an extension of the current dewatering facility to accommodate additional belt presses. Zutari's scope included feasibility and planning Study (RBIG process), planning and conceptual design, preliminary design, detailed design, tender documentation and evaluation, contract administration and construction supervision, as well as administration of the 3-year operation and maintenance contract. Zutari's scope also included management of OHS Agent and ECO officer. Zutari appointed Alex Stewart and Partners for the architectural design of the administration building, guardhouse (security hut), input on the process buildings, and alterations to existing buildings repurposed (old dewatering building repurposed into a maintenance workshop, old admin building repurposed into a sanitation and maintenance building, old workshop repurposed into a mechanical and electrical store. Responsible for architectural design, co-ordination, and interfacing of all buildings with between disciplines such as mechanical, structural, electrical and civil design to project completion. (Stellenbosch Municipality).

Lower Thukela Bulk Water Supply Scheme (KwaZulu-Natal Province, South Africa) 04/2014 - 04/2018. Principal Architect. The project involved the design of a new weir, abstraction works, a 55 Ml/d water treatment works (WTW), a low and high lift pump station, 30 Ml reservoir and 30 km of 900 mm diameter pipeline. It

supplies an additional 55 Ml/d of treated water to the coastal and inland areas of KwaDukuza and Mandini. It included the infrastructure required to abstract and treat water from the Tugela River to supply to secondary bulk and reticulation networks within the iLembe District Municipality. These networks would ultimately supply both developed and un-served areas. Stewart and Partners was appointed by Zutari, for the architectural design of the new administration building, gatehouse (guardhouse / security hut) and process buildings. Responsible for architectural design, co-ordination, and interfacing of all buildings with between disciplines such as mechanical, structural, electrical and civil design to project completion. (Umgeni Water).

Faure New Water Scheme (Western Cape Province, South Africa), 04/2018 – Date. Principal Architect. The project involved the construction of a 70 Ml/d direct potable reuse plant to treat water from the Zandvliet wastewater treatment works to a standard suitable for feeding into the Faure water treatment works. The treatment process includes tertiary filtration, ozonisation, biological activated carbon (BAC) filtration, granular activated carbon filtration, ultra-filtration, and ultraviolet (UV) advanced oxidation processes (AOP). Zutari was appointed for the feasibility planning, concept and detailed design, procurement of construction contracts, contract administration, and supervision. Zutari appointed Stewart and Partners for the architectural design of the administration building and process buildings. Responsible for architectural design, co-ordination, and interfacing of all buildings with between disciplines such as mechanical, structural, electrical and civil design to project completion. (City of Cape Town).

Upgrading and Extension of the Pniel WWTW (Western Cape Province, South Africa) 10/2018 – 10/2019. Principal Architect. Zutari was appointed to upgrade and extend the Pniel wastewater treatment works. The project involved the upgrading and extension of the Pniel (WWTW) from a Modified Ludzack Ettinger (MLE) configuration works of 1.35 Ml/d to a 4.5 Ml/d full biological nutrient and excess phosphate removal (BNEPR) configuration. Zutari appointed Stewart and Partners for the architectural design of the upgrades to existing Administration Building. Responsible for architectural design, co-ordination, and interfacing of all buildings with between disciplines such as mechanical, structural, electrical and civil design to project completion. (Stellenbosch Municipality).

Coega Kop Wellfield Phase 4: Biofiltration Plant and Borehole Pumps (WTW) (Eastern Cape Province, South Africa), 6/2017 – date. Principal Architect. New administration building, gatehouse (security hut) and process buildings. Responsible for architectural design, co-ordination, and interfacing of all buildings with process, mechanical and civil design to project completion. (Nelson Mandela Bay Municipality).

Mogalakwena Bulk Water Supply System Mokopane (WTW) (Limpopo Province, South Africa) 03/2016 – 06/2017. Principal Architect. New administration building and process buildings. Responsible for architectural design, co-ordination, and interfacing of all buildings with process, mechanical and civil design. (Mogalakwena Municipality).

Mogalakwena Bulk Water Supply System Sekuruwe (WTW) (Limpopo Province, South Africa) 03/2016 – 06/2017. Principal Architect. New administration building and process buildings. Responsible for architectural design, co-ordination, and interfacing of all buildings with process, mechanical and civil design. (Mogalakwena Municipality).

Border Post Raw Water Storage Dam and Water Treatment Works (Bisho, Eastern Cape, South Africa). 2017- date. Principal Architect. New administration building. Responsible for architectural design. (Buffalo City Municipality)

Preekstoel Water Treatment Works: New Office Building (Western Cape Province, South Africa), 2017. Principal Architect. New administration building. Responsible for architectural design, co-ordination, and interfacing of all buildings with process, mechanical and civil design to project completion. (Overstrand Municipality).

Malmesbury Wastewater Treatment Works Control and Administration Building (Western Cape Province, South Africa) 2010. Principal Architect. New administration building. Responsible for architectural design and co-ordination to project completion. (Swartland Municipality).

Saron Water Treatment Works (WTW) (Western Cape Province, South Africa) 10/2018 – 10/2019. Principal Architect. New administration building. Responsible for architectural design. (Drakenstein Municipality).

Education

1995 Bachelor of Architectural Studies, University of Cape Town (UCT), South Africa
1999 Diploma in Architecture, Cambridge University, United Kingdom

Professional Affiliations



Languages

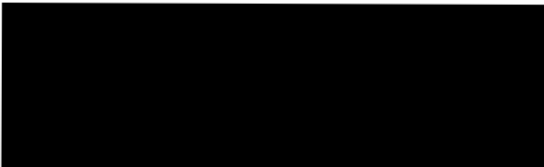
	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent

By my signature below I certify the correctness of the information above and my availability to undertake this assignment.



Signature of Staff Member

Date

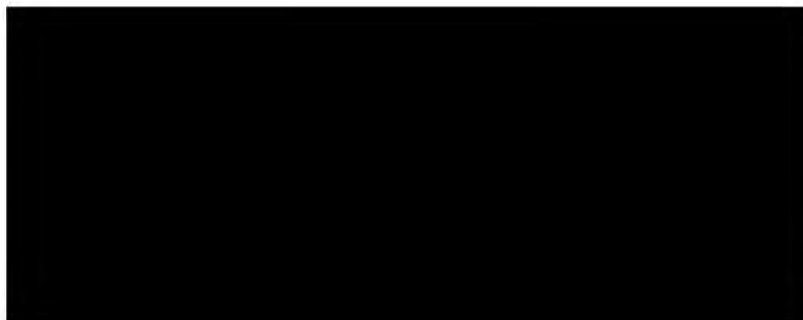




UNIVERSITY OF CAPE TOWN
with which is incorporated the South African College

**Degree of
Bachelor of Architectural Studies**

We hereby certify that [REDACTED]
was admitted to the Degree of Bachelor of Architectural Studies
on 14 DECEMBER 1995.



Vice-Chancellor

Registrar



UNIVERSITY OF CAMBRIDGE

This is to certify that

[REDACTED]
of DARWIN COLLEGE

in the University of Cambridge

having satisfied the preliminary conditions and having been
admitted to the examinations appointed by the University of
Cambridge has been approved by the Examiners as a student

well versed and proficient in Architecture and

has been awarded the

DIPLOMA IN ARCHITECTURE

on 17 June 1999

Witness my hand this

eighth day of February, two thousand and six

[REDACTED]
Administrative Officer



South African Council
for the Architectural Profession



CERTIFICATE OF REGISTRATION

This certificate is proudly issued to



registered as a

Professional Architect

In Terms of The Architectural Profession Act, 2000 (Act No. 44 of 2000)

Registration Number:

Original Registration Date:

Current Registration Date:

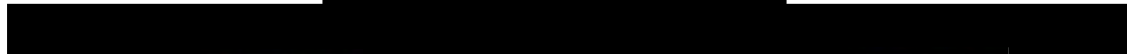
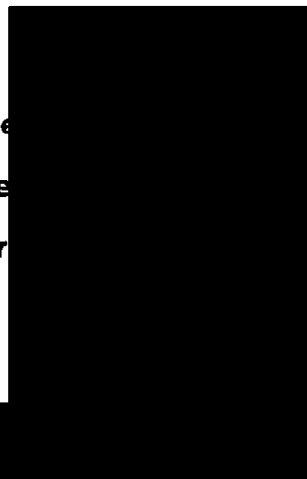
Certificate Serial Number:

End of CPD Cycle:

Contact Details

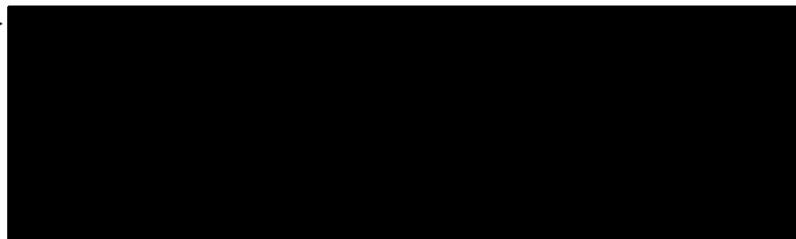
Email:

Mobile:



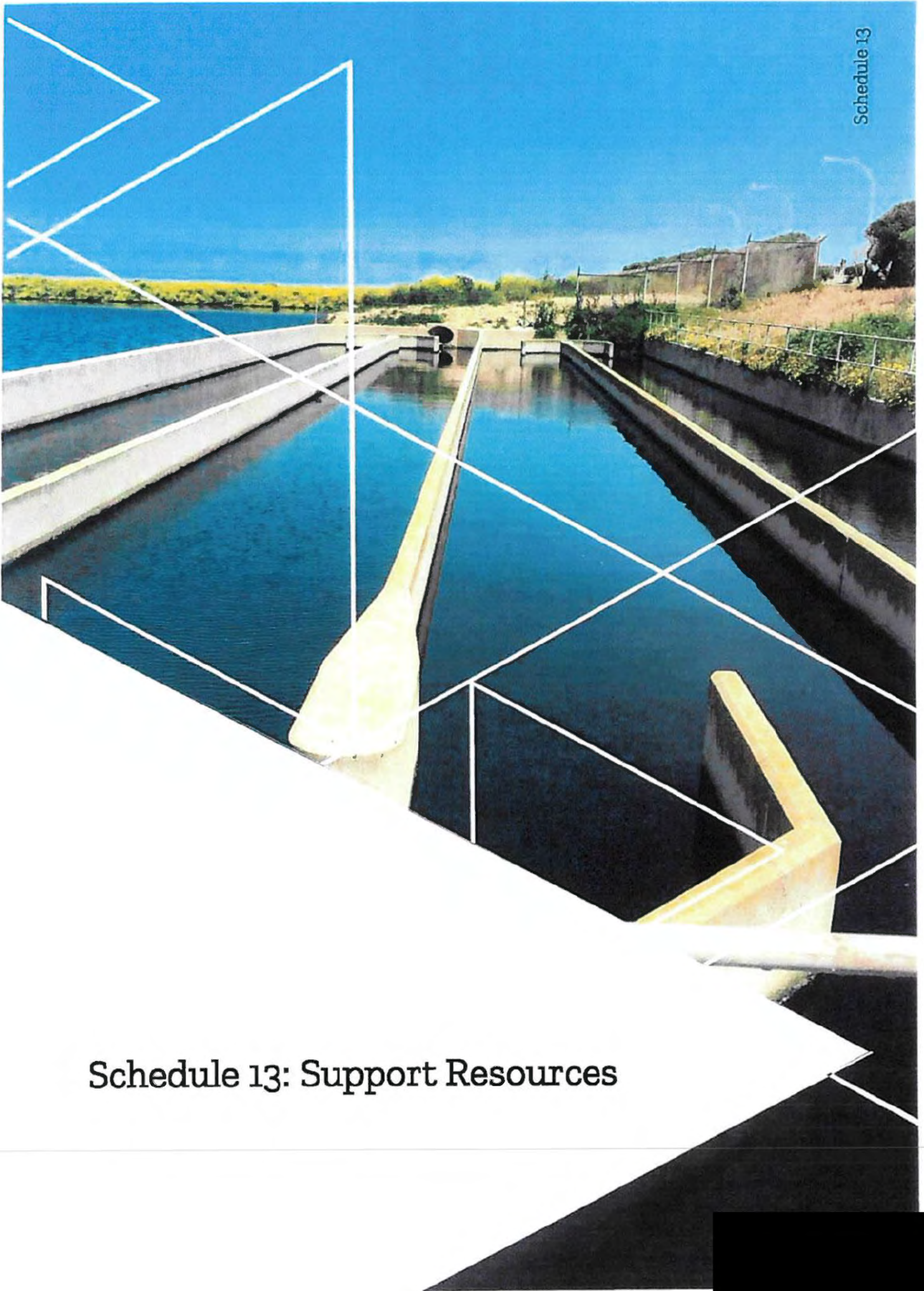
President

Registrar

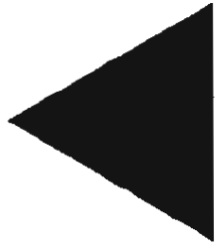


is only valid
son has paid
omplied with
the CPD requirements





Schedule 13: Support Resources



SCHEDULE 13: SUPPORT RESOURCES (FOR INFORMATION ONLY)



TENDER NO: 266C/2024/25

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

SOFTWARE PACKAGES AVAILABLE FOR USE		
DESCRIPTION	DESCRIPTION	DESCRIPTION
Autodesk AutoCAD 2020 to 2023	Drawing software packages	Currently Licenced
Autodesk Civil 3D 2020 to 2023		Currently Licenced
PROKON	Structural analysis software packages	Currently Licenced
SAFE		Currently Licenced
ETABS		Currently Licenced
GLS WADISO	Analysis and optimal design of water distribution systems	Currently Licenced
EPANET		Currently Licenced
Bentley WaterGEMS		Currently Licenced
Autodesk Storm and Sanitary Analysis 2023	Simulation, analysis and optimal design of sewer reticulation systems	Currently Licenced
PCSWMM (1D and 2D)	Modelling software for stormwater, wastewater and watershed systems	Currently Licenced
HECRAS (1D and 2D)	Modelling software for hydraulics of water flow through natural rivers and other channels	Currently Licenced
Bentley HAMMER	Surge analysis software	Currently Licenced
KYPIPE SURGE		Currently Licenced
Autodesk REVIT 2020 to 2023	3D modelling of structural, mechanical and electrical components, etc.	Currently Licenced
Autodesk Inventor 2020 to 2023	Computer-aided design application for 3D mechanical design, simulation, visualization, and documentation	Currently Licenced
Autodesk Navisworks 2020 to 2023	3D design review package for Microsoft Windows	Currently Licenced
Autodesk Infraworks	Infrastructure planning and design software	Currently Licenced
Star-CCM+	Computational fluid dynamics modelling software	Currently Licenced
BioWin	Commercial simulation tool for biological wastewater treatment plant design, analysis and training. Can simulate both steady-state and dynamic-state models	Currently Licenced

TENDER NO: 266C/2024/25

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

Plant Wide Steady State Design (University of Cape Town, 2014)	Plant-wide steady-state computerised process design software for treatment plant design and analysis	No License required
Ms Office & PDF Exchanger	Preparation of documents, reports, presentation, calculations	Currently Licensed

Zutari resources and software

Footprint



Our physical facilities include:

- ▶ Office space
- ▶ Conference facilities
- ▶ 24-hour office security
- ▶ Pool cars
- ▶ PC's and laptops, high volume copiers/printers and WAN & LAN computer support
- ▶ Full corporate support departments like CAD Plotting, filing and archiving, postal and delivery services as well as reproduction and printing.

Information technology

We partnered with Vodacom to provide and manage our network across Africa.

Zutari has one physical data centre located in Tshwane, South Africa, with partial cloud-based disaster recovery services. This data centre is equipped with Compute-Dell Storage-EMC/Dell that hosts our virtual environment based on VM ware. All our offices also have the same brand infrastructure scaled to office sizes.

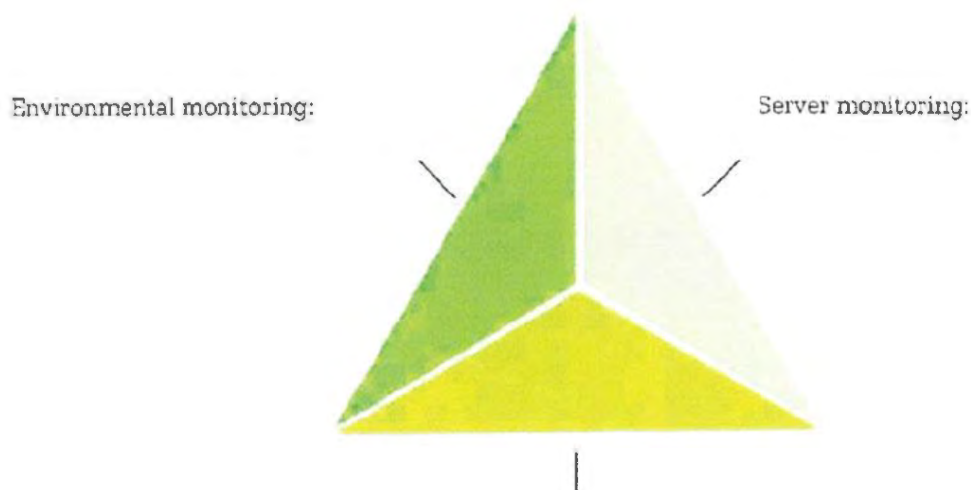
Data backups and archiving are done with Commvault with onsite retention and cloud offload.

Our office LAN runs on a Cisco backbone.

Our IT connectivity services also includes virtual private networks (VPNs) and secure internet connectivity. Because the network is protected by firewalls, access is limited to authorised personnel only. The extranet services are made available through our DMZ (Demilitarized Zone) depending on business requirements managed by Orange.

Zutari uses the best available technology to support our business. This includes Cisco as the network switching layer, Dell desktops, Dell laptops and Dell servers, Dell/EMC storage and Enterprise Voice (Teams). All LANs are Ethernet networks based on CAT5/CAT6 UTP cabling. Furthermore, all core services in buildings are backed up by Uninterrupted Power Supply (UPS) and generators (where deployed).

Zutari's IT team continually monitors many services in its environment, including:



We use software almost exclusively and have an Enterprise Licensing Agreement with them. Zutari is an Office 365 user for mail management and use Advanced Threat Protection for email security hygiene.

Our design software suite is made-up of, and various third-party design products.

All the equipment is owned by our firm and is managed by a central IT team within Zutari. All large purchases are financed by a local investment house.

Licensed software used for projects



Fabrication CADMEP,
CAMduct and EST
MEP
Navisworks Freedom
Navisworks ISSUES
3Ds Max
Advanced Steel
AutoCAD
AutoCAD Civil 3D
AutoCAD Electrical
AutoCAD PID
AutoCAD Plant 3D
BIM360 Design
Bridge Designer
DWG TrueView
Infraworks
Insights
Inventor
Maya
Navisworks Manage
Navisworks Simulate
Plant 3D
PyRevit
ReCap
ReCap Pro
Revit
Revit - Dynamo
River & Flood Analysis
Robot
Storm & Sanitary
Analysis
Vehicle Tracking

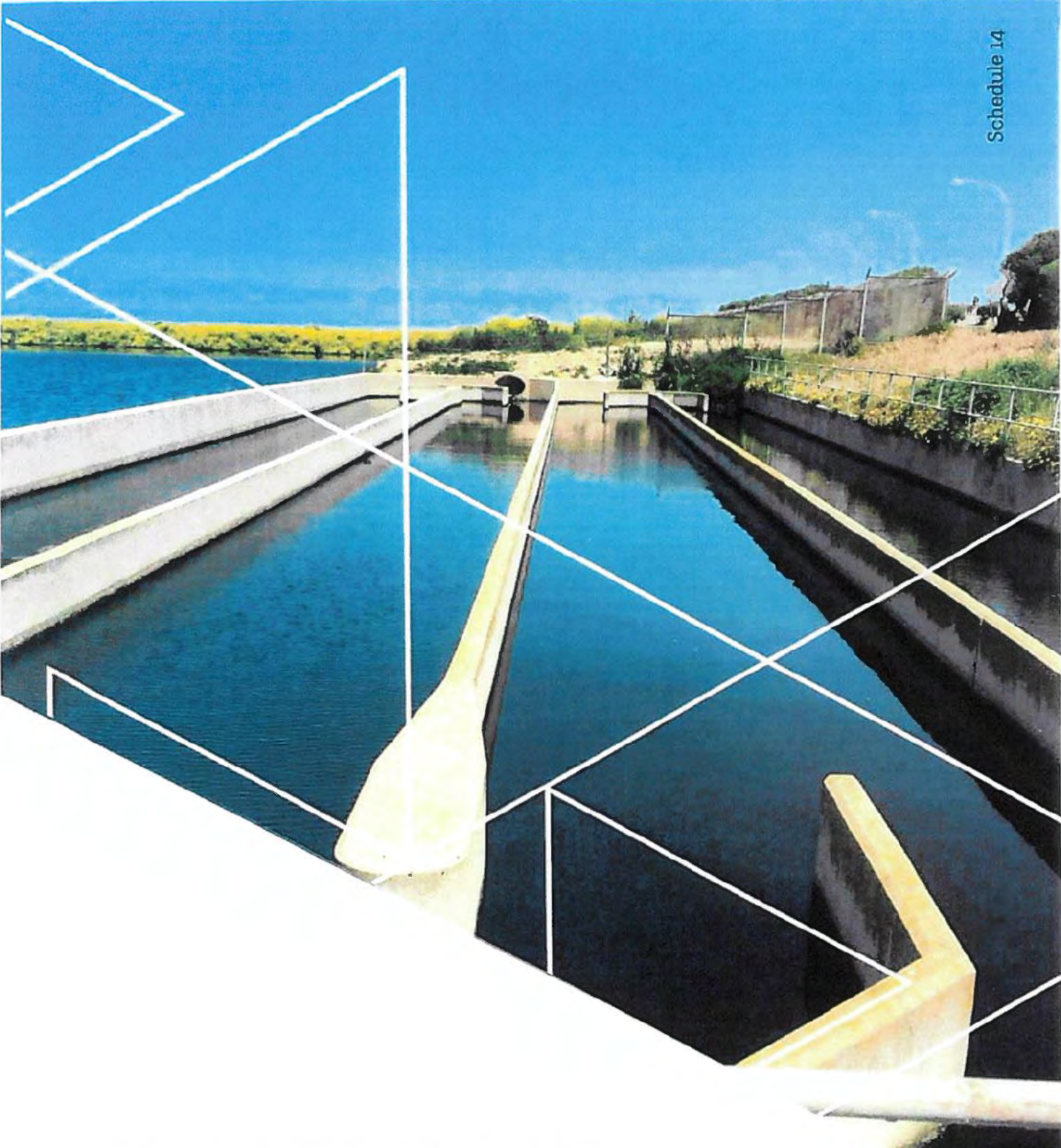


3D Substation
AutoPIPE
Hammer
Context Capture
Descartes
FlowMaster
gINT
HAMMER
Inroads
LIMCON
LumenRT
MicroStation
MSTower
Navigator v8i
Open Rail Designer
Open Roads Designer
OpenBridge
OpenBuildings
OpenBuildings -
Generative
Componets Plugin
PLAXIS 2D & 3D
Powercivil
ProjectWise
Prostructures
Rail Track (BRT)
Sewer Gems
WaterGEMS



Access
Access 64 Bit
Access 97 Database
CRM / Dynamics
Devops
Excel 64 Bit
Office 365 suite
Power BI Pro
Projects
Projects Online
SharePoint - HIVE /
Intranet
Skype for Business
System Center
Configuration Manager
(SCCM)
Teams
Visio professional
Visual Studio
Visual studio code
Visual Studio Pro
Server 2012, 2016, 2019
and 2022
SQL 2012 to date





Schedule 14: Professional Indemnity Insurance



TO WHOM IT MAY CONCERN

Dear Sir/Madam

PROFESSIONAL INDEMNITY INSURANCE

ZUTARI (PTY) LTD

This letter serves to confirm that the abovementioned client holds Professional Indemnity Insurance on the following basis:

Professional Indemnity Insurance

Limit of Indemnity

Jurisdiction

Period of Insurance

Insurers

Master Policy Number

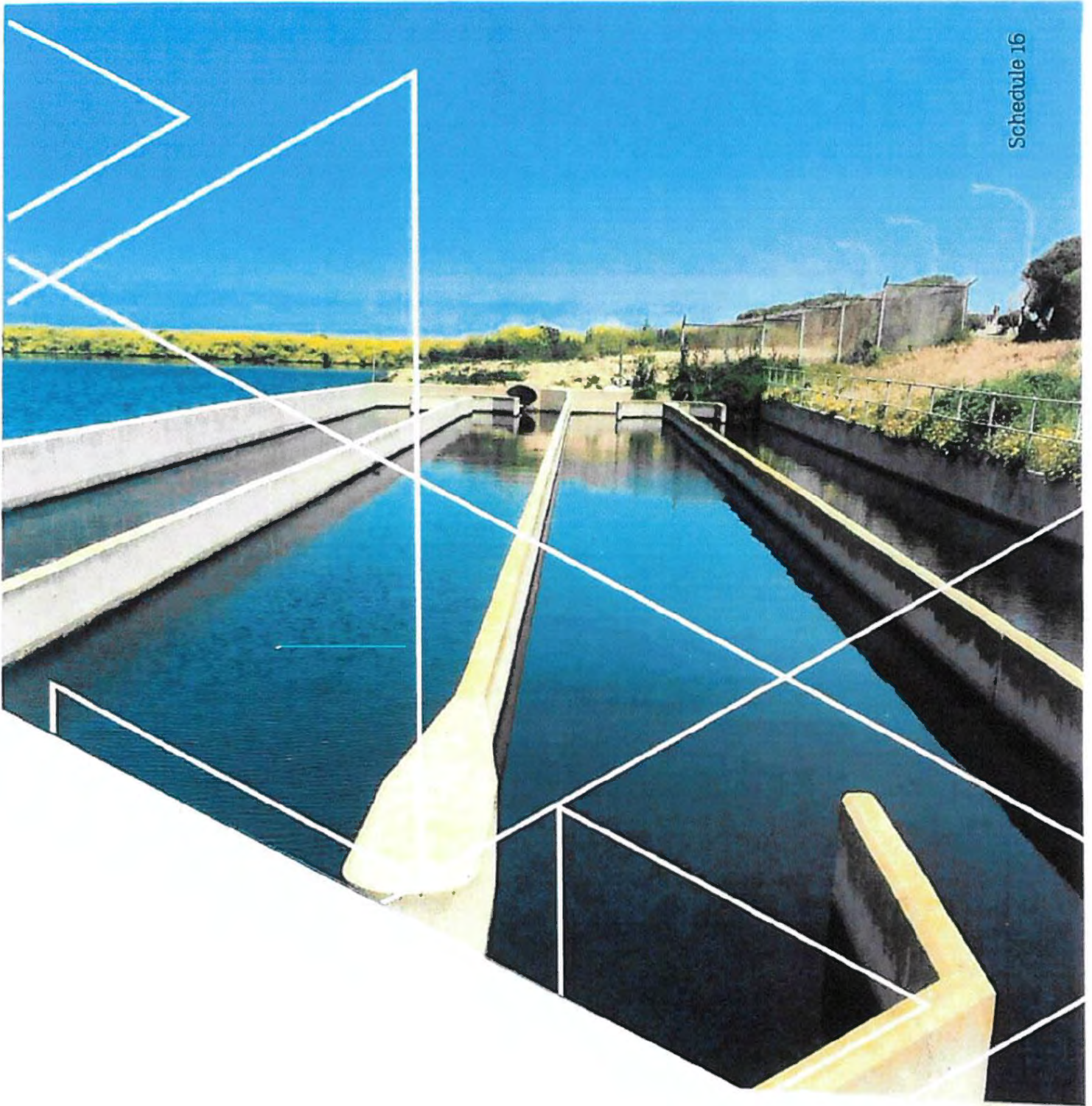
We confirm that the premium has been paid and that the policy is currently in full force and effect.

Yours faithfully

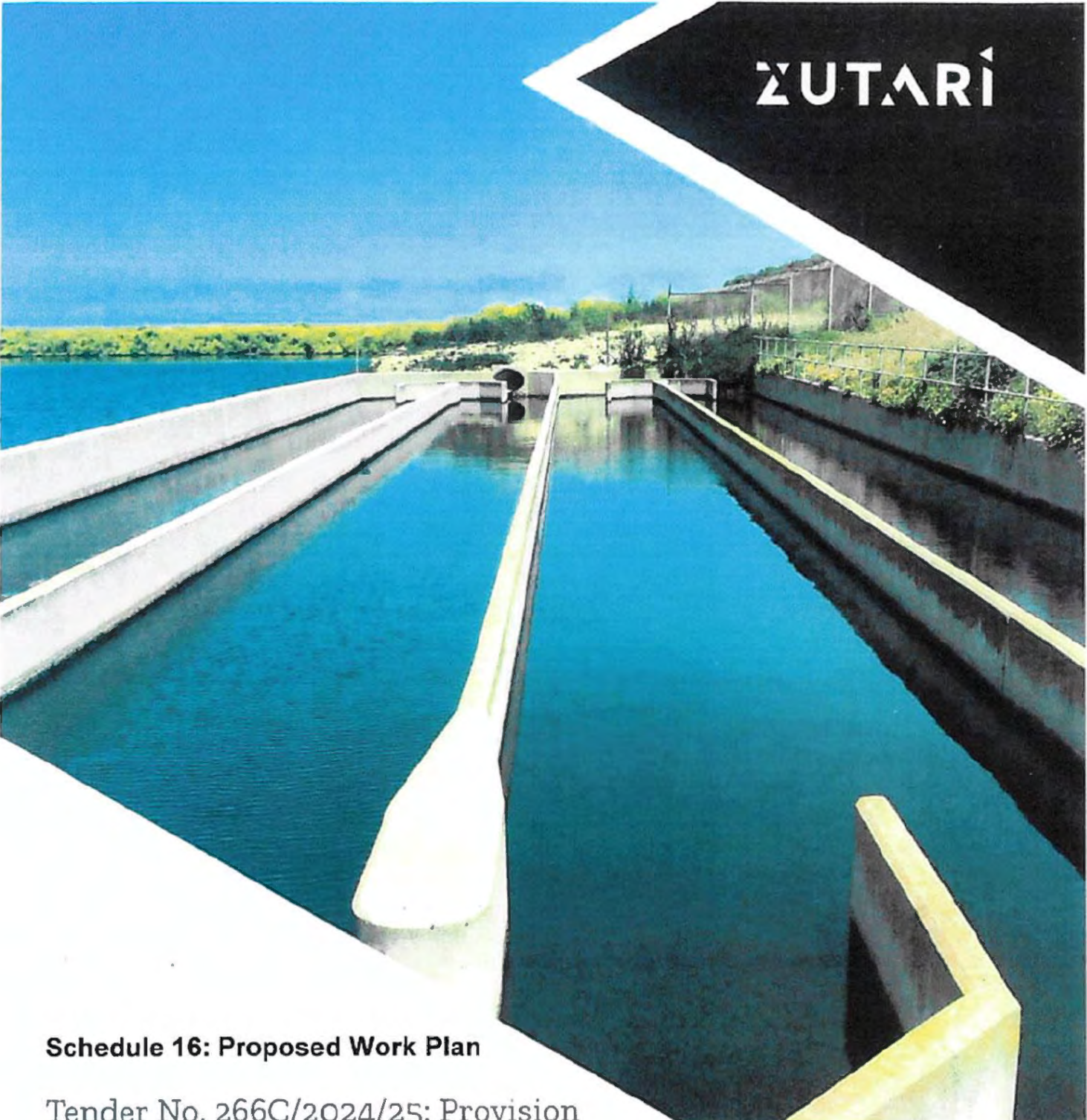
Professional Risks



Aon South Africa (Pty) Ltd



Schedule 16: Proposed Work Plan



Schedule 16: Proposed Work Plan

Tender No. 266C/2024/25: Provision of Professional Services in Respect of Contract Administration and Inspection, Close Out and Additional Services for the Upgrade and Expansion of the Macassar Wastewater Treatment Works

Submission date: 2025/07/02

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1 Introduction

1.1 Overview and Primary Objectives

This document details Zutari's SCHEDULE 16: PROPOSED WORKPLAN called for by the CITY OF CAPE TOWN:

"Tender No. 266C/2024/25: Provision of Professional Services in Respect of Contract Administration and Inspection, Close Out and Additional Services for the Upgrade and Expansion of the Macassar Wastewater Treatment Works"

This document serves to explain how Zutari has understood the tender brief and details the project approach in terms of activities, deliverables and anticipated challenges. It is not intended to repeat information included in the Scope of Work as defined in the Tender Document (Section C3.1). Reference will be made to the Scope of Work where appropriate, but in general, all requirements stipulated in the Scope of Work will be adhered to.

As with most infrastructure projects, this project represents an important opportunity to not only improve the condition of infrastructure and expand thereon but also to improve the quality of life for many of the region's residents by unlocking both development and job opportunities. Zutari recognises the value and importance of water and wastewater infrastructure as a resource for economic activity, as a pre-requisite for human health and dignity, and as a vital part of protecting the natural systems surrounding urban developments. We also recognise the safety and environmental risks involved in large construction projects.

Zutari has also partnered (subcontracting arrangement under Zutari) with Safe Working Practice Occupational Health & Safety Group (QSE), Alex Stewart & Partners (QSE), Scientific Terrestrial Services (EME), Joubert & Brink Surveys (QSE) to assist with the execution of the project.

1.2 Interpretation of the Brief

The brief requires the consulting team to undertake the Design Review, Contract Inspection and Administration and Close Out stages of the project as well as managing of other professional services for the Upgrade and Expansion of the Macassar Wastewater Treatment Works (WWTW). Zutari as the lead will manage sub-consultant services which includes occupational health and safety, architectural, landscape architectural, environmental (including biodiversity offset), geotechnical specialists, major hazard installation risk assessors etc. The brief also requests that the consulting team undertakes additional services including; obtaining all permits, approvals, commissioning of the WWTW during the expansion including the trial operation periods, local flood protection of works, construction of access roads, training of relevant City of Cape Town staff and anything else as may be required to complete the works.

The overall aim of the project entails the upgrade and capacity extension of the existing WWTW. This included a refurbishment of selected infrastructure and an extension of the treatment capacity to 80 Mℓ/d ADWF, with an option to further extend the plant's treatment capacity in the future to an ultimate design capacity of 120 Mℓ/d ADWF. The refurbishment and extension are applicable to the primary, secondary and tertiary treatment processes at the Macassar WWTW. In addition, the Employer's objectives include general project requirements, design (including design review and design development of the scope of works associated with the upgrade), construction and other requirements.

Based on Zutari's involvement on the current contract 194C/2020/21, Zutari is well positioned to address the Employer's objectives as explained below:

- ▶ **Upgrade and extension of the existing plant in terms of Civil, Mechanical and Electrical works:** Majority of the scope associated with the upgrade and extension has been predefined in the Employer's objectives, however, Zutari is well positioned to amend or update the current design based on any unforeseen challenges during the construction period.
- ▶ **General project requirements:** Zutari understands that the process design has been completed where due consideration was given to process requirements (in terms of wastewater characterisations) and peak factors and such that it complies with DWS standards and the Water Use License (or amendments applied for by the City of Cape Town). The current design allows for energy recovery specifically in terms of waste to energy and other means of energy efficient requirements.
- ▶ **Design:** Design review of the information available will not be required due to Zutari's current PSP appointment and understanding of the project. Based on a proven track record Zutari has the experience and capacity to finalise the balance of the design including architectural design, finalisation of civil design of buildings or process units based on inputs received from the Mechanical and Electrical Contractor, or as a result of the HAZOP or HAZAC.
- ▶ **Construction:** The handover during construction monitoring will be limited due to Zutari's understanding of the project. If Zutari continues on Construction Monitoring from their existing PSP appointment then the transition will be seamless on both the Civil (i.e., 203Q/2023/24) and Mechanical and Electrical Contract (i.e., 191Q/2023/24). This is beneficial to the Employer from a risk perspective as it minimises hindrances associated with change of PSP to the ongoing construction phases (on both contracts) which in turn minimises the risk of delays or disruptions resulting in delay claims (financial implications to the Employer). Zutari

has the experience and capacity to continue with the construction inspection and administration phase on both the Civil and Mechanical and Electrical contracts.

- ▶ **Other requirements:** If Zutari continues on from their existing PSP appointment then managing aspects such as OHS Act (through an independent health and safety officer) and NEMA Act (through adhering to the Environmental Authorisation) will be seamless as the team is familiar with the project requirements and expectations. Applications for wayleaves, approvals and permits will also be business as usual.

2 Value Engineering Initiatives

Zutari will value engineer solutions that take cognisance of the operator and customer's requirements, safety, sustainability in terms of operation and maintenance, quality, cost control and risk management. Typical value engineering initiatives shall include:

- ▶ A continued special focus on operation and maintenance of equipment during the implementation period, and availability of local suppliers to service the specified equipment
- ▶ Finalising designs by adopting a human-centred approach to design, engaging the Employer and WWTW personnel (operators, process controllers etc.) in decision-making
- ▶ Safety in design to ensure health and safety requirements are surpassed
- ▶ Implementing environmental control and aesthetic design considerations
- ▶ Designing economical and more efficient systems that will be managed on actual life cycle cost and sustainability principles along with incorporating energy saving principles
- ▶ Providing Infrastructure Asset Management with the key objective being to evaluate total life-cycle costs, not only initial capital costs, but also subsequent operational and maintenance to ensure that the investment is optimally cost-effective
- ▶ Working towards a digital twin. Zutari understands the current design allows for a fully automated plant with centralised control room, historian, data warehouse, business intelligence and communication to the larger enterprise decision support system at the City of Cape Town Water & Sanitation Departmental office. Under our current appointment, a proof of concept (POC) of a virtual centralised control room was developed during the detail design to test design assumptions and implementation readiness of new technologies. The POC included PLCs, SCADA, a 3D model, with BIM data and aggregated data from the historian, and a VR/AR model with live data embedded in the models. The aim of this is working towards a digital twin which could be used for operation, maintenance and training and also for overall asset management.

This project will be undertaken with due consideration of the project requirements and/or constraints as set out below:

- **Phasing of the Works:** Due consideration will be given to the Phasing of the Works to ensure that the existing WWTW remains operational during construction of the new Works. When the new Works is commissioned, the existing infrastructure will be modified or demolished, where demolished provision will be made for new infrastructure.
- **Budget constraints:** Zutari is familiar with the conflict between solutions that produces a high-quality effluent and the capital and operating cost of many of these solutions. Should the Employer have any budgetary and financial constraints during implementation, Zutari will be able to advise on the optimal cost saving adjustments to the scope while minimising impacts to the process, civil and mechanical and electrical design and ensuring no impacts to operation and maintenance of the Works
- **Operation Assistance, Maintenance Assistance and Training Contract (Part of Main Extension M&E Contract):** From an operation and maintenance perspective, the project entails a large capital investment in infrastructure together with the potential implementation of new technologies in the City of Cape Town. This necessitates additional care in the handover process to ensure that the Works is fully functional and compliant with its license requirements. As a result, we would propose the City of Cape Town consider extending the proposed "Process Control Training, Maintenance and Assistance" from 18 months to 36 months, where the Contractor (specifically the Mechanical and Electrical Contract) will assist and train the Municipality's staff to be employed on the Plant. This aids in implementing the project successfully and protects the large investment made in this infrastructure. Zutari has adopted a similar approach on recent projects, namely the Stellenbosch WWTW, Paarl WWTW and Wellington WWTW, where the cost of a three-year operation assistance, maintenance assistance and training scope (1 year full-time and 2 years part-time) was less than 3% of the total capital costs.

3 Project Methodology, Programme and Cashflow

The project methodology presented in this Section shall be read in conjunction with the programme attached as **Appendix A**, which specify the various stages and tasks from appointment to close-out for each part of the tender. The construction phase will have been underway for just under one year at the time of this contract appointment. From the time of appointment, a period of three (3) months is allocated for Status Quo Design Review and Construction Monitoring Handover. A Forty-four (44) month construction period has been allocated for the upgrades and extensions to the works. This will be followed by a one-year of defects liability period and an eighteen (18) month Process Control Training, Maintenance and Assistance period. A projected cashflow has been provided under **Appendix B**.

3.1 Engineering Services

Majority of the work required under "Engineering Services" (as outlined in the Scope of Works) has already been completed by Zutari under their existing PSP appointment. Zutari remains agile enough to make amendments as required as part of the Engineering Services should the Employer's need arise during construction. Our general approach to project management which will apply to this project is discussed under **Section 3.4**.

3.2 Normal Services

3.2.1 Stage 1, 2, 4 Inception

- ▶ *Stage 1: Inception - Not applicable to this tender.*
- ▶ *Stage 2: Concept and Viability - Not applicable to this tender.*
- ▶ *Stage 4: Documentation and Procurement: Inception - Not applicable to this tender.*

3.2.2 Stage 3: Design Development

Typical Deliverables: Revised designs, detailed design drawings, technical memos and cost estimates

▶ *Design Review:*

As Zutari is the current appointed PSP, no Design Review will be required of the available information or handover will be required. Tasks relating to the Design Review is reflected in the Preliminary Programme (**Appendix A**) however no duration has been allocated and is noted as "not applicable".

3.2.3 Stage 5: Construction and Site Administration

Typical Deliverables: Construction drawings, structural reinforcement drawings and bending schedules, documentation related to Construction Administration (e.g. Variation Orders) and Supervision, Monthly Site Meeting and Progress Reports

a. Construction Supervision & Administration

As Zutari is the current appointed PSP, no construction monitoring handover will be required. Zutari will also be responsible for continuing the necessary contract administration, inspection and monitoring to ensure that the project is delivered contractually, and within budget and programme. Zutari has a well-developed site management system that comprises of procedures, forms and guidelines that ensure that all personnel follow the same methods for site supervision and that compliance with ISO 9001 requirements is maintained. The Zutari Site Management System ensures that the project is well documented and that the site personnel have all the necessary support structures to deliver a successful project. Zutari will ensure that all payment certificates, preferential procurement and labour returns, and contract participation expenditure reports are timeously submitted and will not issue any variations, unless approved by the Employer.

b. Phasing of Works and Milestones:

Zutari understands that the current design in which the Works is phased into two phases, namely Phase 1 and 2. Zutari will ensure that the phasing of the works is adhered to such that the existing plant remains operational ("Live") until the new works is commissioned (Phase 1), thereafter the balance of the works will be constructed where existing infrastructure needs to be modified or demolition of existing infrastructure will be required to construct new infrastructure (Phase 2). Further to this Zutari is cognisant of project milestones which are applicable to both the Civil and Mechanical and Electrical Works contracts.

c. OHS & ECO

During construction, the OHS agent will conduct audits every month, which will be both administrative and physical audits of the site and will attend monthly contract site meetings. During construction the ECO will conduct audits in terms of the Environmental Authorisation (which includes the Biodiversity Offset) monthly and will attend monthly contract site meetings.

d. Civil Scope

It is recommended that the project design team be actively involved in the implementation of the project. This approach ensures that, any omission during design stage, or misinterpretation during construction, will be identified more easily during the construction stage. The benefits of this approach are clear from existing contracts and contract managers.

e. Mechanical and Electrical Scope

All drawings prepared by the Contractor will be reviewed, verified and approved by the mechanical and electrical design teams. Drawings will have to comply with the specification and any Employer specific requirements. Where possible, the design will be assessed and optimised such that sustainability is optimised. Criteria that the design would be assessed for would be the efficiency of the equipment, energy usage, robustness, chemical usage, potable water demand and potential for environmental impact, such as noise and odour generation. All fabrication and site inspections will be done by senior mechanical and electrical engineers. It is recommended that, in addition to the regular monthly site meetings, more regular technical meetings be held during the contractor's design phase and during installation and testing.

Further, to above meetings, a Hazardous and Operability (HAZOP) meeting and a Hazardous Area Classification (HAZAC) meeting, where required, will be held once the M&E design has reached an adequate level of development and the P&ID drawings have been developed to suitable detail. The mechanical and electrical engineers' involvement on site would start to increase as the installation begins to conclude and the commissioning phase begins. The contractor will have to supply a commissioning plan and schedule for the Engineer to review prior to commissioning commencing. Initially, the contractor will have to pre-commission the equipment and provide testing results. At this stage, the mechanical and electrical engineers will spend limited time on site as this stage is for the contractor to check that all is complete and prepare the equipment for testing. Cold commissioning will follow once pre-commissioning is satisfactorily completed. The cold commissioning will test the functioning, control and operational sequence of the equipment. During this period, the Engineers' time of site will increase but they will only attend the testing of major/critical equipment. Hot commissioning will bring the equipment into commission and the equipment shall undergo performance testing. The Engineers will be on site almost full time during this period. If the equipment is all operating correctly, the Trial and Operation period (typically for 28 days) will begin. The equipment will be expected to function correctly for the entire specified period of the Trial Operation Period before the Taking-Over Certificate is issued. The Engineers will be based part time on site during the Trial and Operation period. The above is applicable to both Phase 1 and Phase 2 of the Works.

f. Design Changes

Zutari understands that additional design development is required for completion of the civil designs, architectural and structural designs for the process units and buildings which has not yet been constructed when this contract commences. This may include redesign, amendment, review and reapproval of previous Civil designs (including Civil Drawings and Structural Design related drawings and schedules) as a result of a changes in the M&E design, refinement of Employers scope during construction or due to changes in site conditions. Items affected as a result of a change in footprint may also include all general civil works such as; roads and stormwater, potable water reticulation, service water reticulation, interconnecting pipework (or process pipelines). Zutari will use the construction programmes and associated milestone dates which are deemed to be approved to ensure detailed designs, drawings and deliverables required are issued timeously. Cost estimates will be updated using bill rates as far as possible and the cost at completion will be updated as part of this stage. All outstanding council submissions for designs and drawings which have changed shall be made to the relevant local authority.

g. Technical/Administrative Support during Commissioning and Operation

Upon completion of construction and commissioning, Zutari will continue to represent the Client during the defects and liabilities period of one year and the 18 month "Process Control Training, Maintenance and Assistance" ensuring that the works is operated and maintained as per specification, and that all 'teething problems' are resolved and outstanding 'snag list' items are attended to. Zutari will provide the necessary technical support to the Contractor for process control training during this period in accordance with the Client's requirements.

3.2.4 Stage 6: Project Close-out

Typical Deliverables: As-built Drawings, Project Close-out Report

At the end of the defects and liabilities period, Zutari will issue the Employer with a final Close-out Report detailing the work completed, lessons learnt, finalising of financial accounts, which will include copies of all project records (including as-built drawings, reports, minutes, etc.) in the format as stipulated by the Employer.

3.3 Additional Services

Zutari understands that the following additional services are required and is well prepared to undertake the additional services based on effort already undertaken for majority of the additional services under the current appointment.

- Service enquiries/wayleave applications
- Architectural services
- Preferential procurement and targeted participation
- Landscape architectural services

- Act as leader of the professional team
- Construction monitoring
- Environmental officer
- Additional geotechnical investigations
- Sludge lagoon sampling
- Stage gates
- Advanced supervisory control and data acquisition system with data storage models.
- Hazard impact assessment
- Administration of biodiversity offset
- Funding applications support
- Skills transfer
- Assistance with compliance with City of Cape Town processes and systems
- Act as the employer's agent in terms of the occupational health and safety act

3.4 General approach to project management

The success of a project of this nature is dependent on sound technical input and proper project management and financial control. Zutari is ISO 9001 certified and has approved quality management systems in place to run a project of this scale. Zutari has experience in project management throughout a range of projects. It is important to note that the project team will give advice and make recommendations to the Client, but that the Client makes major decisions. Approval for such decisions will be obtained through the Client's nominated representative (Project Leader). Zutari will be responsible for the day-to-day project management and co-ordination of the project team. In summary, the following tasks will be undertaken under project management:

- Arranging project meetings, preparing agendas and taking minutes of meetings and distributing these to all members
- Budget preparation, monitoring and other project management and administrative matters
- Drafting Terms of Reference and appointing and managing other service providers
- Ensuring review of specialist outputs which falls under the scope of Zutari.

It is anticipated that the following meetings will be held:

- Monthly project management / steering committee meetings
- Contract site meetings during the construction stage
- Technical co-ordination meetings will be held regularly during the construction period to discuss the technical aspects and issues arising. This meeting will include the design team, contractors and Client's Technical representative
- Hazard and Operability meeting (HAZOP) will be held early in the project once the mechanical and electrical design has been finalised by the Mechanical Contractor. This will incorporate the Client, Engineer and Contractor to identify health and safety issues and potential operational problems
- Ad hoc and general meetings as and when required.

3.4.1 Project management / steering committee meetings

The Project Management Committee comprising representatives from the Client and members of the core study team, will meet monthly to discuss progress and technical issues. Presentations will be prepared for each meeting where required, summarising the information which will be contained in the progress reports. Zutari will prepare agendas and minutes of these meetings.

3.4.2 Monthly Progress Report

During each month of the construction period, Zutari will issue a Progress Report to the Client. Included in this progress report will be updates on the completion of the project (overall programme), project budget, local labour, quality assurance aspects, claims, delays and frustrations. In addition, weekly progress reports will be submitted to document activities and progress during construction.

4 Conclusion

Zutari hosts a large pool of wastewater engineers who have worked together for an extensive number of years on a number of innovative and strategic sewerage and treatment related projects in Africa, the Middle East, Australia and, most specifically, for the City of Cape Town. Our proposed team (refer to organogram attached to **Schedule 12** of the tender document) has experience managing large complex and multi-disciplinary wastewater treatment projects and possess in-depth knowledge of the City of Cape Town's requirements. We believe that our proposed approach will ensure that the risks associated with this work are well managed and mitigated and that interfaces between the various parties will be well coordinated.

5 Appendices

5.1 Appendix A - Preliminary Programme

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION,
CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

01 JULY 2025

ID	Activity	Duration	Start	Finish	Resource	2024	2025	2026	2027	2028	2029	2030	2031
1	1 APPOINTMENT OF CONSULTANT	1 day	Wed 01 Jul '25	Thu 02 Jul '25									
2	1.1 Signing of Contract (Commencement Date)	0 days	Wed 01 Jul '26	Wed 01 Jul '26	Client/Consultant								
3	1.2 Project Management	0 days	Thu 02 Jul '26	Thu 02 Jul '26	Client/Consultant								
4	2 ENGINEERING SERVICES	0 days	Thu 02 Jul '26	Thu 02 Jul '26									
5	2.1 Identify and Define Project Constraints and Criteria (not applicable)	0 days	Thu 02 Jul '26	Thu 02 Jul '26									
6	2.2 Review Discharge and Return Options (not applicable)	0 days	Thu 02 Jul '26	Thu 02 Jul '26									
7	2.3 Design Selected Management Options (not applicable)	0 days	Thu 02 Jul '26	Thu 02 Jul '26									
8	2.4 Refined Cost Estimate (not applicable)	0 days	Thu 02 Jul '26	Thu 02 Jul '26									
9	2.5 Construction of Facilities (not applicable)	0 days	Thu 02 Jul '26	Thu 02 Jul '26									
10	2.6 Operation and Maintenance Guidelines (not applicable)	0 days	Thu 02 Jul '26	Thu 02 Jul '26									
11	3 STAGE 3: DESIGN DEVELOPMENT	9-15 days	Fri 03 Jul '26	Thu 28 Feb '30									
12	3.1 WWTW Design Review (Civil and M&E Contracts) (not applicable)	0 days	Fri 03 Jul '26	Fri 03 Jul '26									
13	3.1.1 Review and Update and Approval of Previous Design Reports (not applicable)	0 days	Fri 03 Jul '26	Fri 03 Jul '26									
14	3.1.2 Review of Surveys and Approval Geotechnical Reports (not applicable)	0 days	Fri 03 Jul '26	Fri 03 Jul '26									
15	3.2 Design Development	42 days	Fri 03 Jul '26	Mon 31 Aug '26									
16	3.2.1 Review Verification and Approval of Design-Build by the Mechanical/Electrical (M&E) contractor (not applicable)	0 days	Fri 03 Jul '26	Fri 03 Jul '26									
17	3.2.2 Redesign, Amendment, Review and Re-approval of Previous Civil Designs (not applicable)	0 days	Fri 03 Jul '26	Fri 03 Jul '26									
18	3.2.3 Assessment, Verification and Updating of Detailed Design and Construction Drawings	42 days	Fri 03 Jul '26	Mon 31 Aug '26									
19	3.3 Additional Services	9-15 days	Fri 03 Jul '26	Thu 28 Feb '30									
20	3.3.1 Biodiversity Process (Ongoing)	120 days	Fri 03 Jul '26	Thu 31 Dec '26									
21	3.3.2 Geotechnical Investigations	261 days	Tue 01 Sep '26	Tue 31 Aug '27									
22	3.3.3 Hazard Impact Assessment	64 days	Fri 03 Jul '26	Wed 30 Sep '26									
23	3.3.4 Landscaping Services	129 days	Mon 03 Sep '26	Thu 28 Feb '30									
24	4 STAGE 4: CONTRACT ADMINISTRATION AND INSPECTION	148 days	Wed 01 Jul '26	Fri 23 Aug '31									
25	4.1 Construction Monitoring Handover (not applicable)	0 days	Fri 03 Jul '26	Fri 03 Jul '26									
26	4.2 Main Extension Contract: Mechanical & Electrical	148 days	Wed 01 Jul '26	Fri 23 Aug '31									
27	4.2.1 Review of Construction Requirements by Contractor (Performance Security, Insurance, Programming etc) (not applicable)	0 days	Wed 01 Jul '26	Wed 01 Jul '26									
28	4.2.2 Handover of Mechanical and Electrical Detailed Design of Equipment (Approval by Engineer)	251 days	Wed 01 Jul '26	Wed 30 Jun '27									
29	4.2.3 Phase 1	473 days	Wed 01 Jul '26	Fri 26 Jan '29									
30	4.2.3.1 Mechanical and Electrical Procurement	499 days	Wed 01 Jul '26	Mon 29 May '29									

CONTRACT NO: 266C/2024/25:
PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION,
CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS



5.2 Appendix B - Projected Cashflow

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SCHEDULE 26: INFORMATION TO BE PROVIDED WITH THE TENDER

B. CASHFLOW FORECST

No.	MONTH	MONTHLY AMOUNT
1	July 2026	R 4,779,507.52
2	August 2026	R 4,779,507.52
3	September 2026	R 4,779,507.52
4	October 2026	R 4,779,507.52
5	November 2026	R 4,779,507.52
6	December 2026	R 4,779,507.52
7	January 2027	R 4,696,174.18
8	February 2027	R 4,696,174.18
9	March 2027	R 4,696,174.18
10	April 2027	R 4,696,174.18
11	May 2027	R 4,696,174.18
12	June 2027	R 4,696,174.18
13	July 2027	R 4,696,174.18
14	August 2027	R 4,696,174.18
15	September 2027	R 4,696,174.18
16	October 2027	R 4,696,174.18
17	November 2027	R 4,696,174.18
18	December 2027	R 4,696,174.18
19	January 2028	R 4,696,174.18
20	February 2028	R 4,696,174.18
21	March 2028	R 4,696,174.18
22	April 2028	R 4,696,174.18
23	May 2028	R 4,696,174.18
24	June 2028	R 4,696,174.18
25	July 2028	R 4,696,174.18
26	August 2028	R 4,696,174.18
27	September 2028	R 4,696,174.18
28	October 2028	R 4,696,174.18
29	November 2028	R 4,696,174.18
30	December 2028	R 4,696,174.18
31	January 2029	R 4,696,174.18

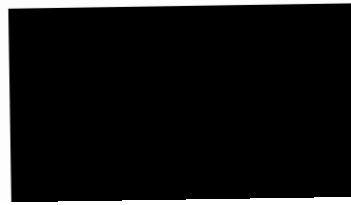
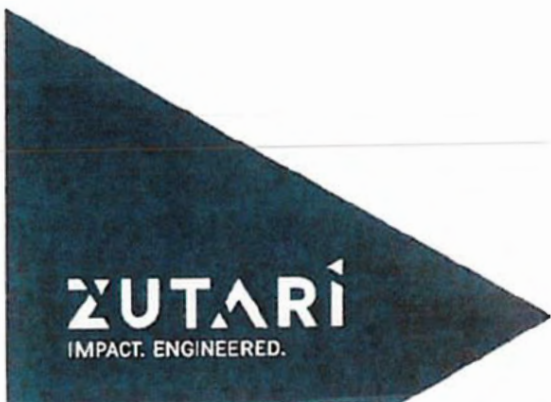
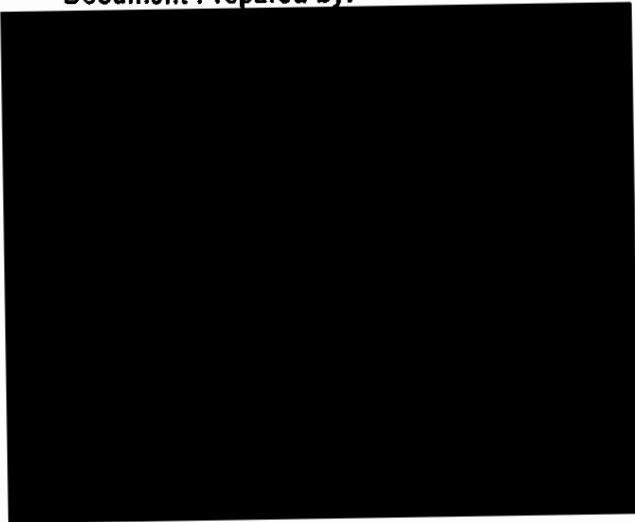
SCHEDULE 26: INFORMATION TO BE PROVIDED WITH THE TENDER			
B. CASHFLOW FORECST			
No.	MONTH	MONTHLY AMOUNT	
32	February 2029	R	4,696,174.18
33	March 2029	R	4,696,174.18
34	April 2029	R	4,696,174.18
35	May 2029	R	4,696,174.18
36	June 2029	R	4,696,174.18
37	July 2029	R	4,696,174.18
38	August 2029	R	4,696,174.18
39	September 2029	R	4,696,174.18
40	October 2029	R	4,696,174.18
41	November 2029	R	5,092,872.79
42	December 2029	R	5,092,872.79
43	January 2030	R	5,092,872.79
44	February 2030	R	5,092,872.79
45	March 2030	R	308,543.36
46	April 2030	R	308,543.36
47	May 2030	R	308,543.36
48	June 2030	R	308,543.36
49	July 2030	R	308,543.36
50	August 2030	R	308,543.36
51	September 2030	R	308,543.36
52	October 2030	R	308,543.36
53	November 2030	R	308,543.36
54	December 2030	R	308,543.36
55	January 2031	R	308,543.36
56	February 2031	R	308,543.36
57	March 2031	R	308,543.36
58	April 2031	R	308,543.36
59	May 2031	R	308,543.36
60	June 2031	R	308,543.36
61	July 2031	R	308,543.36
62	August 2031	R	308,543.36

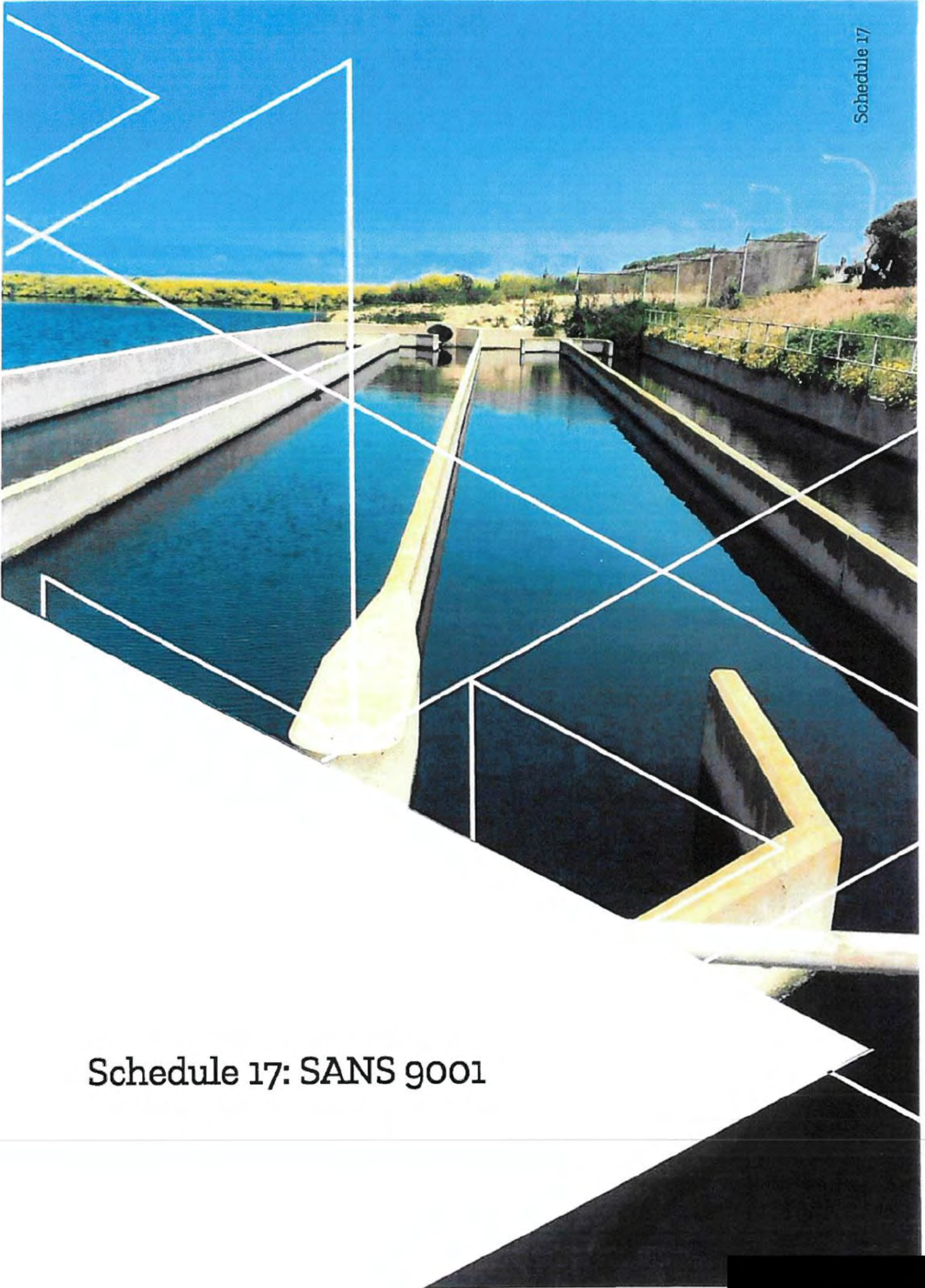
SCHEDULE 26: INFORMATION TO BE PROVIDED WITH THE TENDER		
B. CASHFLOW FORECST		
No.	MONTH	MONTHLY AMOUNT
Sub Total	R	214,272,239.00
Allow the sum of 10% (ten percent) of the above Sub-total for Contingencies to be spent as the Employer may direct and to be deducted in whole or in part if not required	R	21,427,223.90
Total including Contingencies	R	235,699,462.90
Plus VAT (15%)	R	35,354,919.44
TENDER PRICE CARRIED FORWARD TO C1.1 FORM OF OFFER AND ACCEPTANCE	R	271,054,382.34

In diversity there is beauty and
there is strength.



Document Prepared by:





Schedule 17: SANS 9001

Certificate of Approval

This is to certify that the Management System of:

ZUTARI (PTY) LTD

Zutari Building, Riverwalk Office Park, 41 Matroosberg Road, Ashlea Gardens, Extension 6, Pretoria,
0081, South Africa

has been approved by LRQA to the following standards:

ISO 9001:2015

Approval number(s): ISO 9001 – 0045782

This certificate is valid only in association with the certificate schedule bearing the same number on which the locations applicable to this approval are listed.

The scope of this approval is applicable to:

Consulting Engineers - The provision of infrastructure design and management solutions.

Area Operations Manager - North Asia & SAMEA

Issued by: LRQA Limited



0001

Certificate Schedule

Location

Activities

Tshwane Office

ISO 9001:2015

Johannesburg Office

ISO 9001:2015

Cape Town Office

ISO 9001:2015

Paarl Office

ISO 9001:2015

George Office

ISO 9001:2015

Bloemfontein Office

ISO 9001:2015

East London Office

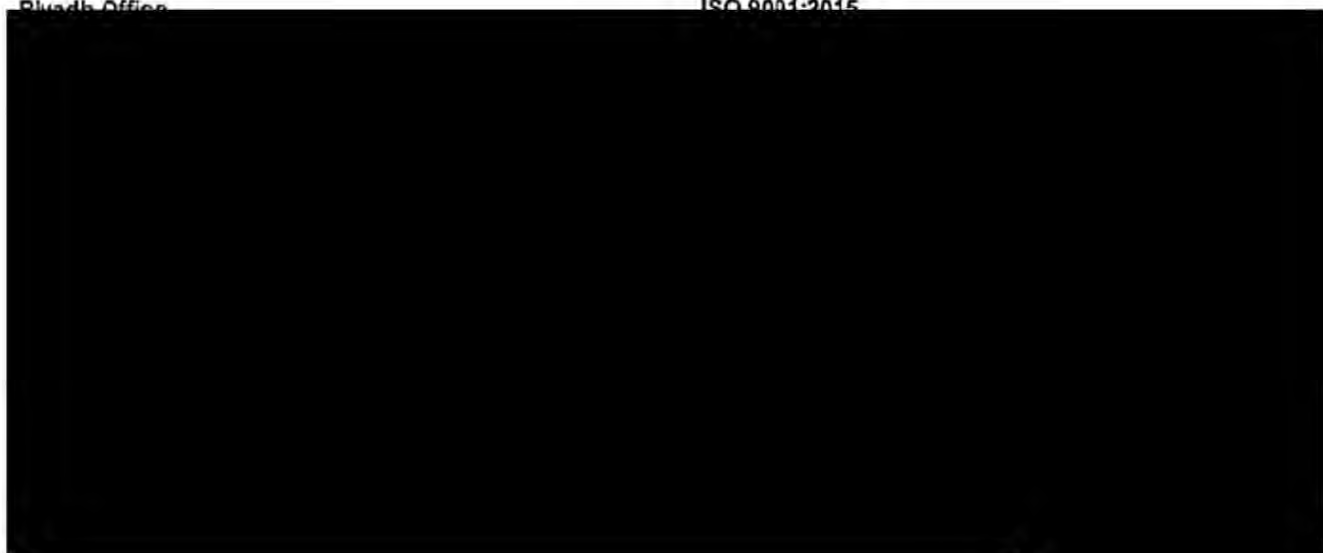
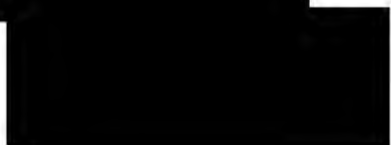
ISO 9001:2015

eThekweni Office

ISO 9001:2015



Certificate Schedule

Location	Activities
Mahikeng Office	ISO 9001:2015
	
Polokwane Office	ISO 9001:2015
	
Gqeberha Office	ISO 9001:2015
	
Rustenburg Office	ISO 9001:2015
	
Dubai Office	ISO 9001:2015
	
Abu Dhabi Office	ISO 9001:2015
	
Doha Office	ISO 9001:2015
	
Blantyre Office	ISO 9001:2015
	
	

Schedule 19: Personnel Schedule (Other Than Key Personnel)



SCHEDULE 19: PERSONNEL SCHEDULE (OTHER THAN KEY PERSONNEL)

TENDER NO: 266C/2024/25
PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE
UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

SCHEDULE 19: PERSONNELSCHEDULE (OTHER THAN KEY PERSONNEL)				
NAME	TITLE	JOB DESCRIPTION	QUALIFICATION	ESTIMATED PERIOD OF ENGAGEMENT (Weeks)

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TENDER NO: 266C/2024/25
PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

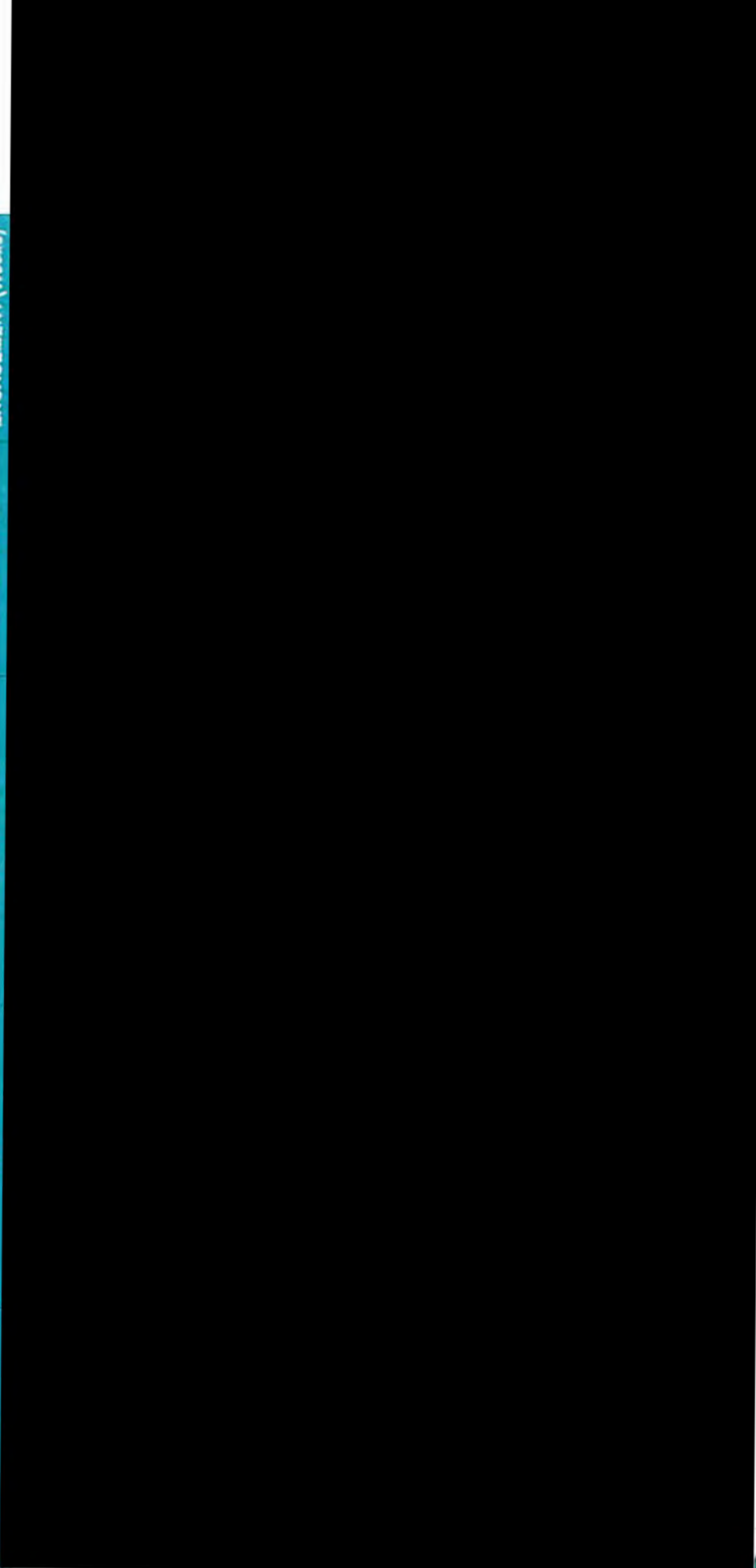
SCHEDULE 19: PERSONNEL SCHEDULE (OTHER THAN KEY PERSONNEL)			
NAME	TITLE	JOB DESCRIPTION	ESTIMATED PERIOD OF ENGAGEMENT (Weeks)

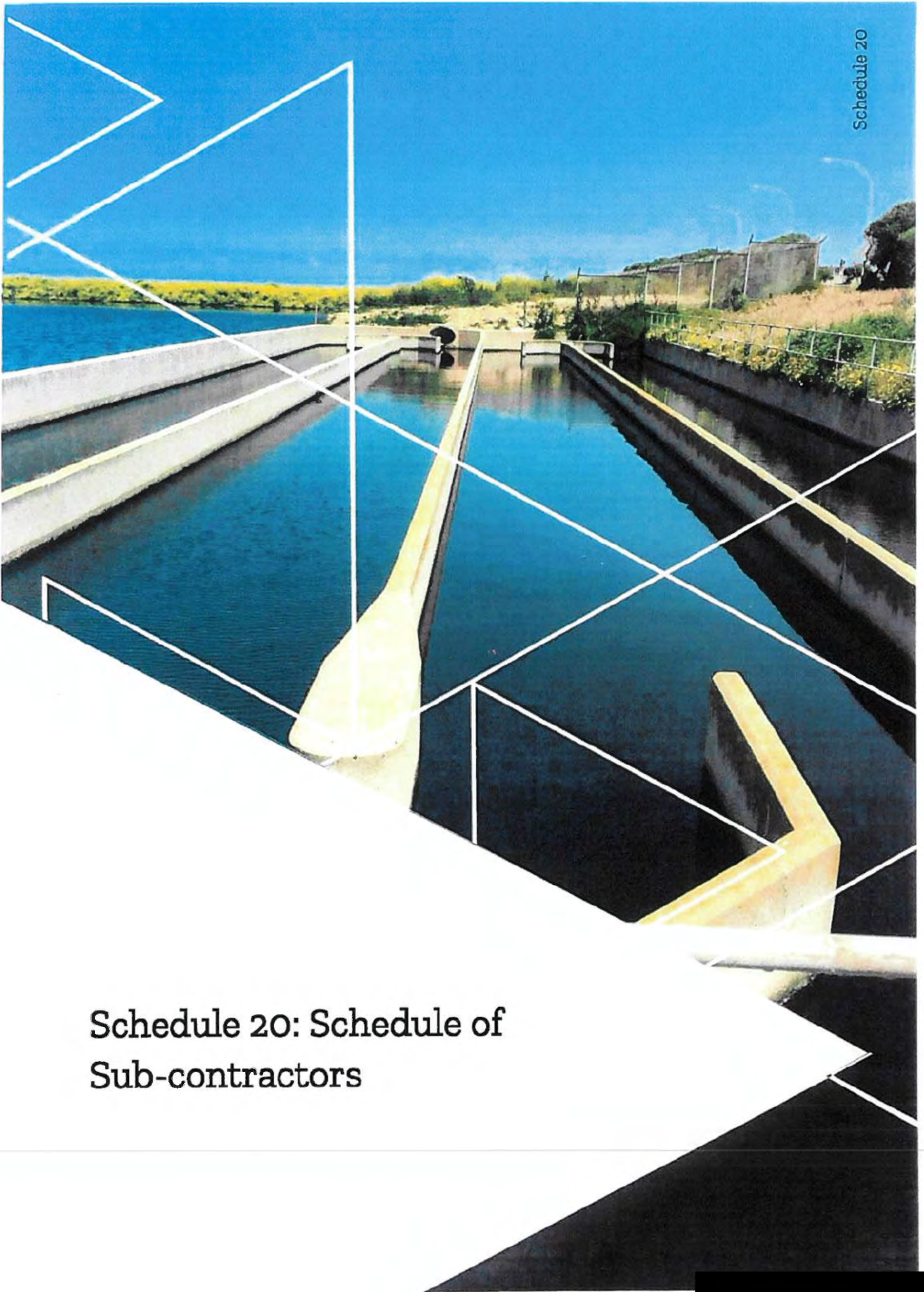
TENDER NO: 266C/2024/25
PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE
UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

SCHEDULE 19: PERSONNEL SCHEDULE (OTHER THAN KEY PERSONNEL)				
NAME	TITLE	JOB DESCRIPTION	QUALIFICATION	ESTIMATED PERIOD OF PROVISION OF SERVICES

TENDER NO: 266C/2024/25
PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE
UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

SCHEDULE 19: PERSONNELSCHEDULE (OTHER THAN KEY PERSONNEL)				
NAME	TITLE	JOB DESCRIPTION	QUALIFICATION	ESTIMATED PERIOD OF ENGAGEMENT (Weeks)





Schedule 20: Schedule of Sub-contractors

SCHEDULE 20: SCHEDULE OF SUB-CONTRACTORS		
SUB-CONTRACTORS		
Sub-contractor's name	Work activities to be undertaken by the Sub-contractor	Estimated value of work (Rand) (Excl. VAT)
Alex Stewart and Partners	Architectural Services including the Council submission for approval of all buildings on the project.	R 5,565,000.00
Planning Partners	Landscape Architectural Services.	R 1,204,000.00
Blue Science Pty Ltd	Water Use License Application and Aquatic Specialist Services as required.	R .
Ishecon Chemical Process Safety Engineers	Major Hazard Installation Risk Assessment and associated services as required.	R 420,000.00
Joubert and Brink Surveys	Topographical and Land Survey Services.	R 105,600.00
Safe Working Practice Cape Town (Pty) Ltd	Occupational, Health and Safety Services.	R 624,250.00
Scientific Terrestrial Services	Biodiversity Off-set Specialist Services.	R 255,000.00
TOTAL excl. VAT		R 8,173,850.00



11 June 2025

Sub-Consultant Letter of Association

**PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT
ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES
FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER
TREATMENT WORKS**

Tender No.: 266C/2024/25

Herewith, I, [REDACTED] as DIRECTOR, unequivocally state on behalf of ALEX STEWART AND PARTNERS and hereby being authorized to do so provide my commitment to the delivery of the required outcomes for the project, Tender No.: 266C/2024/25, for which part the said firm is responsible as part of the professional team of Zutari (Pty) Ltd.

I am committed to provide the resources and the time to complete the required activities and deliverables for the duration of the project and will ensure achievement to milestones and delivery of the products and reports, as required. If staff changes are to be made during the course of the project, this shall be done only with prior approval and to the satisfaction of the Client.

Please do not hesitate to contact me should you require any further information.

Signed at CAPE TOWN, on this 11th day of JUNE 2025

Name

Signature

ALEX
STEWART
AND
PARTNERS

Architecture & Interior Design



Sub-Consultant Letter of Association

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

Tender No.: 266C/2024/25

Herewith, I [REDACTED] as Landscape Architect, unequivocally state on behalf of Planning Partners (Pty) Ltd and hereby being authorized to do so provide my commitment to the delivery of the required outcomes for the project, Tender No.: 266C/2024/25, for which part the said firm is responsible as part of the professional team of Zutari (Pty)Ltd.

I am committed to provide the resources and the time to complete the required activities and deliverables for the duration of the project and will ensure achievement to milestones and delivery of the products and reports, as required. If staff changes are to be made during the course of the project, this shall be done only with prior approval and to the satisfaction of the Client.

Please do not hesitate to contact me should you require any further information.

Signed at CAPE TOWN, on this 01ST day of JULY 2025.

[REDACTED]
Director/Professional Landscape Architect

[REDACTED]
Signature



Sub-Consultant Letter of Association

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS
Tender No.: 266C/2024/25

Herewith, I [REDACTED] Director, unequivocally state on behalf of Joubert and Brink Surveys (Pty) Ltd and hereby being authorized to do so provide my commitment to the delivery of the required outcomes for the project, Tender No.: 266C/2024/25, for which part the said firm is responsible as part of the professional team of Zutari (Pty)Ltd.

I am committed to provide the resources and the time to complete the required activities and deliverables for the duration of the project and will ensure achievement to milestones and delivery of the products and reports, as required. If staff changes are to be made during the course of the project, this shall be done only with prior approval and to the satisfaction of the Client.

[REDACTED] half of Joubert and Brink Surveys Pty Ltd ("Joubert & Brink") hereby confirm as follows:
This correspondence serves as a formal association between Joubert and Brink Surveys Pty Ltd, Town & Country Professional Land Surveyor, where Frank Truter, represented by the *Professional Land Surveyor*, will provide Professional Land Surveying Services, for the duration of the Project as per Section 16(5) of the Geomatics Profession Act No 19 of 2013.
Topographical Surveys and Engineering Surveys Services will be conducted under supervision of a registered Engineering Surveyor, for the duration of the Project as per Section 16(5) of the Geomatics Profession Act No 19 of 2013.

Section 16(5) of Act No 19 of 2013 (Geomatics Profession)

"The provisions of this section must not be construed as prohibiting any person from performing work reserved, if such work is performed in the service of or by order of and under direction, control, supervision of or in a formal association with a registered person entitled to perform that reserved work, on the condition that such a registered person assumes responsibility for any work so performed."

Please do not hesitate to contact me should you require any further information.

Signed at Durbanville, on this 18th day of June 2025

[REDACTED]



safe working practice
cape town (pty) ltd

Sub-Consultant Letter of Association

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

Tender No.: 266C/2024/25

Herewith, I **Safe Working Practice Cape Town (Pty) Ltd**, as Director, unequivocally state on behalf of **Safe Working Practice Cape Town (Pty) Ltd** and hereby being authorized to do so provide my commitment to the delivery of the required outcomes for the project, Tender No.: 266C/2024/25, for which part the said firm is responsible as part of the professional team of Zutari (Pty)Ltd.

I am committed to provide the resources and the time to complete the required activities and deliverables for the duration of the project and will ensure achievement to milestones and delivery of the products and reports, as required. If staff changes are to be made during the course of the project, this shall be done only with prior approval and to the satisfaction of the Client.

Please do not hesitate to contact me should you require any further information.

Signed at **SWP Cape Town**, on this **18** day of **June 2025**

Name

Signature

Part C5: Returnable Documents
Documents
Reference No. 266C/2024/25

List of Returnable



Scientific Terrestrial Services

Applying science to the real world



Name

Date: Thursday, 19 June 2025

TO WHOM IT MAY CONCER

Dear Sir/Madam,

Sub-Consultant Letter of Association

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

Tender No.: 266C/2024/25

Herewith, I [REDACTED] Director, unequivocally state on behalf of **Scientific Terrestrial Services PTY Ltd** and hereby being authorized to do so provide my commitment to the delivery of the required outcomes for the project, Tender No.: 266C/2024/25, for which part the said firm is responsible as part of the professional team of Zutari (Pty)Ltd.

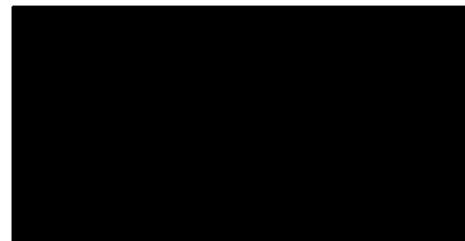
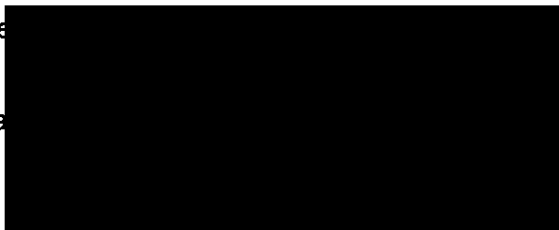
I am committed to provide the resources and the time to complete the required activities and deliverables for the duration of the project and will ensure achievement to milestones and delivery of the products and reports, as required. If staff changes are to be made during the course of the project, this shall be done only with prior approval and to the satisfaction of the Client.

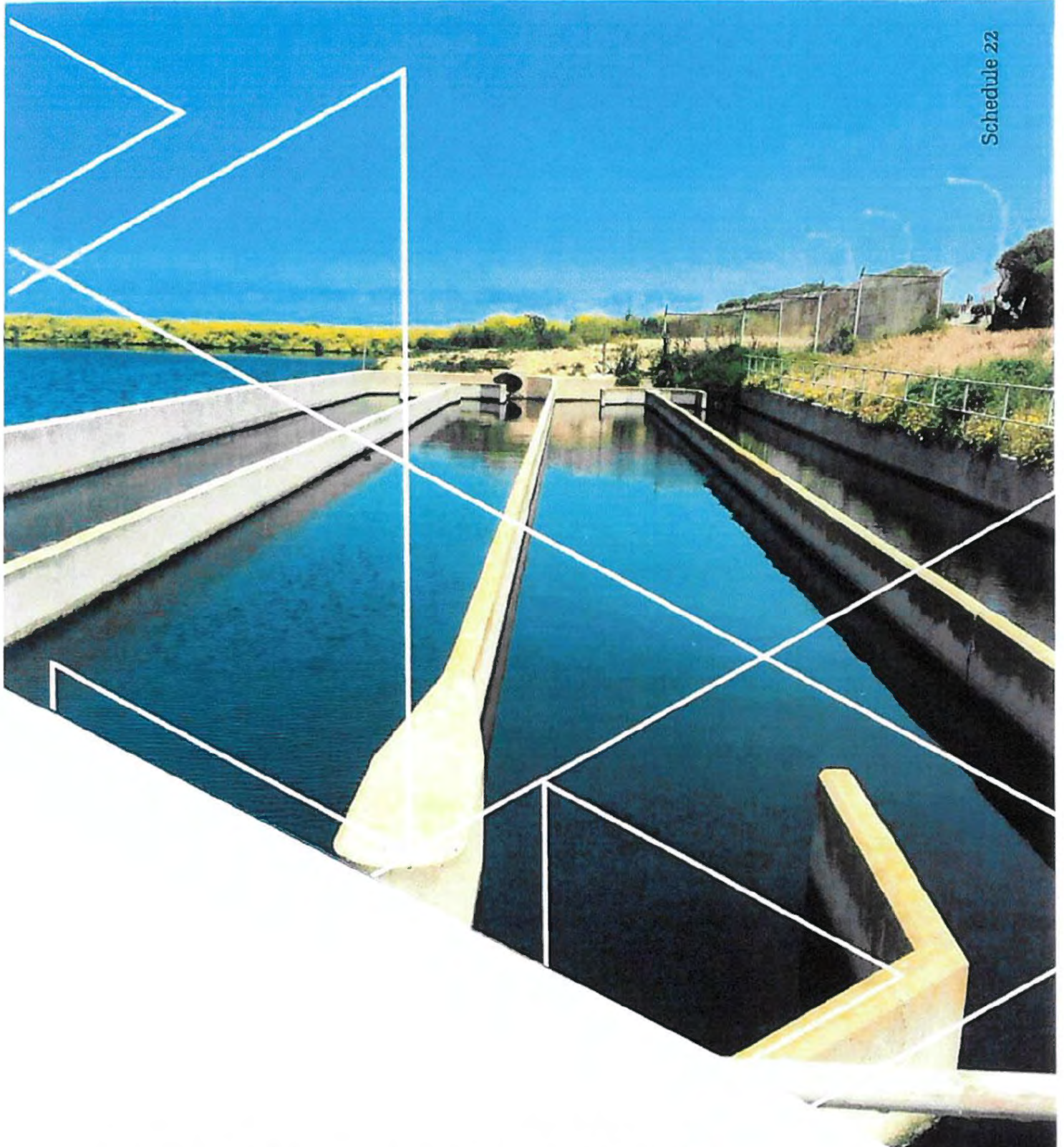
Please do not hesitate to contact me should you require any further information.

Signed at Bedfordview, on this 19 day of June 2025

Name

Signature





Schedule 22: Record of Addenda to Tender Documents



17 JUNE 2025

NOTICE TO TENDERERS NO. 1

TENDER NO: 266C/2024/25

DESCRIPTION: PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

BOX NUMBER: 185

CLOSING DATE: 26 June 2025 @ 10h00

Your attention is specifically drawn to the tender document for the following clarifications and amendments which are to be incorporated in the tender document for the abovementioned tender in terms of Clause C.3.2 of Part T1.2 of the Standard Conditions of Tender and you will be deemed to have made any allowance necessary to provide for these amendments in your tender offer.

Kindly be advised that tenderers must complete Schedule 22, page 126 in Part C5.2 of The Tender of the Contract Document.

QUESTIONS RECEIVED AFTER THE TENDER CLARIFICATION MEETING UP TO THE ISSUE OF THIS NOTICE:

The following table lists clarifications which have been communicated to the CCT via official communication channels. It should be noted that where questions or clarifications have been submitted and is not specifically addressed herein, the relevant party shall accept that the answer to the question or clarification shall be accepted as "specified in the tender document".

Tenderers shall note that these clarifications are FOR INFORMATION PURPOSES ONLY.

Item	Reference	Question/Clarification	Response
1	C.2.1 Eligibility C.2.1.4.2 and C.2.1.4.6	Functionality - can the criteria be relaxed?	No – This project is a highly complex project and requires the stipulated disciplines, with relevant experience as per criteria set out in C.2.1.4.2 and C.2.1.4.6. The regulatory framework (ECSA) establishes that projects requiring advanced technical decision-making, involving multiple risk factors, uncertain contexts, and requiring leadership of large resource-intensive endeavours must be led by appropriately registered professionals. The complexity threshold is determined by whether the work requires the competencies defined for Professional

Item	Reference	Question/Clarification	Response
			Engineers, including the ability to handle technically advanced problems across multiple disciplines and manage complex engineering enterprises. For projects spanning multiple engineering disciplines, ECSA requires registered professionals in each relevant discipline to take responsibility for their respective areas of expertise.
2	C.1.2 Contract Data	Do all the key staff need to be a local office? Can the staff work remotely from other locations?	Clause 3.5: Add the following: The location for the performance of the Project will be the OFFICE of the service provider, together with the site of the proposed capacity extension for Macassar Wastewater Treatment Works situated within the City of Cape Town Municipal area. Key personnel will be expected to work out of the local office as the exigencies of this contract require. The address of the local office will be that as indicated on Schedule 1, Part T2.2: Returnable Schedules, and which will be regarded as the <i>domicilium citandi et executandi</i> for the purposes of any contract arising from this tender submission
3	C.3.1 Scope of Work	Will the winner of this tender need to take over full design liability for this project?	3. EMPLOYER'S OBJECTIVE The objective of this tender is to procure professional services by appointing a suitably qualified and experienced professional engineering consultant to replace the current Professional Services Provider (PSP) for the remaining Contract Inspection and Administration and Close Out stages of the upgrade and expansion of the Macassar WWTW project. In addition, a liaison period between the 194C/2020/21 PSP and the PSP appointed under this tender will be required to ensure successful handover between the two parties. There will be a 6 month overlap between the current PSP and the PSP appointed under this contract which will take place over the Contract Inspection and Administration stage. It should be noted that the new PSP will be required to accept Design & Professional Liability of any

Item	Reference	Question/Clarification	Response
			amendments or changes to the current design/s during the review period.
5	T1.2 Tender Data	Will the presentation and attendance registers be shared?	Yes attached in Appendix E
6	C.2.1 Eligibility C.2.1.4.2 and C.2.1.4.6	Tender doesn't show a breakdown of points for qualifications, Pr. Registration, experience (Number of years) for the "key personnel" in Table 3 (page 14 of the T1.2) as on the "Other Personnel" schedule found on Table 4 (Page 18 of T1.2). Therefore, we don't know how these factors will be evaluated	Page 14 needs to be read in conjunction with the clause on page 12 "Category 2: Specific experience of Key Personnel and Other Personnel" The overall score for this criterion will be sum of the scores for each of the key personnel and other personnel, with the applicable values as follows: a. Key Personnel (Schedule 11 of Part C5.2):" Breakdown of points is shown in table 4 and should be read in conjunction with the above clause on page 12
7	C.2.1 Eligibility C.2.1.4.2 and C.2.1.4.6	Is there a requirement to submit the CVs and credentials for both "Other personnel" and "Key Personnel" at this stage or just "Key personnel"?	Tenderers are urged to ensure that the Curriculum Vitae provided in respect of the key and other personnel contain details of all relevant experience and must include registration number for all key and other personnel, where applicable.
8	C.1.2 Contract Data	Will the current incumbent consultant (Zutari) be eligible to tender for this appointment? By their presence at the meeting, it has been assumed that they are allowed to tender. We are of the view that this is in contradiction of Clause C2.1.4.1 i) of the Conditions of Tender (as amended), which states: <i>"Only those tenders that are compliant with the requirements below will be declared responsive:.....</i> <i>1. The tenderer is not an advisor or consultant contracted with the Employer whose prior or current obligations creates any conflict of interest or unfair advantage;"</i>	Moore Forensics comments regarding similar Tenders in CCT on this, is that the incumbent can tender as they were not involved in preparing the Contract Document.
9	C.2.1 Pricing Assumptions	The Pricing Schedule also heavily favours the incumbent, as a significant number of hours have been allocated to Item 1: Provision for Time-Based Engineering Services - Design Review. Section C3.1 - Scope of works Part 3 c sets out the requirements of the Design stage of the appointment. The second and third bullet points of this section state the following tasks:	All Tenderers are not prejudiced in pricing zero or at low rates. Take note of C2.1 Pricing Assumptions Clause 3. No unfair advantage exists.

Item	Reference	Question/Clarification	Response
		· "Review of existing design drawings, design reports, specifications, tender/contract documents, construction information planning, data storage and information management, etc · Design Review of and finalizing Civil Design of the work undertaken by previous PSP and any optimization of the Civil Design, which includes but is not limited to the following." As the incumbent is fully au fait with the project and the designs undertaken to date, it is conceivable that they will tender zero or very low rates for this section. This places them at a very significant commercial advantage over all other tenderers. As suggested in the Clarification Meeting, a possible remedy to this clear commercial advantage would be to exclude the entirety of Item 1. Provision for Time-Based Engineering Services - Design Review from the tender evaluation process. This would level the playing fields, allowing a competitive tender process.	

THE TENDER:
Part T1.2 Tender Data
Page 9

ATD1-1 Clause C.2.1.4.2 (d) Key personnel: Chief/Lead Resident Engineer replace wording:

- *d)** Chief/Lead Resident Engineer who is a qualified Engineer (BTech/BEng/BSc.Eng) and who has at least 20 (twenty) years verifiable post graduate experience (each) in construction monitoring and site supervision of contract work with a civil and mechanical interface, reinforced concrete, water retaining structures and pipelines. **Chief/Lead Resident Engineers assigned to this project must be supported by a letter of undertaking from the Service Provider, valid for the entire duration of this contract. Such letter of undertaking shall guarantee the availability and commitment of the designated Chief/Lead Resident Engineers."**

Strike through and replace page 9 with attached page 9R.

THE TENDER:
Part C3.1 Scope of Work
Page 15

ATD1-2 Clause 2.4.1.6 Compulsory Site Clarification. amended the incorrect clause numbering:

***2.4.1.7. Compulsory clarification meeting**

Tenderers are required to attend a compulsory clarification meeting at which they may familiarise themselves with aspects of the proposed work, services or supply and pose questions.

Details of the meeting(s) are stated in the General Tender Information.

Only those tenders submitted by tenderers whose attendance at this meeting have been recorded, will be declared responsive."

Strike through and replace page 15 with attached page 15R.

THE TENDER:
Part C3.1 Scope of Work
Page 81

ATD1-3 Clause 14.1 (d) Key personnel: Chief/Lead Resident Engineer replace wording:

- 'd) **Chief/Lead Resident Engineer** who is a qualified Engineer (BTech/BEng/BSc.Eng) and who has at least 20 (twenty) years verifiable post graduate experience (each) in construction monitoring and site supervision of contract work with a civil and mechanical interface, reinforced concrete, water retaining structures and pipelines. **Chief/Lead Resident Engineers assigned to this project must be supported by a letter of undertaking from the Service Provider, valid for the entire duration of this contract."**

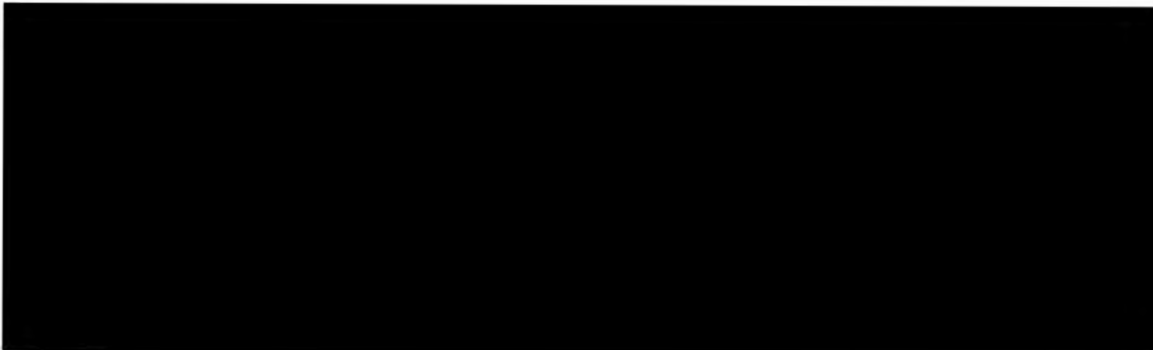
Strike through and replace page 81 with attached page 81R.

[End of Notice]

Thanking you



ACKNOWLEDGEMENT OF RECEIPT OF NOTICE 1- FOR AND ON BEHALF OF THE TENDERER: TENDER NO. 266C/2024/25



Enclosures:

- 1) Appendix A : Revised page 9R
- 2) Appendix B : Revised page 15R
- 3) Appendix C: Revised page 81R
- 4) Appendix D : Compulsory Site Clarification Presentation

- a) **Project Leader** who is professionally registered with the Engineering Council of South Africa (ECSA) as a **PrEng**, who has a minimum of a Master's Degree in the field of **Water and Wastewater Treatment Engineering**, who has at least 20 (Twenty) years verifiable post graduate experience in the analysis and design of **Water or Wastewater Treatment Plants** and who will be responsible for all work carried out in terms of the tender. The Project Leader must, within the last five years, also have acted as the "Employers Agent" in terms of the General Conditions of Contract for Construction Works, 1st Edition 2015 or "Engineer" in terms of FIDIC Conditions of Contract for Plant and Design-Build Contract, 1999 or later. He/she must have a minimum of 10 (ten) years verifiable post graduate experience including a combination of project management and/or construction monitoring and/or contract management in concrete structures with a mechanical and electrical interface. **A list of projects, with start and end dates of involvement, on which the Project Leader has acted as the Employer's Agent (GCC) and/or Engineer (FIDIC) must be clearly ascertainable from the curriculum vitae submitted (this key expert may not be sub-contracted).**
- b) **Process Design Engineer** who is professionally registered with ECSA as a **PrEng OR PrTechEng** in the field of **Civil or Chemical Engineering (this key expert may not be sub-contracted)** and who satisfy either of the following requirements:
- who has 10 (ten) years' experience in the analysis and design of Activated Sludge and Biological Nutrient Removal (BNR) Wastewater Treatment Plants and a master's in the field of **Water and Wastewater Engineering**
 - OR
 - who has at least 20 (twenty) years verifiable post graduate experience in the analyses and design of Activated Sludge and Biological Nutrient Removal (BNR) Wastewater Treatment Plants
- c) **Civil Engineer** who is professionally registered with ECSA as a **PrTechEng** or **PrEng**, who has at least 20 (twenty) years verifiable post graduate experience in the analysis and design of **Water or Wastewater Treatment Plants (this key expert may not be sub-contracted).**
- d) **Chief/Lead Resident Engineer** who is a qualified Engineer (**BTech/BEng/BSc.Eng**) and who has at least 20 (twenty) years verifiable post graduate experience (each) in construction monitoring and site supervision of contract work with a civil and mechanical interface, reinforced concrete, water retaining structures and pipelines. **Chief/Lead Resident Engineers assigned to this project must be supported by a letter of undertaking from the Service Provider, valid for the entire duration of this contract. Such letter of undertaking shall guarantee the availability and commitment of the designated Chief/Lead Resident Engineers.**
- e) **Mechanical Engineer** who is professionally registered with ECSA as a **PrTechEng** or **PrEng**, who has at least 10 (ten) years verifiable post graduate experience in **Wastewater Treatment engineering (this key expert may not be sub-contracted).**
- f) **Electrical Engineer** who is professionally registered as with ECSA as a **PrEng**, who has at least 15 (fifteen) years of electrical and electronics engineering experience, knowledge and experience of: MV/LV electrical design (including substations), computer networks and their configuration, communication systems technology, data management and data security, infrastructure security, firewalls and intrusion detection systems, programming and scripting languages – and specifically experience in SCADA (Supervisory Control And Data Acquisition) or Industrial, Infrastructure based processes Control Systems **(this key expert may not be sub-contracted).**

Where required, the professional registration numbers of the key personnel must be indicated on the **Schedule 12 : Key Personnel**, Part C5.2: Returnable Schedules. The *curriculum vitae* of all key personnel (including sub-consultants), must be submitted with the tender submission, appended to this Schedule.

Contract

Tender
Part C5: Rf
Document
Reference No. 266C/2024/25
Reference

9R

T1.2
Tender Data

Table 4: Quality Score for Other Personnel

Item No.	Other Personnel	Scoring Criteria								
	Discipline	Qualifications	Points	Professional Registration	Points	Experience	Points	Points per Project	No. of Projects	Max Scoring Points
1	Structural Engineer	MEng	5	Y	1	≥15+ years	5	3	3	20
		BEng	3	N	0	≥10 - <15 years	3		2	
		BTech	2			<10 years	0		1	
2	Hydraulic Engineer	MEng	5	Y	1	≥15 + years	5	3	3	20
		BEng	3	N	0	≥10 - <5 years	3		2	
		BTech	2			<10 years	0		1	
3	Electronic Engineer	MEng	5	Y	1	≥15+ years	5	3	3	20
		BEng	3	N	0	≥10 - <15 years	3		2	
		BTech	2			<10 years	0		1	
4	Resident Engineer 1	MEng	5	Y	1	≥15+ years	5	3	3	20
		BEng	3	N	0	≥10 - <15 years	4		2	
		BTech	2			≥5 - <10 years	3		1	
						<5 years	0			
5	Resident Engineer 2	MEng	5	Y	1	≥15+ years	5	3	3	20
		BEng	3	N	0	≥10 - <15 years	4		2	
		BTech	2			≥5 - <10 years	3		1	
						<5 years	0			
6	Quantity Surveyor	MSc	5	Y	1	≥15+ years	5	3	3	20
		BSc (Hons)	3	N	0	≥10 - <15 years	3		2	
		BTech	2			≥5 - <10 years	1		1	
						<5 years	0			
7	Architect	MArch	5	Y	1	≥15+ years	5	3	3	20
		BAS (Hons)	3	N	0	≥10 - <15 years	3		2	
		BTech	2			<10 years	0		1	

Table 5: Maximum Scores for Personnel

Category	Maximum Score Available	Tenderer's Score
Key Personnel (Table 3)	180	
Other Personnel (Table 4)	140	
Total Score	320	
Pro-rata Score: Key & Other Personnel (will be carried forward to Table 1)	50	

C.2.1.4.7 Compulsory clarification meeting

Tenderers are required to attend a compulsory clarification meeting at which they may familiarise themselves with aspects of the proposed work, services or supply and pose questions.

Details of the meeting(s) are stated in the General Tender Information.

Only those tenders submitted by tenderers whose attendance at this meeting have been recorded, will be declared responsive.

original tax invoice. Ad-hoc communication between the Employer and the Service Provider may be conducted per facsimile or in electronic format (e-mail).

All plans and contract documents submitted for approval shall be in hardcopy format.

14. PERSONNEL REQUIRED

14.1 KEY PERSONNEL

The Service Provider shall maintain the involvement of the following key personnel as the exigencies of this contract require:

- a) **Project Leader** who is professionally registered with the Engineering Council of South Africa (ECSA) as a **PrEng**, who has a minimum of an Master's Degree in **Water and Wastewater Engineering**, who has at least 20 (Twenty) years verifiable post graduate experience in the analysis and design of Water or Wastewater Treatment Plants and who will be responsible for all work carried out in terms of the tender. The Project Leader must, within the last five years, also have acted as the "Employers Agent" in terms of the General Conditions of Contract for Construction Works, 1st Edition 2015 or "Engineer" in terms of FIDIC Conditions of Contract for Plant and Design-Build Contract, 1999 or later. He/she must have a minimum of 10 (ten) years verifiable post graduate experience including a combination of project management and/or construction monitoring and/or contract management in concrete structures with a mechanical and electrical interface. **A list of projects, with start and end dates of involvement, on which the Project Leader has acted as the Employer's Agent (GCC) and/or Engineer (FIDIC) must be clearly ascertainable from the curriculum vitae submitted (this key expert may not be sub-contracted).**
- b) **Process Design Engineer** who is professionally registered with ECSA as a **PrEng OR PrTechEng in the field of Civil or Chemical Engineering (this key expert may not be sub-contracted)** and who satisfy either of the following requirements:
 - who has 10 (ten) years' experience in the analysis and design of Activated Sludge and Biological Nutrient Removal (BNR) Wastewater Treatment Plants and a Master's in **water and Wastewater Engineering**
 - OR
 - who has at least 20 (twenty) years verifiable post graduate experience in the analyses and design of Activated Sludge and Biological Nutrient Removal (BNR) Wastewater Treatment Plants
- c) **Civil Engineer** who is professionally registered with ECSA as a **PrTechEng or PrEng**, who has least 20 (twenty) years verifiable post graduate experience in the analysis and design of Water or Wastewater Treatment Plants **(this key expert may not be sub-contracted).**
- d) **Chief/Lead Resident Engineer** who is a qualified Engineer (BTech/BEng/BSc.Eng) and who has at least 20 (twenty) years verifiable post graduate experience (each) in construction monitoring and site supervision of contract work with a civil and mechanical interface, reinforced concrete, water retaining structures and pipelines. **Chief/Lead Resident Engineers assigned to this project must be supported by a letter of undertaking from the Service Provider, valid for the entire duration of this contract.**
- e) **Mechanical Engineer** who is professionally registered with ECSA as a **PrTechEng or PrEng**, who has at least 10 (ten) years verifiable post graduate experience in Wastewater Treatment engineering **(this key expert may not be sub-contracted).**
- f) **Electrical Engineer** who is professionally registered as with ECSA as a **PrEng**, who has at least 15 (fifteen) years of electrical and electronics engineering experience, knowledge and experience of: MV/LV electrical design (including substations), computer networks and their configuration, communication systems technology, data management and data security, infrastructure security, firewalls and intrusion detection systems, programming and scripting



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

266C/2024/25: PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

Compulsory Clarification Meeting | 10h00 2 June 2025

Making progress possible. **Together.**

AGENDA - 1

1. OPENING AND WELCOME
2. PURPOSE
3. ATTENDANCE REGISTER
4. SITE LAYOUT AND ROUTE
5. H&S INDUCTION



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

1. OPENING AND WELCOMING

City of Cape Town Representation:



Project Manager, Projects & Implementation Division: Wastewater Branch
Contract Manager, Projects & Implementation Division: Wastewater Branch

Other CCT representation

Welcome prospective Tenderers

2. PURPOSE: TENDER NOTICE AND INVITATION TO TENDER

Tender No:	266C/2024/25
Title:	Provision of Professional Services in Respect of Contract Administration and Inspection, Close Out and Additional Services for the Upgrade and Expansion of the Macassar WWTW
Tender Advertised:	16 May 2025
Documentation collection:	Tender Distribution Office, 2nd Floor (Concourse Level), Civic Centre, 12 Hertzog Boulevard, Cape Town between 08h30 – 15h00.
Tender Closing:	26 June 2025 @ 10h00
Tender Box & Address:	Tender Box 185 at the Tender & Quotation Box Office, 2nd Floor (Concourse Level), Civic Centre, 12 Hertzog Boulevard, Cape Town.
Communication:	Mr [REDACTED] PSP.Macassar@capetown.gov.za SCM.Tenders9@capetown.gov.za

4. MACASSAR EXISTING SITE LAYOUT

**Contract
Part C5: Returnable Documents
Reference No. 266C/2024/25**

522 **C5.1**
List of Returnable Documents

H&S INDUCTION

- Plant Manager – Meshall Raff

H&S REQUIREMENTS

- PPE
- STICK TO ROUTE

NO ACCESS TO OPERATIONAL OR CONSTRUCTION AREAS

AGENDA - 2

1. OPENING AND WELCOME
2. ATTENDANCE REGISTER
3. PROJECT BACKGROUND
4. SCM RELATED MATTERS
5. TENDER REALTED MATTERS
6. CONSTRUCTION CONTRACTS
7. Q&A
9. SITE WALK



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

1. OPENING AND WELCOMING

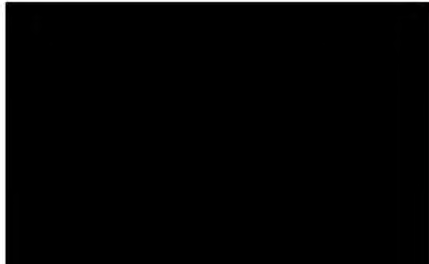
City of Cape Town Representation:



Project Manager, Projects & Implementation Division: Wastewater Branch
Contract Manager, Projects & Implementation Division: Wastewater Branch

Other CCT representation

Welcome prospective Tenderers



2. ATTENDANCE REGISTER

Venue for site visit/clarification meeting

Site visit

Macassar Wastewater Treatment Plant

Clarification meeting

Macassar Wastewater Treatment Plant

Both sessions are compulsory!

Separate attendance registers have been circulated at the entrance to both sessions. **Make sure you have signed both.**

If compulsory site visit or briefing session is not attended, and the attendance register at both are not signed, the tender submitted will be considered non-responsive.

3. PROJECT BACKGROUND

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Reference No. 266C/2024/25

Reference No. 266C/2024/25

3.1 MACASSAR WWTW LOCALITY

Catchment Location



Site Layout



3.2 MACASSAR EXPANSION PROJECT PHASES

- The Works will be phased into two (2) phases, namely **Phase 1 and Phase 2**
- **Phase 1:**
 - New mechanical and electrical equipment to be installed whilst the existing equipment at the Works remains operational
 - Flow diverted through the new installations
 - Decommissioning, transport and handover (to Employer) of existing installations
- **Phase 2:**
 - Remainder of existing equipment to be decommissioned
 - New mechanical and electrical equipment to be installed

3.3 PURPOSE: MACASSAR WWTW EXPANSION PROJECT UMBRELLA



266C/2024/25



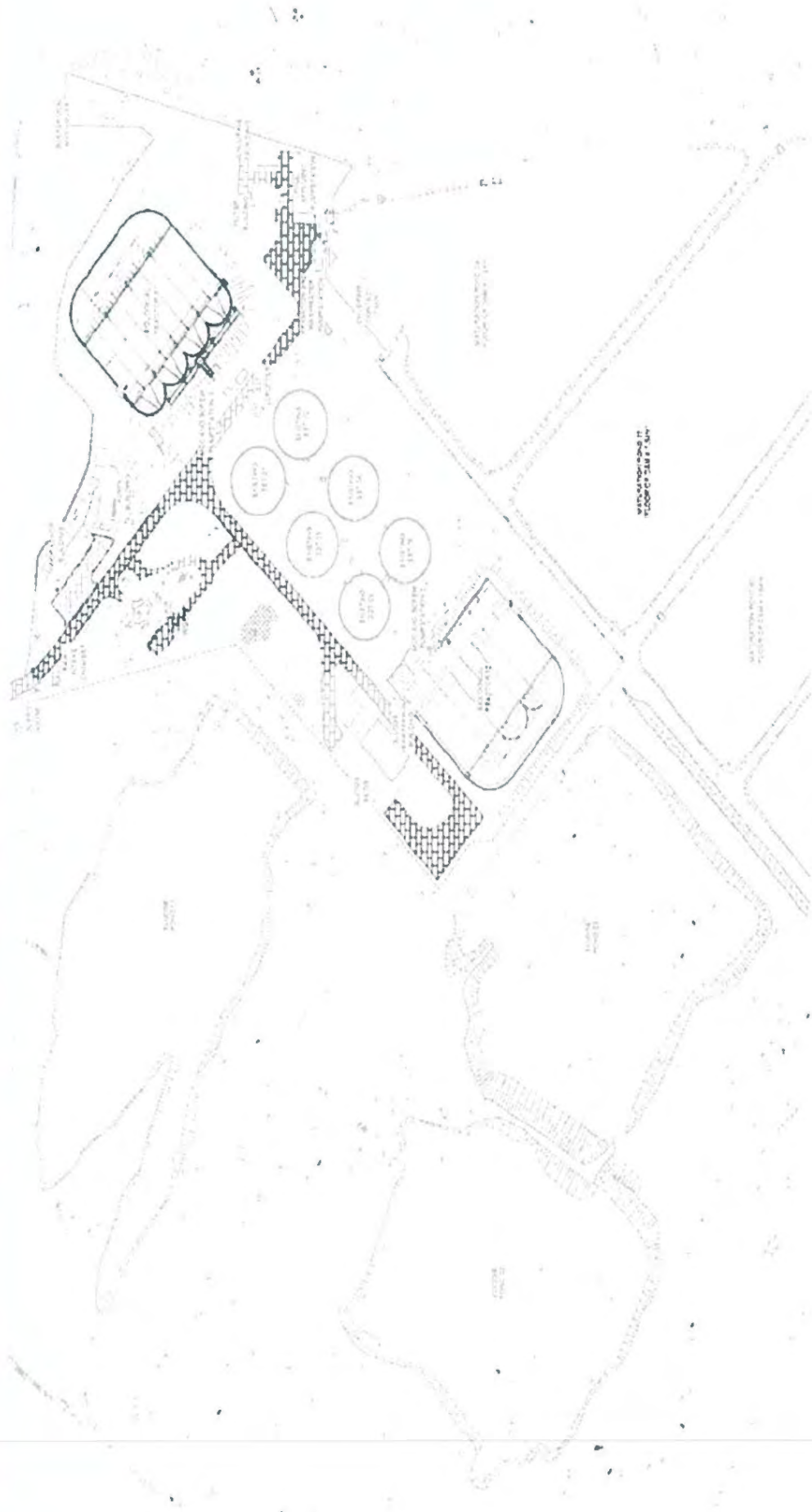
266C/2024/25
Provision of Professional Engineering Services: Investigation, Preliminary Design, Detailed Design and Contract Supervision for the Capacity Upgrade at the Macassar WWTW

TENDERS AWARDED

203Q/2023/24: Upgrade And Extension Of The Macassar Wastewater Treatment Works: Civil Works	191Q/2023/24 Design Build Of Mechanical And Electrical Works For The Upgrading And Expansion Of The Macassar Wastewater Treatment Works
---	---



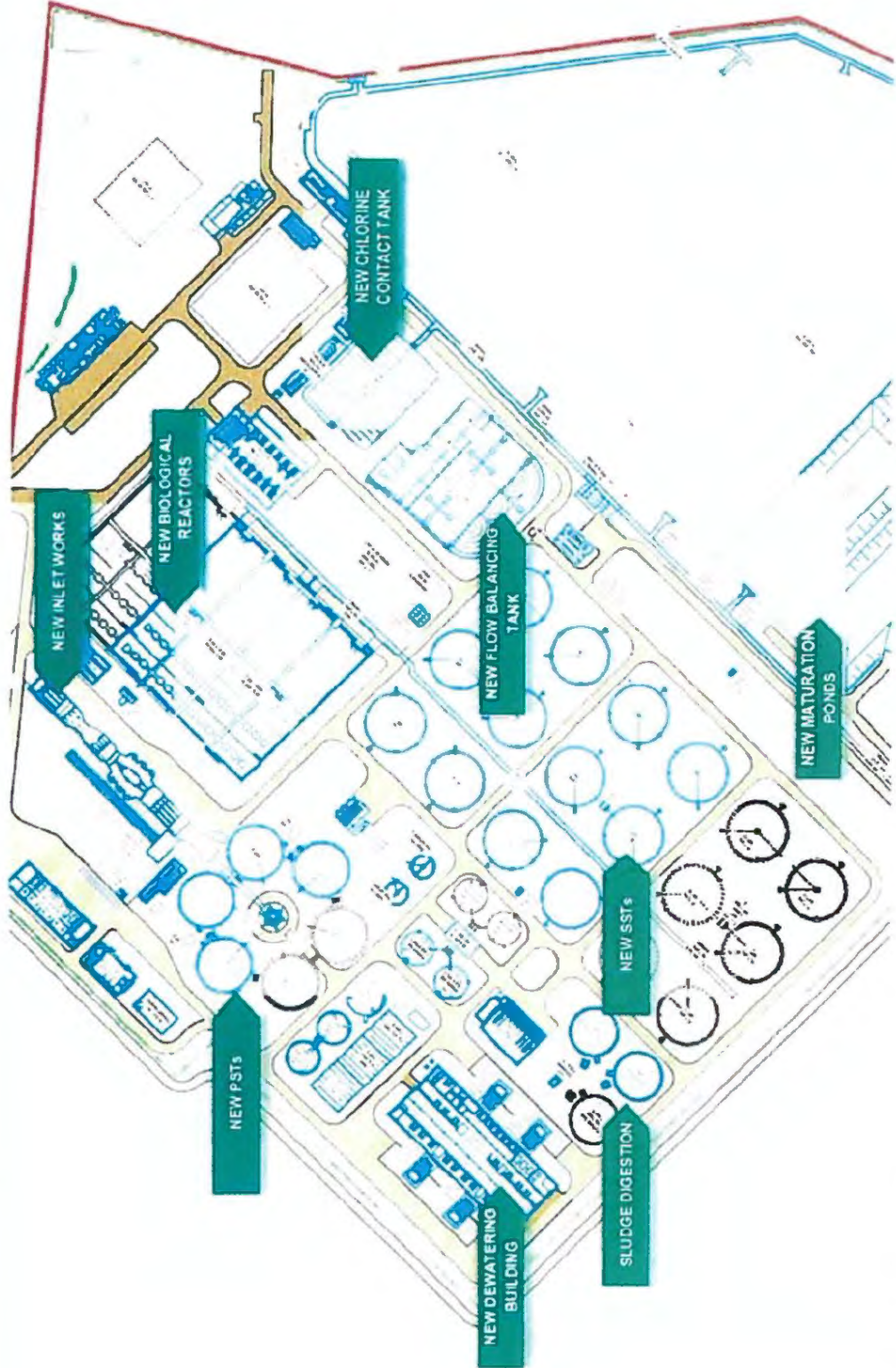
3.4 MACASSAR EXISTING SITE LAYOUT



**Contract
Part C5: Returnable Documents
Reference No. 266C/2024/25**

531 C5.1
List of Returnable Documents

3.5 SITE LAYOUT: UPGRADE AND EXPANDED WORKS



SITE LAYOUT LEGEND	
ARTIFICIAL BOUNDARY	---
CHMS	=====
WATER GRADE ROADS	=====
ASBESTOS REMOVAL STRUCTURES	=====
EXISTING STRUCTURES	=====

Contract
Part C5: Returnable Documents
Reference No. 266C/2024/25

4. TENDER 266C/2024/25: SUPPLY CHAIN MANAGEMENT RELATED ASPECTS

4.1 TENDER EVALUATION PROCESS

EVALUATION AND AWARD OF TENDER:

- Compliance with requirements of CCT SCM Policy and procedures
- Key Personnel
- Functionality
- Price and Preference (90/10)
- Appeal period
- **Section 33 (Contracts exceeding three financial years)**
- Award

4.2 RESPONSIVENESS REQUIREMENTS

RESPONSIVENESS REQUIREMENTS

Refer to Tender Data Clause C2.1.4

- C.2.1.4.1: Compliance with requirements of CCT SCM Policy and procedures
- C.2.1.4.2: Key Personnel
- C.2.1.4.4: Professional indemnity insurance
- C.2.1.4.5: Track record of tenderer
- C.2.1.4.6: Minimum Score for Quality
- C.2.1.4.6: Compulsory clarification meeting

4.3 KEY PERSONNEL (ELIGIBILITY)

- **Project Engineer/Leader (may not be subcontracted)**
- **Process Design Engineer (may not be subcontracted)**
- **Civil Engineer (may not be subcontracted)**
- **Chief/Lead Resident Engineer**
- **Mechanical Engineer (may not be subcontracted)**
- **Electrical Engineer (may not be subcontracted)**

4.4 QUALITY CRITERIA

FUNCTIONALITY CRITERIA

1. Main scoring will be applied as follow:

Description of quality criteria	Score for Functionality	Weighting factor	Maximum possible score
Experience of Tenderer	50	1	50
Experience of Key and Other Personnel	320	0.15625	50
Maximum possible score	Not Applicable	Not Applicable	100 MS1

2. Minimum Score required **70**.

3. Sub criteria with definitions defined in detail under **Part T1.2 Tender Data**.

4. NOTE:

Information included submission must clearly respond to the requirements and included in the required returnable schedule.

MS1 updated

4.5 RETURNABLE DOCUMENTS

MS1

CITY OF CAPE TOWN

WATER AND SANITATION

CONTRACT NO. 266C/2024/25

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

C5.1 List of Returnable Documents

The tenderer must complete the following Returnable Documents in non-erasable black ink:

Returnable Schedules that will be incorporated into the Contract

	Pages
1: COMPULSORY ENTERPRISE QUESTIONNAIRE	96-97
2: CERTIFICATE OF INDEPENDENT TENDER DETERMINATION	98-99
3: CERTIFICATE OF AUTHORITY FOR JOINT VENTURES	100
4: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (MSD.8)	101
5: DECLARATION OF INTEREST – STATE EMPLOYEES (MSD.4)	102-104
6: DECLARATION OF INTEREST	105
7: AUTHORISATION FOR THE DEDUCTION OF OUTSTANDING AMOUNTS OWED TO CCT	106
8: DECLARATION IN RESPECT OF COMPLIANCE WITH LABOUR LEGISLATION	107
9: CONFIRMATION OF CCT SUPPLIER DATABASE REGISTRATION	108
10: CONSULTANCY SERVICES PROVIDED TO ORGANS OF STATE	109
11: SCHEDULE OF WORK EXPERIENCE OF TENDERER	110
12: KEY STAFF	111-113
13: SCHEDULE OF SUPPORT RESOURCES (FOR INFORMATION ONLY)	114
14: PROFESSIONAL INDEMNITY INSURANCE	115
15: FUNCTIONALITY CRITERIA	116
16: PROPOSED WORK PLAN	117
17: CONFIRMATION OF TENDERER REGISTRATION / ACCREDITATION	118
18: OTHER CRITERIA	119
19: PERSONNEL SCHEDULE (OTHER THAN KEY STAFF)	120-123
20: SCHEDULE OF SUBCONTRACTORS	124
21: DEVIATIONS AND QUALIFICATIONS BY TENDERER	125
22: RECORD OF ADDENDA TO TENDER DOCUMENTS	126
23: PRICE BASIS FOR IMPORTED RESOURCES	127
24: PREFERENCE SCHEDULE (where preferences are granted in respect of specific goals)	128-131
25: APPEAL APPLICATION (ANNEXURE B)	132
26: INFORMATION TO BE PROVIDED WITH THE TENDER	133

Other documents required for tender evaluation purposes

- Joint Venture Agreement (if applicable) - append to Schedule 3.
- Curriculum Vitae of Staff as applicable - append to Schedule 12.
- Documentary evidence/proof of Professional Indemnity Insurance - append to Schedule 14.
- Any other documentary evidence/proof as required - append to Schedule 26.
- Functionality Criteria - append to Schedule 15.

Slide 21

MS1

updated

Mikha Slamang, 2025 05-28T13:28:59.886

Reference No. 2660/2024/25

5. TENDER 266C/2024/25 RELATED MATTERS



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Reference No. 266C/2024/25

Reference No. 266C/2024/25

5.1 KEY OBJECTIVES

- 266C/2024/25 Key Objectives:
 - Replacement of current PSP services for the remainder of the project
 - Status Quo and Design review(continuation with existing design philosophy)
 - Site Monitoring Review and Handover
 - **Liaison period between the existing PSP for handover**
 - **Design responsibility**
 - Contract Management
 - Further requirements stated in tender document

5.2 PURPOSE

- 266C/2024/25 purpose:
take over and complete project lifespan:
 - **191Q/2023/24:** Design Build Of Mechanical And Electrical Works For The Upgrading And Expansion Of The Macassar Wastewater Treatment Works with an appointed value of **R2 175 446 336.10** Excluding provisions of CPA, ROE and VAT (FIDIC yellow), and
 - **203Q/2023/24:** Upgrade and Extension of the Macassar Wastewater Treatment Works: Civil Works with an appointed value of **R1 344 287 875.77** Excluding provisions of CPA and VAT (GCC 2015)
- Engineering Services: Normal services: 2 & 3
- Additional Services: Refer to C3 Scope of Work

5.3. C1.2 Contract Data: Key Contractual Aspects

PERIOD OF PERFORMANCE

Period	Duration
Status Quo Design review completion	3 months after commencement date
Construction monitoring handover	3 months after commencement date
Stage 5 ends	44 months after commencement date
Stage 6 ends	54 months after commencement date
Process Control Training, Maintenance and Assistance (18 Months)	62 Months after Commencement Date

Clause 3.12.1: Penalty amount per day = R15 000.00 ex VAT per day
- Also refer to Clause 8.1 of C3.1 Scope of Work

Clause 5.4.1: Insurances and Surety

- PI: R20,000,000
- Public Liability: R20,000,000
- Insurances for COVID

5.4 C2.2 ACTIVITY SCHEDULE

SECTION OF WORKS:

CITY OF CAPE TOWN
WATER AND SANITATION
CONTRACT NO. 266C/2024/25
PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

SUMMARY OF ACTIVITY SCHEDULE

- A: TOTAL OF ITEM No. 1
- B: TOTAL OF ITEM No. 2
- C: TOTAL OF ITEM No. 3
- D: TOTAL OF ITEM No. 4
- E: SUB-TOTAL (A TO D)
- F: CONTINGENCIES
- ALLOW the sum of 10% (ten percent) of the above Sub-total for Contingencies to be spent as the Employer may direct and to be deducted in whole or in part if not required
- G: TOTAL INCLUDING CONTINGENCIES
- H: VALUE ADDED TAX
- ADD: VAT at the rate of 15% of H above
- I: TENDER PRICE CARRIED FORWARD TO C1.1 FORM OF OFFER AND ACCEPTANCE (G+H)
1. PROVISION FOR TIME-BASED ENGINEERING SERVICES - DESIGN REVIEW
2. PROVISION FOR TIME-BASED ENGINEERING SERVICES - CONSTRUCTION AND DEFECTS LIABILITY PERIOD
3. ADDITIONAL SERVICES
4. RECOVERABLE EXPENSES (DISBURSEMENTS) - ALL DISCIPLINES

C2.1 Pricing Assumptions:

Clause 3:

A rate, sum, and/or price as applicable, is to be entered against each item in the Activity Schedule. An item against which no rate is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word "included" or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item. The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonableness of such rates

Slide 26

MS1

Remains the same

Continued from slide 25

5.5 C4.2 EMPLOYER INFORMATION PROVIDED

Information provided with the Tender:

MS1

- Design reports on SharePoint (only provided at Design Review Stage)
- Basic Assessment Report (only provided at Design Review Stage)
- Geotechnical Report (only provided at Design Review Stage)
- Construction Programmes (only provided at Design Review Stage)
- Current Operating License (WUL) No. 19/G22H/F/582 (only provided at Design Review Stage)
- Tender Documents including Tender Drawings , Specifications and Bills of Quantities (only those available at advertisement stage):
 - 191Q/2023/24 Design Build of Mechanical and Electrical Works for the Upgrading and Expansion of the Macassar Wastewater Treatment Works, and
 - 203Q/2023/24: Upgrade and Extension of the Macassar Wastewater Treatment Works: Civil Works

Slide 27

MS1

To be updated

1. The first part of the slide is a list of the

6. CONSTRUCTION CONTRACTS

DE CAPE TOWN
CO SASEKAPA
KAAPESTAD

Reference No. 266C/2024/25

WIDE OF INFORMATION DOCUMENT

3.1 CONSTRUCTION PROGRAMME MILESTONES

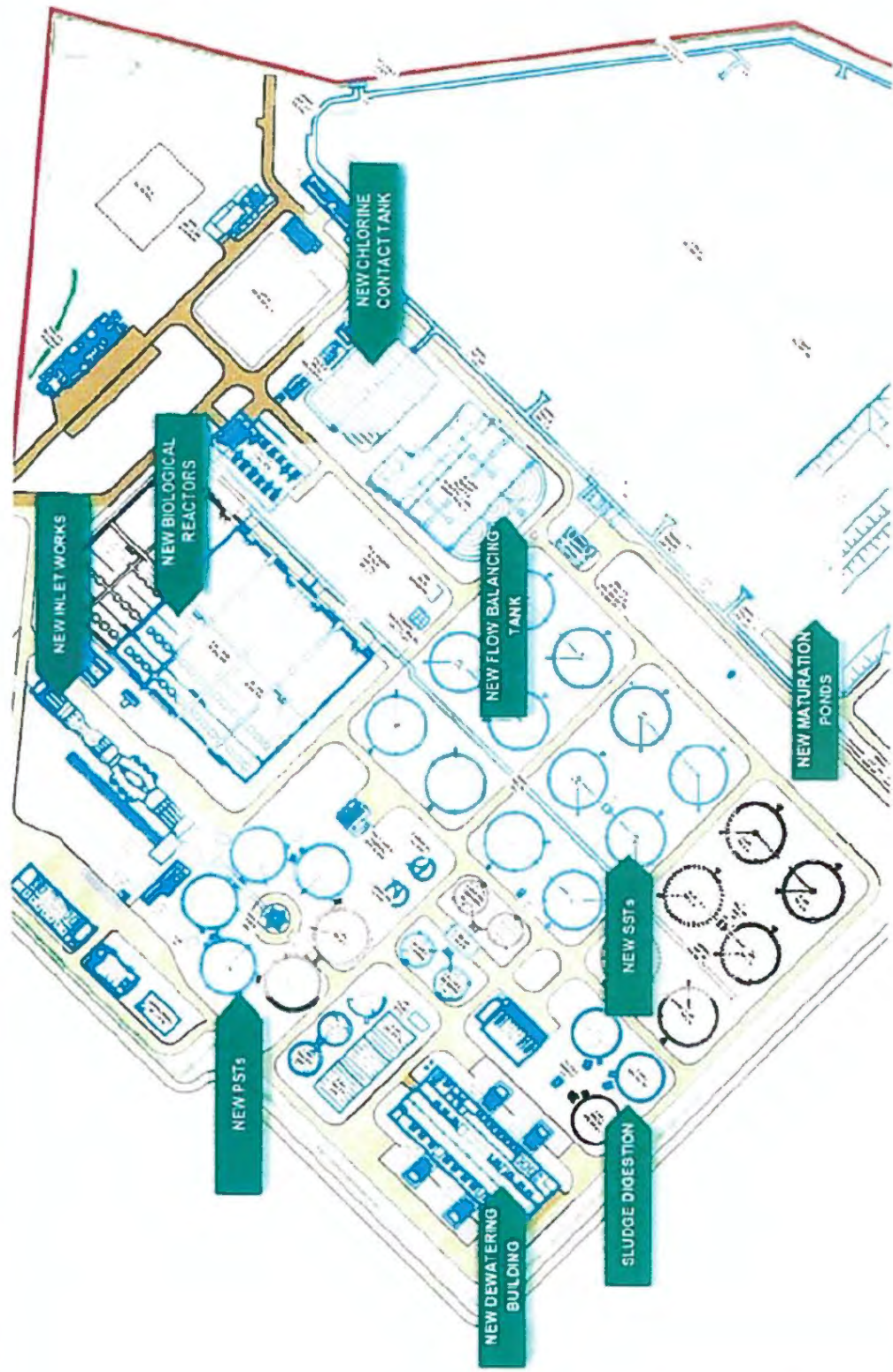
191Q/2023/24: Design Build Of Mechanical And Electrical Works For The Upgrading And Expansion Of The Macassar Wastewater Treatment Works

191Q/2023/24 – M&E Contract			
Description	Duration (months)	Start date	Finish date
Construction Process (end of ToP)	48	Sept 2025	Sept 2029
Trial & Operation Period	3	June 2029	Aug 2029
Defects Notification Period	12	Sept 2029	Aug 2030
Process Control Training, Maintenance and Assistance	18	Sept 2029	Feb 2031

203Q/2023/24: Upgrade and Extension of the Macassar Wastewater Treatment Works: Civil Works

203Q/2023/24 – Civil Contract			
Description	Duration (months)	Start date	Finish date
Construction Process (end of ToP)	48	Sept 2025	Aug 2029
Defects Notification Period	12	Sept 2029	Aug 2030

3.2 SITE LAYOUT: UPGRADE AND EXPANDED WORKS



SITE LAYOUT LEGEND	
POTENTIAL EXISTING	
NEW	
EXISTING	
PROPOSED (SCALE 1:100)	
SCALE	1:100 (AS SHOWN)



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Questions & Answers

Making progress possible. Together.



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

ENKOSI | DANKIE | THANK YOU

Making progress possible. Together.

Reference No. 266C/2024/25

Reference No. 266C/2024/25



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

FINANCE
SUPPLY CHAIN MANAGEMENT

Tenders & Contracts, Supply Chain Management
SCM Water and Sanitation

Email: SCM.Tenders9@capetown.gov.za

20 JUNE 2025

NOTICE TO TENDERERS NO. 2

TENDER NO: 266C/2024/25

DESCRIPTION:

PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

BOX NUMBER: 185

ORIGINAL CLOSING DATE: 26 June 2025 @ 10h00

REVISED CLOSING DATE: 02 July 2025 @ 10h00

Your attention is specifically drawn to the tender document for the following clarifications and amendments which are to be incorporated in the tender document for the abovementioned tender in terms of Clause C.3.2 of Part T1.2 of the Standard Conditions of Tender and you will be deemed to have made any allowance necessary to provide for these amendments in your tender offer.

Kindly be advised that tenderers must complete Schedule 22, page 126 in Part C5.2 of The Tender of the Contract Document.

NTT- 2-1 REVISE TENDER CLOSING DATE:

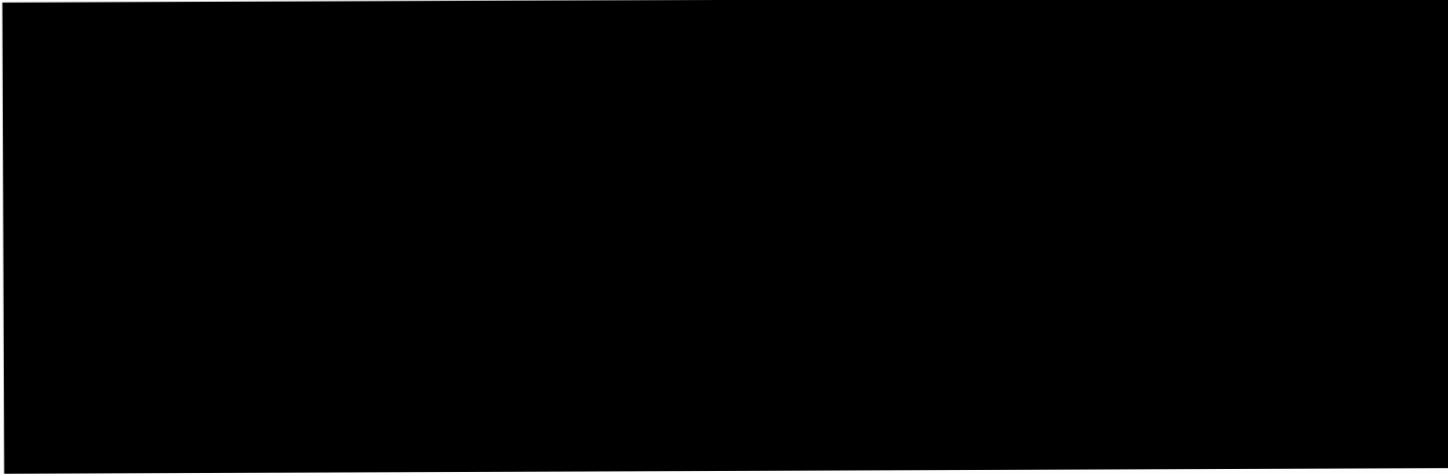
**Volume 1: Tendering Procedures
General Tender Information, Page II**

ATD2-1.1.1 The closing date for receipt of tenders is amended from the **26 June 2025** to **"02 July 2025"**.

Thanking you



**ACKNOWLEDGEMENT OF RECEIPT OF NOTICE 2 - FOR AND ON BEHALF OF THE TENDERER: TENDER
NO. 266C/2024/25**





CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

FINANCE
SUPPLY CHAIN MANAGEMENT

Tenders & Contracts, Supply Chain Management
SCM Water and Sanitation

Email: SCM.Tenders9@capetown.gov.za

25 JUNE 2025

NOTICE TO TENDERERS NO. 3

TENDER NO: 266C/2024/25

DESCRIPTION: PROVISION OF PROFESSIONAL SERVICES IN RESPECT OF CONTRACT ADMINISTRATION AND INSPECTION, CLOSE OUT AND ADDITIONAL SERVICES FOR THE UPGRADE AND EXPANSION OF THE MACASSAR WASTEWATER TREATMENT WORKS

BOX NUMBER: 185

CLOSING DATE: 02 July 2025 @ 10h00

Your attention is specifically drawn to the tender document for the following clarifications and amendments which are to be incorporated in the tender document for the abovementioned tender in terms of Clause C.3.2 of Part T1.2 of the Standard Conditions of Tender and you will be deemed to have made any allowance necessary to provide for these amendments in your tender offer.

Kindly be advised that tenderers must complete Schedule 22, page 126 in Part C5.2 of The Tender of the Contract Document.

NTT- 3-1 AMEND NOTE ON PAGE 13:

**Part T1.2 Tender Data
C.2.1.4.6 Minimum score for quality
Page 13**

ATD3-1 Clause C.2.1.4.6 Minimum score for quality page 13, remove the following wording:

"2. To allow for the time value of monetary inflation, project construction values must be escalated at 6% per annum from the year of completion, compounded annually, until close of tender. Detailed calculations must be submitted to show how escalation was applied. Only projects 15 years prior to tender closing date will be considered. Tenderers are to supply documentary evidence of award values for e.g. a BAC resolution or award letter."

Strike through and replace page 13 with attached page 13R

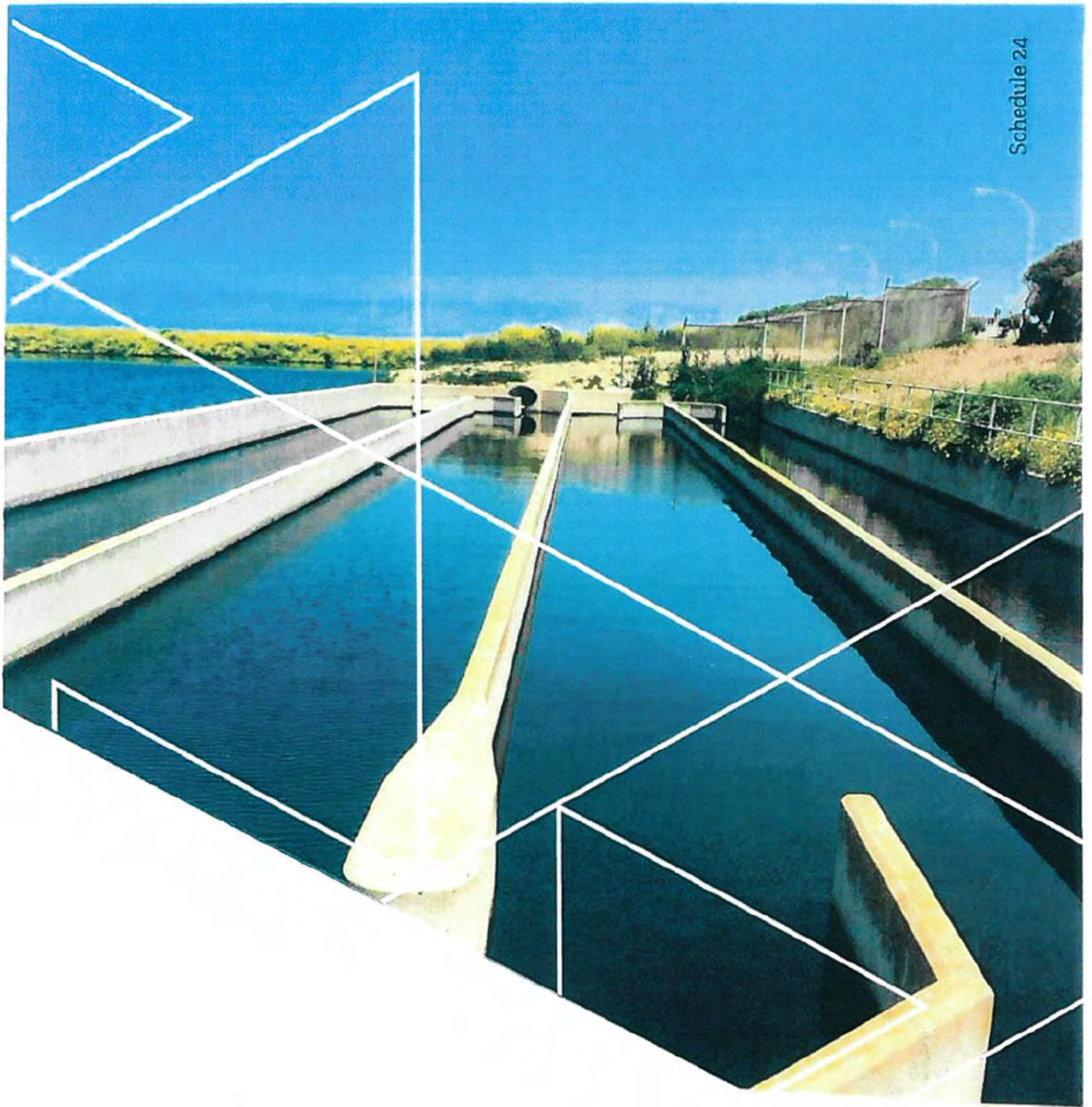
[End of Notice]

Thanking you

**ACKNOWLEDGEMENT OF RECEIPT OF NOTICE 2 - FOR AND ON BEHALF OF THE TENDERER: TENDER
NO. 266C/2024/25**



(Name of firm in ink and capitals)



Schedule 24: Preference Schedule & BBBEE certificates

Honeycomb

BEE Ratings

0861 HONEYCOMB

CONSTRUCTION SECTOR BEP VERIFICATION CERTIFICATE

We Certify that
Zutari (Pty) Ltd

Company Address:

*Has been verified for compliance with the B-BBEE Act No. 53 of 2013 and the Construction Sector
Code Gazette No.41287 of December 2017 and has achieved the following:*

BEE RATING

Level One (1) Contributor

(Generic Scorecard)

BEE PROCUREMENT RECOGNITION LEVEL

135%

Analysis	Score	Element	Results
Black Ownership	34.35%	Ownership	22.32
Black Woman Ownership	8.20%	Management Control	13.72
Black Designated Group	0.37%	Skills Development	29.74
Black Youth	0.37%	Supplier Development	28.74
Black Disabled	0.00%	Socio-Economic Development	6.00
Black Unemployed	0.00%	Total	100.52
Black People Living in Rural Areas	0.00%	Y.E.S. Initiative Implemented	Yes
Black Military Veterans	0.00%	Y.E.S. Target Achieved	One (1) x Target
Black New Entrants	34.35%	Number of Levels Promoted	N/A
Exclusion Principle Applied	No	Certificate Number	HR_GEN_3605_24
Modified Flow Through Principle	No	Version Number	1.0
Empowering Supplier	Yes	Issue Date	18 October 2024
Discounting Applied	No	Expiry Date	17 October 2025
Financial Period Reviewed	01 July 2023 – 30 June 2024	Revision Date	N/A

Honeycomb BEE Ratings

sanas
B-BBEE Rating Agency

020 906

DATE

19/06/2025

ATING BY

HONEYCOMB



In accordance with the Construction Sector Code issued in terms of Section 9(1) of the Broad Based Black Economic Empowerment Act, 2003 (act 53 of 2003 and Act 46 of 2013 as amended)

B-BBEE Verification Certificate

JOUBERT AND BRINK SURVEYS (PTY) LTD

CERTIFICATE No:	BTS24/11/07QSE
TYPE OF ENTITY:	Private Company
REGISTRATION NUMBER:	2021/468573/07
VAT REGISTRATION:	4410156253
HEAD OFFICE LOCATION:	14 Delwyn Crescent, Stellenberg, 7550
FINANCIAL PERIOD:	1 February 2023 – 31 January 2024
APPLICABLE CRITERIA:	Amended Construction Sector Code Government Gazette nr 41287
SCORECARD APPLIED:	Qualifying Small Enterprise - Contractor (Annual Turnover > R10 million but < R50 million)

Element	Element Weighting	Score
Ownership	30	30.00
Skills Development	24	0.00
Preferential Procurement and Supplier Development	29	0.00

Broad-Based BEE status level:

A level **THREE** contributor to B-BBEE

BEE procurement recognition:	110%	Black Ownership: 51.22%
Discounting Principle Applicable	Yes	Black Female Ownership: 51.22%
Modified Flow Through Applied	No	Black New Entrant: 51.22%
Exclusion Principle Applied	No	Black Designated Group: 0.00%
Empowering Supplier:	Yes	Black Disabled: 0.00%
Y.E.S. participation	No	Black Unemployed: 0.00%
Achieve Y.E.S Target and 2.5% Absorption	N/A	Black People living in rural areas: 0.00%
Achieve 1.5x Y.E.S Target and 5% Absorption	N/A	Black Youth: 0.00%
		Black Military Veterans: 0.00%

DATE OF ISSUE:	13 December 2024
EXPIRY DATE:	12 December 2025
DATE OF REISSUE:	N/A

COMPANIES AND INTELLECTUAL PROPERTY COMMISSION REPUBLIC OF SOUTH AFRICA

CoR18.3 - Registration Certificate

Issue date: 10/03/2021

Print date: 11/03/2021

Customer code:

Tracking number:

Concerning:

Conversion of 'JOUBERT AND BRINK SURVEYS CC' to
'JOUBERT AND BRINK SURVEYS (PTY) LTD'

The above named Company has been converted from a Close Corporation in terms of Schedule 2 of the Companies Act, 2008, with effect from the date 10/03/2021 of this certificate.

The Company's name as shown above, has been altered by the Commission to comply with the requirements of Section 14 (3) of the Companies Act, 2008, and otherwise appears to be acceptable in terms of the Act.

Commissioner: CIPC

TAM

About this certificate

This Certificate is issued in terms of Schedule 2 of the Companies Act, 2008, and Regulation 18 of the Companies Regulations, 2011.

If the Commission has issued a Notice of a Potentially Contested Name in conjunction with the certificate, the company must serve that notice on each person identified in the Notice, and any such person has the right to



Reference No. 266C/2024/25



**Certificate issued by the Companies and Intellectual Properties
Commission on Thursday, March 11, 2021 09:09
Certificate of Registration**



Companies and Intellectual
Property Commission

12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Registration number

Converted from Close Corporation

Enterprise Name

Enterprise Shortened Name

Enterprise Translated Name

Registration Date

Business Start Date

Enterprise Type

Enterprise Status

Financial year end

Main Business/Main Object

Postal address

Address of registered office





**Certificate issued by the Companies and Intellectual Properties
Commission on Thursday, March 11, 2021 09:09
Certificate of Confirmation**

Companies and Intellectual
Property Commission

Division of the Department of Trade and Industry

Registration number



Enterprise Name

JOUBERT AND BRINK SURVEYS (PTY) LTD

Auditor

Name

C2M CHARTERED ACCOUNTANTS INC

Postal



Active Directors / Officers

Surname and first names	Status	ID number or date of birth	Director type	Appoint- ment date	Addresses
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JOLIBERT AND BRINK SURVEYS (PTY) LTD

**ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 JANUARY 2025**

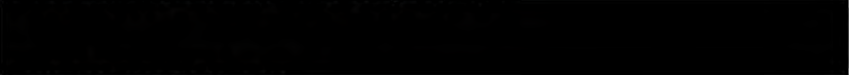
Contract

C5.1

**Part C5: Returnable Documents
Documents
Reference No. 266C/2024/25**

List of Returnable

JOUBERT AND BRINK SURVEYS (PTY) LTD



GENERAL INFORMATION

Country of incorporation and domicile	South Africa
Nature of business and principal activities	Engineering, surveying and all related activities
Directors	
Registered office	
Business address	
Postal address	
Bankers	Nedbank Limited
Compilers	C2M Chartered Accountants Incorporated Chartered Accountants (SA) Registered Auditors
Company registration number	
Tax reference number	
Level of assurance	These annual financial statements have not been audited or independently reviewed.
Issued	05 May 2025

INDEX

The reports and statements set out below comprise the annual financial statements presented to the shareholders

	Page
Directors' Responsibilities and Approval	3
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Practitioner's Compilation Report	6
Statement of Financial Position	7
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Statement of Changes in Equity	9
Statement of Cash Flows	10
Accounting Policies	11 - 14
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Detailed Income Statement	18

DIRECTORS' RESPONSIBILITIES AND APPROVAL

The directors are required by the Companies Act of South Africa, to maintain adequate accounting records and are responsible for the content and integrity of the annual financial statements and related financial information included in this report. It is their responsibility to ensure that the annual financial statements fairly present the state of affairs of the company as at the end of the financial year and the results of its operations and cash flows for the period then ended, in conformity with the International Financial Reporting Standard for Small and Medium-sized Entities.

The annual financial statements are prepared in accordance with the International Financial Reporting Standard for Small and Medium-sized Entities and are based upon appropriate accounting policies consistently applied and supported by reasonable and prudent judgements and estimates.

The directors acknowledge that they are ultimately responsible for the system of internal financial control established by the company and place considerable importance on maintaining a strong control environment. To enable the directors to meet these responsibilities, the directors sets standards for internal control aimed at reducing the risk of error or loss in a cost effective manner. The standards include the proper delegation of responsibilities within a clearly defined framework, effective accounting procedures and adequate segregation of duties to ensure an acceptable level of risk. These controls are monitored throughout the company and all employees are required to maintain the highest ethical standards in ensuring the company's business is conducted in a manner that in all reasonable circumstances is above reproach. The focus of risk management in the company is on identifying, assessing, managing and monitoring all known forms of risk across the company. While operating risk cannot be fully eliminated, the company endeavours to minimise it by ensuring that appropriate infrastructure, controls, systems and ethical behaviour are applied and managed within predetermined procedures and constraints.

The directors are of the opinion, based on the information and explanations given by management, that the system of internal control provides reasonable assurance that the financial records may be relied on for the preparation of the annual financial statements. However, any system of internal financial control can provide only reasonable, and not absolute, assurance against material misstatement or loss.

The directors have reviewed the company's cash flow forecast for the year to 31 January 2026 and, in the light of this review and the current financial position, they are satisfied that the company has or has access to adequate resources to continue in operational existence for the foreseeable future.

The annual financial statements set out on pages 7 to 17, which have been prepared on the going concern basis, were approved by the directors on 05 May 2025 and were signed on its behalf by:


JWK Brink

Bellville

05 May 2025

DIRECTORS' REPORT

The directors have pleasure in submitting their report on the annual financial statements of Joubert and Brink Surveys (Pty) Ltd for the year ended 31 January 2025.

1. Incorporation

The company was incorporated on 10 January 1996 and obtained its certificate to commence business on the same day.

2. Nature of business

Joubert and Brink Surveys (Pty) Ltd was incorporated in South Africa with interests in the services industry. The company operates in South Africa.

3. Review of financial results and activities

The annual financial statements have been prepared in accordance with International Financial Reporting Standard for Small and Medium-sized Entities and the requirements of the Companies Act of South Africa. The accounting policies have been applied consistently compared to the prior year.

4. Share capital

Authorised Ordinary shares	2025		2024	
	Number of shares		Number of shares	
	500		500	
Issued Ordinary shares Class A ordinary shares	2025 R	2024 R	2025 Number of shares	2024 Number of shares
	-	-	410	410
	6 000 000	6 000 000	500	500
	6 000 000	6 000 000	910	910

There have been no changes to the authorised or issued share capital during the year under review.

5. Control over unissued shares

The unissued ordinary shares are the subject of a general authority granted to the directors in terms of section 38 of the Companies Act of South Africa. As this general authority remains valid only until the next AGM, the shareholders will be asked at that meeting to consider an ordinary resolution placing the said unissued ordinary shares, up to a maximum of 100% of the company's issued share capital, under the control of the directors until the next AGM.

6. Dividends

No dividend was declared or paid during the year.

7. Insurance and risk management

The company follows a policy of reviewing the risks relating to assets and possible liabilities arising from business transactions with its insurers on an annual basis. Wherever possible assets are automatically included. There is also a continuous asset risk control program, which is carried out in conjunction with the company's insurance brokers. All risks are considered to be adequately covered, except for political risks, in the case of which as much cover as is reasonably available has been arranged.

DIRECTORS' REPORT

8. Directors

The directors in office at the date of this report are as follows:

Directors
JWK Brink
R Joubert

There have been no changes to the directorate for the period under review.

9. Directors' interests in contracts

During the financial year, no contracts were entered into which directors or officers of the company had an interest and which significantly affected the business of the company.

10. Property, plant and equipment

There was no change in the nature of the property, plant and equipment of the company or in the policy regarding their use.

11. Special resolutions

No special resolutions, the nature of which might be significant to the shareholders in their appreciation of the state of affairs of the company were made by the company during the period covered by this report.

12. Events after the reporting period

The directors are not aware of any material event which occurred after the reporting date and up to the date of this report.

13. Going concern

The directors believe that the company has adequate financial resources to continue in operation for the foreseeable future and accordingly the annual financial statements have been prepared on a going concern basis. The directors have satisfied themselves that the company is in a sound financial position and that it has access to sufficient borrowing facilities to meet its foreseeable cash requirements. The directors are not aware of any new material changes that may adversely impact the company. The directors are also not aware of any material non-compliance with statutory or regulatory requirements or of any pending changes to legislation which may affect the company.

14. Litigation statement

The company becomes involved from time to time in various claims and lawsuits incidental to the ordinary course of business. The company is not currently involved in any such claims or lawsuits, which individually or in the aggregate, are expected to have a material adverse effect on the business or its assets.

15. Compilers

C2M Chartered Accountants Incorporated continued in office as compilers for the company for 2025.

16. Secretary

The company had no secretary during the year.

17. Liquidity and solvency

The directors performed the liquidity and solvency tests as required by the Companies Act of South Africa.

PRACTITIONER'S COMPILATION REPORT

To Joubert and Brink Surveys (Pty) Ltd

We have compiled the annual financial statements of Joubert and Brink Surveys (Pty) Ltd, as set out on pages 7 - 17, based on information you have provided. These annual financial statements comprise the statement of financial position of Joubert and Brink Surveys (Pty) Ltd as at 31 January 2025, the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

We performed this compilation engagement in accordance with International Standard on Related Services 4410 (Revised), Compilation Engagements.

We have applied our expertise in accounting and financial reporting to assist you in the preparation and presentation of these annual financial statements in accordance with the International Financial Reporting Standard for Small and Medium-sized Entities. We have complied with relevant ethical requirements, including principles of integrity, objectivity, professional competence and due care.

These annual financial statements and the accuracy and completeness of the information used to compile them are your responsibility.

Since a compilation engagement is not an assurance engagement, we are not required to verify the accuracy or completeness of the information you provided to us to compile these annual financial statements. Accordingly, we do not express an audit opinion or a compilation opinion on these annual financial statements are prepared in accordance with the International Financial Reporting Standard for Small and Medium-sized Entities.

Professional Accountant (S.A.)
Associate

05 May 2025



JOUBERT AND BRINK SURVEYS (PTY) LTD

STATEMENT OF FINANCIAL POSITION AS AT 31 JANUARY 2025

Figures in Rand	Notes	2025	2024
Assets			
Non-Current Assets			
Property, plant and equipment	2	6 420 475	5 574 971
Loans to shareholders	3	-	116 855
		6 420 475	5 691 826
Current Assets			
Loans to directors, managers and employees		110 000	11 500
Cash and cash equivalents	4	1 283 207	199 497
		1 393 207	210 997
Total Assets		7 813 682	5 902 823
Equity and Liabilities			
Equity			
Share capital	5	6 000 000	6 000 000
Accumulated loss		(1 721 542)	(2 974 801)
		4 278 458	3 025 199
Liabilities			
Non-Current Liabilities			
Other financial liabilities	6	1 878 636	2 074 500
Finance lease liabilities		243 127	286 995
		2 121 763	2 361 495
Current Liabilities			
Trade and other payables	7	1 228 488	423 863
Current tax payable		184 973	92 266
		1 413 461	516 129
Total Liabilities		3 535 224	2 877 624
Total Equity and Liabilities		7 813 682	5 902 823

LOUBERT AND BRINK SURVEYS (PTY) LTD

STATEMENT OF COMPREHENSIVE INCOME

Figures in Rand	Notes	2025	2024
Revenue	8	31 400 439	24 905 518
Cost of sales	9	(15 493 791)	(12 182 990)
Gross profit		15 906 648	12 722 528
Other income	10	-	159 999
Operating expenses	11	(13 827 905)	(11 677 334)
Operating profit		2 078 743	1 205 193
Finance costs	1.10	(361 950)	(402 779)
Profit before taxation		1 716 793	802 414
Taxation	13	(463 534)	(216 652)
Profit for the year		1 253 259	585 762
Other comprehensive income		-	-
Total comprehensive income for the year		1 253 259	585 762

STATEMENT OF CHANGES IN EQUITY

Figures in Rand	Share capital	Accumulated loss	Total equity
Balance at 01 February 2023	6 000 000	(3 560 563)	2 439 437
Profit for the year	-	585 762	585 762
Other comprehensive income	-	-	-
Total comprehensive income for the year	-	585 762	585 762
Balance at 01 February 2024	6 000 000	(2 974 801)	3 025 199
Profit for the year	-	1 253 259	1 253 259
Other comprehensive income	-	-	-
Total comprehensive income for the year	-	1 253 259	1 253 259
Balance at 31 January 2025	6 000 000	(1 721 542)	4 278 458
Note	5		

STATEMENT OF CASH FLOWS

Figures in Rand	Notes	2025	2024
Cash flows from operating activities			
Cash generated from operations	14	3 698 050	1 514 587
Finance costs		(361 950)	(402 779)
Tax paid		(370 827)	(138 371)
Net cash from operating activities		2 965 273	973 437
Cash flows from investing activities			
Purchase of property, plant and equipment	2	(1 660 186)	(1 999 691)
Movement in other assets	2	-	159 999
Net cash from investing activities		(1 660 186)	(1 839 692)
Cash flows from financing activities			
Movement in other financial liabilities		(195 864)	(82 590)
Movement in loans to directors, managers and employees		(98 500)	(11 500)
Movement in shareholders loan		116 855	1 042 878
Finance lease movements		(43 868)	(186 713)
Net cash from financing activities		(221 377)	762 075
Total cash movement for the year		1 083 710	(104 180)
Cash at the beginning of the year		199 497	303 677
Total cash at end of the year	4	1 283 207	199 497

ACCOUNTING POLICIES

1. Basis of preparation and summary of significant accounting policies

The annual financial statements have been prepared on a going concern basis in accordance with the International Financial Reporting Standard for Small and Medium-sized Entities, and the Companies Act of South Africa. The annual financial statements have been prepared on the historical cost basis, and incorporate the principal accounting policies set out below. They are presented in South African Rands.

These accounting policies are consistent with the previous period.

1.1 Significant judgements and sources of estimation uncertainty**Critical judgements in applying accounting policies**

Management did not make critical judgements in the application of accounting policies, apart from those involving estimations, which would significantly affect the annual financial statements.

Key sources of estimation uncertainty

The financial statements do not include assets or liabilities whose carrying amounts were determined based on estimations for which there is a significant risk of material adjustments in the following financial year as a result of the key estimation assumptions.

1.2 Property, plant and equipment

Property, plant and equipment are tangible assets which the company holds for its own use or for rental to others and which are expected to be used for more than one period.

Property, plant and equipment is initially measured at cost.

Cost includes costs incurred initially to acquire or construct an item of property, plant and equipment and costs incurred subsequently to add to, replace part of, or service it. If a replacement cost is recognised in the carrying amount of an item of property, plant and equipment, the carrying amount of the replaced part is derecognised.

Property, plant and equipment is subsequently stated at cost less accumulated depreciation and any accumulated impairment losses, except for land which is stated at cost less any accumulated impairment losses.

Depreciation of an asset commences when the asset is available for use as intended by management. Depreciation is charged to write off the asset's carrying amount over its estimated useful life to its estimated residual value, using a method that best reflects the pattern in which the asset's economic benefits are consumed by the company.

The useful lives of items of property, plant and equipment have been assessed as follows:

Item	Depreciation method	Average useful life
Land and buildings	Straight line	Indefinite
Furniture and fixtures	Straight line	6 years
Motor vehicles	Straight line	5 years
Office equipment	Straight line	5 years
IT equipment	Straight line	3 years

When indicators are present that the useful lives and residual values of items of property, plant and equipment have changed since the most recent annual reporting date, they are reassessed. Any changes are accounted for prospectively as a change in accounting estimate.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its continued use or disposal. Any gain or loss arising from the derecognition of an item of property, plant and equipment, determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item, is included in profit or loss when the item is derecognised.



ACCOUNTING POLICIES

1.3 Financial instruments

Initial measurement

Financial instruments are initially measured at the transaction price (including transaction costs except in the initial measurement of financial assets and liabilities that are measured at fair value through profit or loss) unless the arrangement constitutes, in effect, a financing transaction in which case it is measured at the present value of the future payments discounted at a market rate of interest for a similar debt instrument.

Financial instruments at amortised cost

These include loans, trade receivables and trade payables. They are subsequently measured at amortised cost using the effective interest method. Debt instruments which are classified as current assets or current liabilities are measured at the undiscounted amount of the cash expected to be received or paid, unless the arrangement effectively constitutes a financing transaction.

At each reporting date, the carrying amounts of assets held in this category are reviewed to determine whether there is any objective evidence of impairment. If there is objective evidence, the recoverable amount is estimated and compared with the carrying amount. If the estimated recoverable amount is lower, the carrying amount is reduced to its estimated recoverable amount, and an impairment loss is recognised immediately in profit or loss.

Financial instruments at cost

Equity instruments that are not publicly traded and whose fair value cannot otherwise be measured reliably without undue cost or effort are measured at cost less impairment.

Financial instruments at fair value

All other financial instruments, including equity instruments that are publicly traded or whose fair value can otherwise be measured reliably, without undue cost or effort, are measured at fair value through profit or loss.

If a reliable measure of fair value is no longer available without undue cost or effort, then the fair value at the last date that such a reliable measure was available is treated as the cost of the instrument. The instrument is then measured at cost less impairment until management are able to measure fair value without undue cost or effort.

ACCOUNTING POLICIES

1.4 Tax

Current tax assets and liabilities

Current tax for current and prior periods is, to the extent unpaid, recognised as a liability. If the amount already paid in respect of current and prior periods exceeds the amount due for those periods, the excess is recognised as an asset.

The tax liability reflects the effect of the possible outcomes of a review by the tax authorities.

Deferred tax assets and liabilities

A deferred tax liability is recognised for all taxable temporary differences.

A deferred tax asset is recognised for all deductible temporary differences to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilised.

Deferred tax asset is recognised for the carry forward of unused tax losses to the extent that it is probable that future taxable profit will be available against which the unused tax losses can be utilised.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Tax expenses

Tax expense is recognised in the same component of total comprehensive income or equity as the transaction or other event that resulted in the tax expense.

1.5 Leases

A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership to the lessee. All other leases are operating leases.

Finance leases – lessee

Finance leases are recognised as assets and liabilities at amounts equal to the fair value of the leased property or, if lower, the present value of the minimum lease payments.

The lease payments are apportioned between the finance charge and the reduction of the outstanding liability using the effective interest method.

1.6 Impairment of assets

The company assesses at each reporting date whether there is any indication that an asset may be impaired.

If there is any such indication, the recoverable amount of any affected asset (or group of related assets) is estimated and compared with its carrying amount. If the estimated recoverable amount is lower, the carrying amount is reduced to its estimated recoverable amount, and an impairment loss is recognised immediately in profit or loss.

If an impairment loss subsequently reverses, the carrying amount of the asset (or group of related assets) is increased to the revised estimate of its recoverable amount, but not in excess of the amount that would have been determined had no impairment loss been recognised for the asset (or group of assets) in prior years. A reversal of impairment is recognised immediately in profit or loss.

1.7 Share capital and equity

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities.

ACCOUNTING POLICIES

1.8 Employee benefits

Short-term employee benefits

The cost of short-term employee benefits are recognised in the period in which the service is rendered and are not discounted.

1.9 Revenue

Revenue is recognised to the extent that the company has transferred the significant risks and rewards of ownership of goods to the buyer, or has rendered services under an agreement provided the amount of revenue can be measured reliably and it is probable that economic benefits associated with the transaction will flow to the company. Revenue is measured at the fair value of the consideration received or receivable, excluding sales taxes and discounts.

Interest is recognised, in profit or loss, using the effective interest rate method.

1.10 Borrowing costs

Borrowing costs are recognised as an expense in the period in which they are incurred.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS

Figures in Rand

2025

2024

2. Property, plant and equipment

	2025			2024		
	Cost or revaluation	Accumulated depreciation	Carrying value	Cost or revaluation	Accumulated depreciation	Carrying value
Land and buildings	3 224 002	-	3 224 002	2 965 295	-	2 965 295
Plant and machinery	3 734 275	(2 454 096)	1 280 179	3 734 275	(2 017 375)	1 716 900
Furniture and fixtures	137 795	(101 598)	36 197	137 795	(93 553)	44 242
Motor vehicles	6 026 088	(4 240 599)	1 785 489	4 624 608	(3 954 349)	670 259
Office equipment	132 340	(132 335)	5	132 340	(132 335)	5
IT equipment	574 440	(479 837)	94 603	574 440	(396 170)	178 270
Total	13 828 940	(7 408 465)	6 420 475	12 168 753	(6 593 782)	5 574 971

	Opening balance	Additions	Depreciation	Closing balance
Land and buildings	2 965 295	258 707	-	3 224 002
Plant and machinery	1 716 900	-	(436 721)	1 280 179
Furniture and fixtures	44 242	-	(8 045)	36 197
Motor vehicles	670 259	1 401 479	(286 249)	1 785 489
Office equipment	5	-	-	5
IT equipment	178 270	-	(83 667)	94 603
	5 574 971	1 660 186	(814 682)	6 420 475

	Opening balance	Additions	Depreciation	Closing balance
Land and buildings	2 965 295	-	-	2 965 295
Plant and machinery	489 064	1 407 258	(179 422)	1 716 900
Furniture and fixtures	3	48 261	(4 022)	44 242
Motor vehicles	428 283	436 089	(194 113)	670 259
Office equipment	5	-	-	5
IT equipment	120 833	108 083	(50 646)	178 270
	4 003 483	1 999 691	(428 203)	5 574 971

Details of properties

- Purchase price: 18 August 2004
- Capitalised expenditure

300 000	300 000
6 829	6 829
306 829	306 829

- Purchase price: 23 February 2010
- Capitalised expenditure

1 000 000	1 000 000
1 917 173	1 658 466
2 917 173	2 658 466

Registers with details of land and buildings are available for inspection by shareholders or their duly authorised representatives at the registered office of the company.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS

Figures in Rand	2025	2024
3. Loans to (from) shareholders		
JWK Brink	-	116 855
This loan was settled during the current financial year.		
4. Cash and cash equivalents		
Cash and cash equivalents consist of:		
Bank balances	1 283 207	199 497
5. Share capital		
Authorised		
500 Ordinary shares of no par value	-	-
Issued		
Preference	6 000 000	6 000 000
6. Other financial liabilities		
	1 878 636	2 074 500
Non-current liabilities		
At amortised cost	1 878 636	2 074 500
7. Trade and other payables		
VAT	512 293	286 591
Other payables	524 970	-
EMP accrual	191 225	137 272
	1 228 488	423 863
8. Revenue		
Rendering of services	31 400 439	24 905 518
9. Cost of sales		
Rendering of services		
Cost of services	15 493 791	12 182 990
10. Other income		
Profit on sale of assets and liabilities	-	159 999

NOTES TO THE ANNUAL FINANCIAL STATEMENTS

Figures in Rand	2025	2024
11. Operating expenses		
Operating expenses include the following expenses:		
Depreciation and amortisation	814 682	428 203
Employee costs	11 509 564	10 011 554
12. Finance costs		
Bank	347 933	402 779
Late payment of tax	14 017	-
	361 950	402 779
13. Taxation		
Major components of the tax expense		
Current taxation		
South African normal tax - year	463 534	216 652
Reconciliation of the tax expense		
Accounting profit	1 716 793	802 414
Tax at the applicable tax rate (2023: SBC)	463 534	216 652
14. Cash generated from operations		
Profit before taxation	1 716 793	802 414
Adjustments for:		
Depreciation and amortisation	814 682	428 203
Profit on sale of assets	-	(159 999)
Finance costs	361 950	402 779
Changes in working capital:		
Trade and other payables	804 625	41 190
	3 698 050	1 514 587

15. Going concern

The annual financial statements have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business.

The directors believe that the company has adequate financial resources to continue in operation for the foreseeable future and accordingly the annual financial statements have been prepared on a going concern basis. The directors have satisfied themselves that the company is in a sound financial position and that it has access to sufficient borrowing facilities to meet its foreseeable cash requirements. The directors are not aware of any new material changes that may adversely impact the company. The directors are also not aware of any material non-compliance with statutory or regulatory requirements or of any pending changes to legislation which may affect the company.

DETAILED INCOME STATEMENT

Figures in Rand	Notes	2025	2024
Revenue			
Rendering of services		31 400 439	24 905 518
Cost of sales			
Purchases		(15 493 791)	(12 182 990)
Gross profit		15 906 648	12 722 528
Other income			
Gains on disposal of assets		-	159 999
Operating expenses			
Accounting fees		(71 455)	(79 547)
Advertising		(77 047)	(40 700)
Bank charges		(21 025)	(17 941)
Computer expenses		(97 981)	(85 207)
Depreciation, amortisation and impairments		(814 682)	(428 203)
Employee costs		(11 509 564)	(10 011 554)
Insurance		(419 045)	(439 119)
Motor vehicle expenses		(18 587)	(7 739)
Printing and stationery		(211 064)	(93 668)
Repairs and maintenance		(83 234)	(106 218)
Security		(89 051)	(60 370)
Telephone and fax		(127 944)	(89 594)
Travel - local		(12 089)	(25 809)
Utilities		(275 137)	(191 665)
		(13 827 905)	(11 677 334)
Operating profit		2 078 743	1 205 193
Finance costs	12	(361 950)	(402 779)
Profit before taxation		1 716 793	802 414
Taxation	13	(463 534)	(216 652)
Profit for the year		1 253 259	585 762



Broad-Based Black Economic Empowerment Verification Certificate

ALEX STEWART AND ASSOCIATES (PTY) LTD

Certificate Number:

Registration Number:

VAT Number:

Head Office Location:

Verification Standard Applied: Amended Construction Sector Code of Good Practice - BEP
Issue of the Rating Standard Applied: Section 9 of the B-BBEE Amendment Act 46 of 2013
Scorecard Applied: CSE with Turnover >R5m & <R25M

B-BBEE Level: NON - COMPLIANT

B-BBEE Procurement Recognition Level: 0%

Financial Year Rated: 2024/02/29

Element	Element weighting	Score
Ownership	27	0.00
Management Control	20	0.00
Skills Development	24	0.00
Enterprise and Supplier Development	29	0.00
Socio-Economic Development	3	0.00
Y.E.S Initiative Bonus Points		0.00
Overall Score	103	0.00

Empowering Supplier	Yes
Designated Group Supplier	No
Modified Flow Through Applied	No
Exclusion Principle Applied	No
Discounting Principle Applied	Yes
Participated in Y.E.S Initiative	No
Achieve Y.E.S Target and 2.5% Absorption	N/A
Achieve 1.5 x Y.E.S Target and 5% Absorption	N/A
Achieve Double Y.E.S Target and 5% Absorption	N/A

Black Ownership	0.00%
Black Female Ownership	0.00%
Black Designated Group Percentage	0.00%
Black Youth Percentage	0.00%
Black Disabled Percentage	0.00%
Black Unemployed Percentage	0.00%
Black People Living in Rural Areas Percentage	0.00%
Black Military Veterans Percentage	0.00%
Black New Entrant Percentage	0.00%

This verification certificate and verification report is based on information provided to Amax BEE Verifications (Pty) Ltd and represent an independent opinion based on the verification and analysis completed by Amax BEE Verifications (Pty) Ltd.

The calculation of the scores has been determined in accordance with the Amended Construction Sector Code of Good Practice - BEP as Gazetted. Gazettes Nos 41287, 41866, 41975 & 42496 where applicable

Erik Botha (Technical Signatory)

Date of Issue: 9 July 2024
Re-issue Date: N/A
Expiry date: 8 July 2025
Period of validity: 12 Months



SWORN AFFIDAVIT – B-BBEE QUALIFYING SMALL ENTERPRISE - GENERAL

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

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

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

Contract

Part C5:
Document
Reference

3. I hereby declare under Oath that:

- The Enterprise is 51 % Black Owned using the flow-through principle as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is 51 % Black Female Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is 0 % Black Designated Group Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- Black Designated Group Owned % Breakdown as per the definition stated above:
 - Black Youth % = 0 %
 - Black Disabled % = 0 %
 - Black Unemployed % = 0 %
 - Black People living in Rural areas % = 0 %
 - Black Military Veterans % = 0 %
- Based on the Audited Financial Statements/ Financial Statements and other information available on the latest financial year-end of 28 FEBRUARY 2025 (DD/MM/YYYY), the annual Total Revenue was between R10,000,000.00 (Ten Million Rands) and R50,000,000.00 (Fifty Million Rands),

- Please confirm on the table below the B-BBEE level contributor, by ticking the applicable box.

100% Black Owned	Level One (135% B-BBEE procurement recognition level)	
At Least 51% black owned	Level Two (125% B-BBEE procurement recognition level)	X

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.
5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

[Redacted Signature]

Commissioner of Oaths
Signature & stamp

Deponent Signature: _____

Date: 1 _____

[Redacted Signature]

SWORN AFFIDAVIT – B-BBEE EXEMPTED MICRO ENTERPRISE - GENERAL

I, the undersigned,

Full name & Surname

Identity number

Hereby declare under oath

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

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

3. I hereby declare under Oath that:

- The Enterprise is 0.00% Black Owned using the flow-through principle as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is 0.00% Black Female Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is 0.00% Black Designated Group Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- Black Designated Group Owned % Breakdown as per the definition stated above:
 - Black Youth % = 0.00%
 - Black Disabled % = 0.00%
 - Black Unemployed % = 0.00%
 - Black People living in Rural areas % = 0.00%
 - Black Military Veterans % = 0.00%
- Based on the Audited Financial Statements/Financial Statements and other information available on the latest financial year-end of **28 FEB 2025 (DD/MM/YYYY)**, the annual Total Revenue was R10,000,000.00 (Ten Million Rands) or less
- Please Confirm on the below table the B-BBEE Level Contributor, by ticking the applicable box.

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

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the Owners of the Enterprise which I represent in this matter.
5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

The Broad-Based Black Economic Empowerment Act No 53 of 2003 as amended by Act No 48 of 2013 only require that all EMEs and QSE with 51% and 100% black owned and controlled companies are only required to obtain a sworn affidavit
Sworn Affidavit financial period Feb 2025



CENFED

(Pty) Ltd
BUSINESS CONSULTING AGENCY
EXEMPTED MICRO ENTERPRISE REPORT

with annual turnover of less than R10,000,000.00(Ten Million)

This Certificate confirms that after consulting the entity, as requested, it is confirmed that the entity only requires to submit Sworn Affidavit as set out in the

Company Name:
Trading As:
Registration Number
Physical Address:



Codes of Good Practice

Cenfed BEE Agency hereby confirms that as per the attached Sworn Affidavit the above mentioned entity's ownership and B-BBEE Status Level is as follows:

Broad Based BEE Status is

Less than 51% Black Owned Level Four (100% B-BBEE procurement recognition)

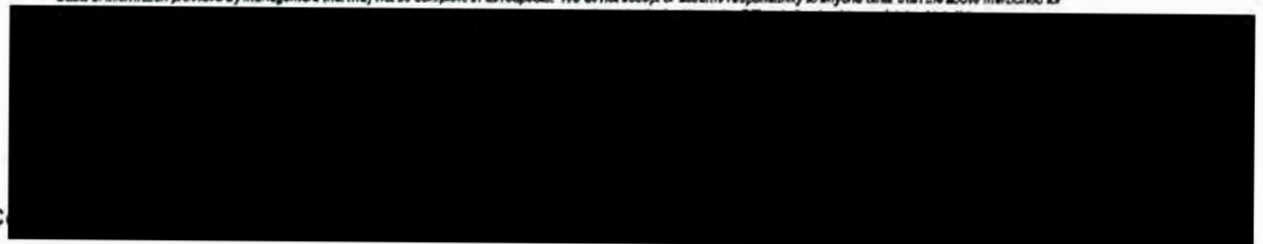
Fronting Practices	None
Black Ownership	0.00%
Black Women Ownership	0.00%
Value Adding Supplier (Yes/No)	No
Empowering Supplier (Yes/No)	Yes
Financial Year End	Feb 2025

Assessment Date: 2025/05/20

Renewal Date: 2026/05/19



In our opinion, the B-BBEE Status reflected on this Consulting Certificate has been determined, in all material respects, in accordance with the Codes of Good Practice on Black Economic Empowerment Gazette on 11 October 2013 in terms of the Black-Economic Empowerment Act of South Africa. This consulting certificate has been determined, on the basis of information provided by management that may not be complete in all respects. We do not accept or assume responsibility to anyone other than the above mentioned for



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Schedule 26:

- Company Organogram
- Cashflow Forecast

GROUP STRUCTURE

SCHEDULE 26: INFORMATION TO BE PROVIDED WITH THE TENDER			
B. CASHFLOW FORECST			
No.	MONTH	MONTHLY AMOUNT	
1	July 2026	R	4,779,507.52
2	August 2026	R	4,779,507.52
3	September 2026	R	4,779,507.52
4	October 2026	R	4,779,507.52
5	November 2026	R	4,779,507.52
6	December 2026	R	4,779,507.52
7	January 2027	R	4,696,174.18
8	February 2027	R	4,696,174.18
9	March 2027	R	4,696,174.18
10	April 2027	R	4,696,174.18
11	May 2027	R	4,696,174.18
12	June 2027	R	4,696,174.18
13	July 2027	R	4,696,174.18
14	August 2027	R	4,696,174.18
15	September 2027	R	4,696,174.18
16	October 2027	R	4,696,174.18
17	November 2027	R	4,696,174.18
18	December 2027	R	4,696,174.18
19	January 2028	R	4,696,174.18
20	February 2028	R	4,696,174.18
21	March 2028	R	4,696,174.18
22	April 2028	R	4,696,174.18
23	May 2028	R	4,696,174.18
24	June 2028	R	4,696,174.18
25	July 2028	R	4,696,174.18
26	August 2028	R	4,696,174.18
27	September 2028	R	4,696,174.18
28	October 2028	R	4,696,174.18
29	November 2028	R	4,696,174.18

SCHEDULE 26: INFORMATION TO BE PROVIDED WITH THE TENDER			
B. CASHFLOW FORECST			
No.	MONTH	MONTHLY AMOUNT	
30	December 2028	R	4,696,174.18
31	January 2029	R	4,696,174.18
32	February 2029	R	4,696,174.18
33	March 2029	R	4,696,174.18
34	April 2029	R	4,696,174.18
35	May 2029	R	4,696,174.18
36	June 2029	R	4,696,174.18
37	July 2029	R	4,696,174.18
38	August 2029	R	4,696,174.18
39	September 2029	R	4,696,174.18
40	October 2029	R	4,696,174.18
41	November 2029	R	5,092,872.79
42	December 2029	R	5,092,872.79
43	January 2030	R	5,092,872.79
44	February 2030	R	5,092,872.79
45	March 2030	R	308,543.36
46	April 2030	R	308,543.36
47	May 2030	R	308,543.36
48	June 2030	R	308,543.36
49	July 2030	R	308,543.36
50	August 2030	R	308,543.36
51	September 2030	R	308,543.36
52	October 2030	R	308,543.36
53	November 2030	R	308,543.36
54	December 2030	R	308,543.36
55	January 2031	R	308,543.36
56	February 2031	R	308,543.36
57	March 2031	R	308,543.36
58	April 2031	R	308,543.36

SCHEDULE 26: INFORMATION TO BE PROVIDED WITH THE TENDER		
B. CASHFLOW FORECST		
No.	MONTH	MONTHLY AMOUNT
59	May 2031	R 308,543.36
60	June 2031	R 308,543.36
61	July 2031	R 308,543.36
62	August 2031	R 308,543.36
Sub Total		R 214,272,239.00
Allow the sum of 10% (ten percent) of the above Sub-total for Contingencies to be spent as the Employer may direct and to be deducted in whole or in part if not required		R 21,427,223.90
Total including Contingencies		R 235,699,462.90
Plus VAT (15%)		R 35,354,919.44
TENDER PRICE CARRIED FORWARD TO C1.1 FORM OF OFFER AND ACCEPTANCE		R 271,054,382.34