

MEMORANDUM OF AGREEMENT

ENTERED INTO BETWEEN



CITY OF CAPE TOWN

A statutory entity with legal personality established in terms of the Local Government: Municipal Structures Act, 117 of 1998 read with the Province of the Western Cape:

Provincial Gazette 5588 dated 22 September 2000, as amended

(Hereinafter referred to as “CoCT”)

and



WATER RESEARCH COMMISSION

A statutory entity with legal personality established in terms of section 2 of the Water

Research Act, 1971 (Act No. 34 of 1971)

(Hereinafter referred to as “WRC”)

FOR THE

**PROVISION OF TECHNICAL ADVISORY, ASSURANCE AND RESEARCH SERVICES
REQUIRED TO SUPPORT IMPLEMENTATION OF WATER REUSE AND DESALINATION
PROGRAMMES**

CONTRACT NO. DP8456R/2023/24

PREAMBLE

WHEREAS the **City of Cape Town (CoCT)** is a statutory entity with a legal personality established in terms of the Local Government: Municipal Structures Act. 117 of 1998 read with the Province of the Western Cape: Provincial Gazette 5588 dated 22 September 2000, as amended;

AND WHEREAS the **Water Research Commission (WRC)** a statutory public entity with legal personality established in terms of section 2 of the Water Research Act, 1971 (Act No. 34 of 1971);

AND WHEREAS as the pressure for increased development and subsequently the demand on the nation's water resources continues, the achievement of sustainable use of South Africa's natural resources becomes increasingly important and challenging;

AND WHEREAS the WRC is currently and has previously been involved in various research, development and innovation projects that are in line with the above, WRC is scientifically recognized for the research work it facilitates and endorses;

AND WHEREAS the deviation contract number DP8456R/2023/24 was approved for the appointment of WRC as the Advisory, Research and Innovation partner on 8 December 2025 in line with the City's Supply Chain Management Bid Adjudication Committee resolution **SCMB 63/12/25**, for the PROVISION OF TECHNICAL ADVISORY, ASSURANCE AND RESEARCH SERVICES REQUIRED TO SUPPORT IMPLEMENTATION OF WATER REUSE AND DESALINATION PROGRAMMES, in the amount of **R71 340 439.91 (Seventy-one million three hundred and forty thousand four hundred and thirty-nine rand and ninety-one cents) (excluding VAT)** and **R82 041 505.90 (Eighty-two million, forty-one thousand, five hundred and five Rand and ninety cents) (including VAT)**, from date of commencement for a period of 10 years subject to the conclusion of a Section 33 of the MFMA process;

AND WHEREAS the Parties are desirous of concluding this **Memorandum of Agreement (“AGREEMENT”)** to establish the parameters of the relationship they wish to develop with each other for their mutual benefit, outlining the roles and responsibilities of each Party;

AND WHEREAS THIS COLLABORATION WILL FOCUS ON THE FOLLOWING PRIORITY AREAS:

- Sharing of knowledge and innovation emanating from research and development in the following areas:
 - Wastewater and Water Quality;
 - Alternate Sources of Water;
 - Climate Resilient Cities;
 - Water Sensitive Design;
 - Water-Energy-Food Nexus;
 - Sanitation and the Circular Economy;
 - Sustainable and Ecological Infrastructure; and
 - Pathways to Green Industrialization.
- Development of advisory platforms and outputs towards improved decision-making and implementation;
- Water and Sanitation innovation collaboration supporting current and new platforms, mechanisms and technologies; and
- Knowledge and innovation products and dissemination in aid of awareness raising and capacity development.

AND WHEREAS the implementation of collaborative projects is applicable under this **Agreement** was developed by the WRC in consultation with the CoCT;

NOW THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1 PARTIES

The Parties to this Contract are:

- 1.1 **The City of Cape Town**, a metropolitan municipality, established in terms of the Local Government: Municipal Structures Act, 117 of 1998, read with the Province of the Western Cape: Provincial Gazette 5588 dated 22 September 2000, as amended (“**the Purchaser**”), herein represented by the **City Manager or his nominee** duly authorised hereto; and
- 1.2 **Water Research Commission**, a statutory public entity with a legal personality established in terms of section 2 of the Water Research Act, 1971 (Act No. 34 of 1971), with its principal place of business situated at [REDACTED]
[REDACTED]
[REDACTED] (“**the WRC**”), herein represented by: [REDACTED] in [REDACTED] capacity as the **CHIEF EXECUTIVE OFFICER**.

2 INTERPRETATION

- 2.1 The headings of the clauses in this **AGREEMENT** are inserted for reference purposes only and shall in no way govern or effect the interpretation of this **AGREEMENT** nor modify or amplify the terms of this **AGREEMENT** or any clause hereof.
- 2.2 Unless the context clearly indicates a contrary intention, an expression which denotes any gender includes the other genders, a natural person includes an artificial person and vice versa, the singular includes the plural and vice versa and the following expressions bear the meanings assigned to them below and cognate expressions bear corresponding meanings, namely: -

“Accounting Officer” means the City Manager of the City of Cape Town (“CoCT”) as contemplated Officer” in section 60 of the Local Government Municipal Finance Management Act 65 of 2003.

“Agreement” means this Memorandum of Agreement, including its Preamble, all clauses, and all Annexures, schedules, addenda and written amendments signed by the Parties from time to time.

“Annexure A” means the Business Plan (Work Plan) with proposed projects and payment schedule (A1, A2 & A3) identified and undertaken by the WRC funded by and on behalf of the CoCT.

“Bank Account” means the bank account as registered in the name of the WRC as its Bank Account for purposes of this **Agreement** and the details of which are as follows:

[REDACTED]

“Confidential Information” means information that (a) relates to the Disclosing Party’s past, present or future research, development, business activities, products, services and/or technical knowledge relating to the Project, and (b) either has been identified in writing as confidential or is of such a nature (or has been disclosed in such a way) that it should be obvious to the other Party that it is claimed as confidential. (As used herein, the Party disclosing Confidential Information is referred to as “the Disclosing Party” and the Party receiving Confidential Information is referred to as “the Recipient” or “the Receiving Party”) and includes, but is not limited in its interpretation to, all Project information and secret knowledge, technical information and specifications, manufacturing techniques, designs, circuit diagrams, instruction manuals, blueprints, electronic artwork, samples, devices, demonstrations, formulae, know-how, information concerning materials, scientific information generally, and other materials of whatever description in which the owner thereof has an interest in being kept confidential including scientific knowledge gathered during the course of research and includes information (whether oral, documentary, magnetic, electronic, graphic or digitised) containing or consisting of information or material of a technical, financial, operational, commercial, administrative or planning nature or in the nature of Intellectual Property of any kind and

relating (wholly or in part) to the Disclosing Party or any of its actual or projected projects, research activities or businesses, including its suppliers, funder's, personnel, students, facilities, assets, financial condition or results, rights, obligations and liabilities. The disclosure and processing of Confidential Information will comply with the POPIA Act and its regulations;

"CoCT"	means the City of Cape Town;
"Funding"	means the total amount (VAT inclusive) made available to the WRC funded by the CoCT for collaborative projects;
"Days"	shall be construed as calendar days unless qualified by the word "business", in which instance a " business day " shall, similarly be construed as any other day than a Saturday, Sunday or public holiday as gazetted by the Government of the Republic of South Africa from time to time;
"Financial Year"	means the financial year beginning on 1 July and ending on 30 June of the following year;
"WRC"	means WATER RESEARCH COMMISSION ;
"MFMA"	Municipal Finance Management Act (Act 56 of 2003);
"MOA"	means this Memorandum of Agreement and includes all Annexures thereto;
"Parties"	means the parties to this Agreement identified in clause 1 and "Party" refers to either one of them as so determined by the context;
"PFMA"	means the Public Finance Management Act, 1999 (Act No. 1 of 1999) as amended; and

“PROJECTS” means research, development, advisory or innovation concepts, proposals or initiatives in support of the CoCT's strategy and the WRC mandate and strategy;

The Annexures to this **AGREEMENT** will form an integral part of the **AGREEMENT**.

Any reference in this **AGREEMENT** to legislation or subordinate legislation is to such legislation or subordinate legislation at the date of signature hereof and as amended or re-enacted from time to time.

- 2.3 Words importing the singular shall include the plural, and vice versa, words importing the masculine gender shall include the feminine and neuter genders, and vice versa, and words importing natural persons shall include legal persons, and vice versa.
- 2.4 If any provision in a definition is a substantive provision conferring rights or imposing obligations on any Party, notwithstanding that it is only in the definition clause, effect shall be given to it as if it were a substantive provision in the body of the **AGREEMENT**.
- 2.5 When any number of days is prescribed in this **AGREEMENT**, same shall be reckoned exclusively of the first and inclusively of the last day, unless the last day falls on a Saturday, Sunday or public holiday, in which case the last day shall be the succeeding day which is not a Saturday, Sunday or public holiday.
- 2.6 Where figures are referred to in numerals and in words, if there is any conflict between the two, the words shall prevail.
- 2.7 Expressions defined in this **AGREEMENT** shall bear the same meanings in Annexures to this **AGREEMENT** which do not themselves contain their own definitions.
- 2.8 Where any term is defined within the context of any particular clause in this **AGREEMENT**, the term so defined, unless it is clear from the clause in question that the term so defined has limited application to the relevant clause, shall bear the meaning ascribed to it for all purposes in terms of this **AGREEMENT**, notwithstanding that, that term has not been defined in this interpretation clause.

2.9 The use of the word "including" followed by a specific example/s shall not be construed as limiting the meaning of the general wording preceding it and the *eiusdem generis* rule shall not be applied in the interpretation of such general wording or such specific examples.

2.10 If there is any conflict between the terms of this **AGREEMENT** and the terms of any Annexure or schedule attached hereto, the terms of this **AGREEMENT** shall apply.

3 APPOINTMENT

3.1 The WRC hereby accepts a research, advisory and innovation collaboration with the CoCT to respond to water security challenges more fully described hereunder.

4 PROJECTS UNDER THE WRC-CoCT COLLABORATION

4.1 The responsibilities of the WRC will be in respect of the CoCT Water and Sanitation Directorate.

4.2 Projects identified at the inception of the collaboration are included in *Annexure A (A1: Water Reuse Phase 2 Proposed Activities – Terms of Reference for an Independent Advisory Panel for the Faure New Water Scheme; A2: Desalination Phase 2 Proposed Activities – Terms of Reference for an Independent Advisory Panel for Desalination), and A3: Research Programme to establish a test bench for the piloting and testing of water reuse process trains)*, however, the budget and deliverables in this AGREEMENT (Annexure A4) is only for implementation of A1 and A2 projects. Project A3 is not provided for under the current MoA. The approved amount of R71 340 439.91 (**Seventy-one million three hundred and forty thousand four hundred and thirty-nine rand and ninety-one cents**) (excluding VAT), equivalent to R82 041 505.90 (**Eighty-two million, forty-one thousand, five hundred and five Rand and ninety cents**) (including VAT), relates exclusively to other projects and expressly excludes Project A3. Any future implementation of Project A3 is conditional upon the approval of a separate and additional budget, which may be sourced from the City of Cape Town or from alternative funding sources, and is not guaranteed to be funded by the City of Cape Town

- 4.3 New collaborative projects identified during the period of the **AGREEMENT** will be costed, funded and initiated as an addendum to this **AGREEMENT**.

5 RESPONSIBILITIES OF THE WRC

- 5.1 The WRC undertakes to comply with the standard principles, policies and procedures of the CoCT as they may be developed, revised or amended and communicated, in writing, to the WRC from time to time. Where amended or revised policies and procedures may have additional cost implications for the WRC, it will be done in consultation with the WRC.
- 5.2 Prior to authorising payment to any appointed specialist, the WRC shall obtain approval from the CoCT Project Manager who is responsible for the said project. Payment will be authorised once the Project Manager is satisfied with the level of service provided and on confirmation that all specified terms and conditions as per *Annexure A4* to this **AGREEMENT**, have been complied with.
- 5.3 As a consequence of the revision of the budgets and funding of the CoCT, the CoCT may on 8 (eight) weeks written notice to the WRC adopt a revised Work Plan covering the remainder of the financial year, provided that the CoCT shall make provision in such revised Work Plan for approved costs and expenses incurred by the WRC and which the WRC has committed itself prior to the revision.
- 5.4 The WRC accepts responsibility for coordinating and managing the implementation of projects and the delivery of the specified outputs and tasks as contemplated in **Annexure A4** (Annexure A4.1: Faure New Water Scheme (Water Reuse) 10 year payment schedule and deliverables and Annexure A4.2: Seawater Desalination Plant 10-year payment schedule and deliverables) to this **AGREEMENT**.
- 5.5 The WRC shall establish the necessary structures for implementing projects in conjunction with the CoCT. In doing so, the WRC shall take into account the employment equity and transformation targets of the CoCT, particularly insofar as they relate to the different levels of management.

- 5.6 The WRC shall comply with such reasonable instructions in writing as the CoCT may issue to the WRC pursuant to a legal duty imposed on the CoCT within the time stipulated in such instructions. Should the WRC be unable to timeously comply with such instructions the WRC shall advise the CoCT, in writing, within a reasonable time of the reason for such inability to comply therewith.
- 5.7 The WRC shall keep records of all decisions related to the CoCT Project, including minutes of all meetings and decisions taken. These records must be accessible to the CoCT upon reasonable request.
- 5.8 The CoCT shall not effect any payment to any service consultant or other service providers engaged by the WRC under collaboration projects unless agreed upon upfront.

6 DURATION OF THIS MOA

- 6.1 This **AGREEMENT** shall commence upon signature by the last signing Party and shall remain in force for a period of 10 years.
- 6.2 At least 3 (three) months prior to the expiry of this **AGREEMENT** either Party may give notice to the other Party of its desire to negotiate a new agreement or extension of the current **AGREEMENT** with similar objectives. The Parties shall negotiate a possible new agreement with a view to finalising such negotiations at least 3 (three) months prior to the expiry of this **AGREEMENT**.

7 FINANCIAL PROCEDURES

- 7.1 The CoCT undertakes to fund collaboration projects with the WRC aligned to the areas of collaboration stated in the preamble.
- 7.2 The WRC and CoCT undertake to identify possible co-funding opportunities aligned to the areas of collaboration stated in the preamble.

- 7.3 A total amount of **R71 340 439.91 (Seventy-one million three hundred and forty thousand four hundred and thirty-nine rand and ninety-one cents) (excluding VAT)** and **R82 041 505.90 (Eighty-two million, forty-one thousand, five hundred and five Rand and ninety cents) (including VAT)**, will be made available by the CoCT for the implementation of projects identified in Annexure A4 of this Project.
- 7.4 As per the annual payment schedule, payments will be made electronically into the Bank Account of the WRC as per Annexure A4.
- 7.5 The WRC will invoice the CoCT in accordance with the payment and deliverable schedule (Annexure A4) and agreed annual planning and reporting;
- 7.6 The WRC shall ring-fence project funding to ensure transparency and management in the event of project changes, allowing for roll overs, flexibility of spend in financial years and reimbursements if required arising from lack of project social acceptance by communities;
- 7.7 The WRC shall endeavor to ensure that the finalisation of projects (related to the technical work required) in terms of Annexure A, is achieved at least 2 (two) months before the termination of this **AGREEMENT**.
- 7.8 The WRC shall not incur expenses exceeding the approved budget transferred, unless prior written approval has been obtained from the CoCT.
- 7.9 No adjustment to the budget relating to the approved Annexure A shall be effected without the prior written approval of the CoCT.
- 7.10 All expenditure and procurement shall be carried out in accordance with the Public Finance Management Act (PFMA) and WRC's procurement procedures, which are in line with the Government Department's Procurement procedures.
- 7.11 As soon as it reasonably appears that the cost shall either overrun or be under the estimates contained in Annexure A, the WRC shall notify the CoCT in writing thereof providing reasons for the planned overspending or under expenditure detailing the amounts involved for approval in line with the CoCT's internal approval processes.

- 7.12 All fruitless, wasteful and irregular expenditure incurred by the WRC outside of Annexure A and the interventions implemented by the WRC to prevent and/or manage such expenditure must be recorded and a detailed report explaining the reasons for the expenditure must be submitted to the CoCT as soon as practicable after the WRC becomes aware thereof.
- 7.13 The WRC shall ensure that it pays all amounts due to specialists, consultants, suppliers, contractors or other parties appointed to carry out functions related to projects per Annexure A, within 30 days of receiving a legitimate invoice from the same.

8 WITHHOLDING OF PAYMENT

- 8.1 Should the WRC fail to perform in terms of this **AGREEMENT**, the CoCT shall be entitled to, after having informed the WRC in writing of such non-performance and after having given 30 (thirty) days' notice, to correct such non-performance and if such non-performance is not corrected, to deduct or disallow management fees to be paid or advanced to the WRC for that portion of the claim which is in dispute, provided that such failure is not due to any act or omission on the part of the CoCT or its employees, agents or contractors.

9 MANAGEMENT FEES

- 9.1 The WRC shall be entitled to claim a management fee, inclusive of VAT, for project management, coordination, governance, reporting and administrative services rendered in terms of this AGREEMENT. The management fee shall be project-specific, shall be expressly itemised and approved in writing as part of each project budget reflected in Annexure A4 (and any approved addendum thereto), and shall be payable only in respect of approved and funded projects.
- 9.2 The aggregate management fee payable to the WRC over the duration of this AGREEMENT shall not exceed ten percent (10%) of the total value of the approved and funded projects, calculated on a pro-rata basis and limited to the applicable period during which services are rendered.

- 9.3 No management fee shall be payable in respect of any project, or any portion thereof, that is suspended, terminated, unfunded, or not implemented in terms of this AGREEMENT.

10 MOVABLE AND IMMOVABLE PROPERTY

- 10.1 The WRC shall acquire no immovable property, vehicles or other items of equipment not directly contemplated in Annexure A of operation, with the funds allocated by the CoCT to the project, unless expressly agreed to in writing by the CoCT.
- 10.2 The CoCT shall retain ownership of all movable property acquired by the WRC on its behalf with funds allocated by the CoCT in terms of this **AGREEMENT** or in connection with any of the Projects. At the termination of this **AGREEMENT** all movable property shall be returned to the CoCT in a reasonable condition excluding fair wear and tear. The WRC will be liable for all losses and shortages not accounted for in a manner acceptable to the CoCT.

11 RECORDS

- 11.1 The WRC shall, with the assistance of the CoCT, keep comprehensive and well-ordered records of all information relating to this **AGREEMENT** and particular project showing time spent, expenses and disbursements as well as books of account, financial records, statements, maps and contracts with SERVICES PROVIDERS.
- 11.2 In order to ensure compatibility and integration with the records of the project, all records shall be kept in a manner and format acceptable to the CoCT.
- 11.3 Authorised officials as well as authorised agents of the CoCT shall at all reasonable times have access to this project as well as all information relating to this **AGREEMENT** and the tasks, whether in hard copy or digital format or otherwise.
- 11.4 The preparation and retention of all books of account, financial statements and records by the WRC shall be in accordance with generally accepted accounting practices in the Republic of South Africa.

12 REPORTING

- 12.1 The WRC shall, with the assistance of the CoCT, provide all reports (technical and administrative) as required by the CoCT in terms of Annexure A, and as agreed at the beginning of the project.
- 12.2 All reports shall be prepared in the format as determined or approved by the CoCT upon initiation of the Project.
- 12.3 The CoCT may request from time-to-time a revised format or content of any report or the manner of reporting. The CoCT shall advise the WRC timeously of any changes in this regard.

Unless advised otherwise the WRC shall, with the assistance of the CoCT furnish the following reports:

- 12.3.1 Bi-annual advisory reports detailing key advisories made should be submitted in electronic format.
- 12.3.2 A preliminary annual report for the project indicating inter alia costs relative to the specified budget in terms of Annexure A as well as reasons for any deviations from such plan shall be provided to the CoCT within two months post the financial year end of the CoCT.

13 AUDITING

- 13.1 The CoCT reserves the right to undertake periodic audits of any operations carried out in terms of this **AGREEMENT**, including any of the projects managed in terms of it, and the records relating thereto. Cash flow implications arising out of an irregularity uncovered by any audit must be dealt with in consultation with the WRC.

14 INFORMATION

- 14.1 The WRC shall furnish the CoCT with such further information as may be periodically requested within the time and in the format stipulated in such request. Should the WRC be unable to comply timeously with such a request, the CoCT shall be advised, by the WRC, in writing, as soon as reasonably possible upon receipt of such request, of the reason for such inability and the potential intervention required to address the deviation and non-compliance.

15 AMENDMENT

- 15.1 This document embodies the entire **AGREEMENT** between the Parties.
- 15.2 No amendment, consensual cancellation, or variation of any provisions of this **AGREEMENT** will be of any force and effect unless its reduced to writing and signed by both Parties.

16 LIABILITY

- 16.1 16.1 Each Party shall be liable for, and indemnifies the other Party against, any claim, loss, damage, cost or expense (including reasonable legal costs) arising from its own unlawful, negligent, grossly negligent or wilful acts or omissions, or those of its employees, agents or subcontractors, in the performance of this Agreement. CoCT shall refund any loss suffered by the WRC as a result of such claims, actions and proceedings instituted against the WRC, including any legal costs, provided that:
- 16.2 The City of Cape Town shall indemnify the Water Research Commission against third-party claims arising directly from the lawful implementation of this Agreement, provided that such claims are not attributable to the negligence, gross negligence or wilful misconduct of the Water Research Commission, its employees, agents or subcontractors, and provided further that the activities giving rise to such claims fall within the approved scope and funded components of this Agreement.

- 16.3 The Water Research Commission shall indemnify the City of Cape Town against any third-party claim arising from the negligent, grossly negligent or wilful acts or omissions of the Water Research Commission, its employees, agents or subcontractors.
- 16.4 Neither Party shall be liable for any indirect, special or consequential loss or damage suffered by the other Party, except to the extent that such loss or damage is caused by that Party's wilful misconduct or gross negligence.
- 16.5 For the avoidance of doubt, no Party shall bear liability for activities, projects or obligations not expressly provided for and funded under this Agreement.

17 CESSION AND ASSIGNMENT

- 17.1 The WRC shall not in any way alienate, encumber or cede any of its rights or interests in terms of this **AGREEMENT** without the prior written consent of the CoCT, which shall not be unreasonably withheld.
- 17.2 The WRC is within its rights to sub-contract pieces of work relevant to this project to external service providers and contractors.
- 17.3 The WRC shall provide all its agreements with contractors and consultants and other service providers for the cessions as provided for in terms of this **AGREEMENT**.
- 17.4 Any cession or assignment agreed to by the CoCT will not relieve the WRC of any obligations with respect to any covenant, condition, or obligation required to be performed by the WRC under this **AGREEMENT**.

18 TERMINATION

- 18.1 Either Party may terminate this **AGREEMENT** by giving 3 (three) months written notice to the other Party.
- 18.2 Either Party may terminate any project or the WRC's management of any project by giving 3 (three) months written notice to the other Party.

- 18.3 Should either Party give notice of termination of this **AGREEMENT**, then, notwithstanding any dispute about the validity or efficacy of such notice, the WRC shall:
- 18.3.1 On demand immediately make available to the CoCT all records, plans, agreement, CDs, maps, accounts, and other information generated in terms of this **AGREEMENT** and renounce any right of retention that it may have; and
- 18.3.2 On demand cede and assign all rights and obligations, which emanate from agreements entered into between the WRC and contractors, consultants or other service providers. The WRC shall remain liable for all obligations and liabilities that it has incurred up and until the date of termination of this **AGREEMENT** or project.
- 18.4 The WRC shall cease all operations on this project when given written notice by the CoCT to that effect.
- 18.5 Upon receipt of notice to cease all operations on a specific project the WRC shall, if so requested by the CoCT, take immediate steps to bring the Project to a halt and to limit expenditure to a minimum.
- 18.6 The WRC shall assist the CoCT in taking over the administration and management of the contracts of this project.
- 18.7 In the case of the termination or suspension of this project or the termination of this **AGREEMENT**:
- 18.7.1 The CoCT shall notify all interested parties of the reasons for such action; and
- 18.7.2 The WRC may recover all approved costs thus far incurred in connection with this project, from the CoCT upon submission of specified and certified claims and all approved costs in connection with all contracts in respect of which the WRC has committed itself and which will continue in force after the termination of such project.
- 18.8 Cancellation or termination of this **AGREEMENT** will not relieve a party of obligations imposed upon such party by statute or regulation or by this **AGREEMENT** prior to its termination.

19 BREACH OF AGREEMENT

19.1 Should the CoCT or the WRC, as the case may be ('the Defaulting Party'):

19.1.1 Commit a breach of any provision of this **AGREEMENT**, and fail to remedy such breach, or if the breach is not capable of remedy, or fail to implement remedial action acceptable to the other party, within fourteen (14) calendar days of receiving a written notice from the other party ("the Aggrieved Party") requiring the Defaulting Party to do so; and

19.1.2 Fail/omit to pay any amount on due date in terms of this **AGREEMENT** and remain in breach for more than 30 (thirty) days after receipt of written notice from the Other Party ("the Aggrieved Party") to do so;

19.1.3 The Aggrieved Party shall be entitled, in addition to its other remedies in law or in terms of this **AGREEMENT**, to cancel this **AGREEMENT** forthwith and without prejudice to its rights to claim damages.

20 FORCE MAJEURE

20.1 Neither Party shall be responsible to the other for failure to perform any of its obligations under this **AGREEMENT**, if such non-performance is caused by acts of God, rain, outages, riots, civil insurrection, acts of a public enemy, accidents, acts of civil or military authority, floods, earthquakes or winds, or similar situations beyond the reasonable control of the Party concerned.

20.2 The Party incapable of performing shall exercise due diligence to shorten the duration of and/or avoid the cause of the inability to perform.

20.3 In the event that the performance of the WRC has been affected on the grounds of Force Majeure, the WRC is to submit a revised Plan, setting out the time required to extend the **AGREEMENT**, if necessary, and cost implications.

21 DISPUTE

21.1 This **AGREEMENT** shall be governed exclusively, in all respects, by and shall be interpreted in accordance with the laws of the Republic of South Africa.

- 21.2 In the event of any dispute arising from or out of this **AGREEMENT**, the Parties shall make every effort to settle such dispute amicably.
- 21.3 If the Parties fail to resolve the dispute within 14 (fourteen) days from the commencement of settlement negotiations referred to in sub-clause 21.2 supra, either Party may refer the dispute for mediation by an independent mediator agreed to by the Parties. Where the mediation fails to resolve the dispute, the mediator shall issue a certificate indicating that the Parties have failed to resolve the dispute.
- 21.4 In the event that the Parties are unable to resolve the dispute and have exhausted all other possible avenues, shall refer such dispute to a single arbitrator in accordance and subject to the provisions of the Arbitration Act, 42 of 1965, or any re-enactment or amendment thereof.

22 APPROVALS

- 22.1 Wherever there is any provision in this **AGREEMENT** which provides for the approval or consent of the CoCT or the WRC, such approval shall not be unreasonably withheld or delayed.

23 WAIVER

- 23.1 The failure of either Party to insist upon the strict performance of any provision of this **AGREEMENT** or to exercise any right, power or remedy consequent upon a breach hereof shall not constitute a waiver by such Party to require strict and punctual compliance with each and every provision of this **AGREEMENT** or estop such party to exercise its rights in terms of this **AGREEMENT**.

24 DOMICILIUM

The Parties choose the following as their respective *domicilia citandi et executandi*:

24.1 CITY OF CAPE TOWN:

Executive Director: Water and Sanitation 5th Floor, Cape Town Civic Centre
12 Hertzog Boulevard, Cape Town, 8001 Tel. No: 021 400 2500
Email:

24.2 THE WRC:

CEO: [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

24.3 The *domicilium citandi et executandi* is chosen for the purpose of giving notice, the payment of any sum, the service of any process and for any other purpose arising from this **AGREEMENT**.

24.4 Any notice in terms of this **AGREEMENT** may be hand delivered to the physical addresses of the Parties, in which event proof of acknowledgement shall be endorsed upon a copy of the notice together with the name of the recipient and date of receipt, or may be sent by registered post, in which event proof of postage issued by the relevant postal authority will serve as proof, or may be transmitted by telefax, in which event the facsimile transmission report will serve as proof of transmission, or may be sent by e-mail, in which event a hardcopy of the electronic record of transmission will serve as proof of transmission.

24.5 Any notice shall be deemed to have been received, until the contrary is proved —

24.5.1 if hand delivered during business hours on a business day, on the day of delivery;

24.5.2 if sent by telefax, one (1) working day after sending of such telefax;

- 24.5.3 if posted by registered post from an address within the Republic of South Africa, on the fourth day after the date of posting.
- 24.5.4 if sent by e-mail, one (1) working day after sending of such e-mail.
- 24.6 Clause 24.4 shall not operate so as to invalidate the giving or receipt of any written notice, which is actually received by the addressee other than by a method referred to in this clause 24.4.
- 24.7 Any notice in terms of or in connection with this **AGREEMENT** shall be valid and effective only if in writing and if received or deemed to have been received by the addressee.

25 SEVERABILITY

- 25.1 In the event that any of the terms of this **AGREEMENT** are found to be invalid, unlawful or unenforceable, such terms will be severable and the remaining clauses remain of full force and effect. If any invalid term is incapable of amendment to render it valid, the Parties agree to negotiate an amendment to remove the invalidity.

26 SIGNATURE

26.1 This **AGREEMENT** is signed by the Parties on a date and at the places recorded herein.

26.2 The persons signing this **AGREEMENT** on behalf of the Parties in a representative capacity warrant their authority to do so and further warrant that the proper resolutions (where applicable) have been passed by the Parties authorising them to do so.

SIGNED on behalf of the Water Research Commission at _____ on this day

_____ of 2026.

AS WITNESSES:

1. _____

FOR AND ON BEHALF OF:

2. _____

THE WATER RESEARCH COMMISSION

SIGNED on behalf of the City of Cape Town at _____ on this day

_____ of 2026.

AS WITNESSES:

1. _____

FOR AND ON BEHALF OF:

2. _____

THE CITY OF CAPE TOWN

ANNEXURE A: BUSINESS PLAN

- ANNEXURE A1 — WATER REUSE PHASE 2 PROPOSED ACTIVITIES - TERMS OF REFERENCE FOR INDEPENDENT ADVISORY PANEL FOR THE FAURE NEW WATER SCHEME
- ANNEXURE A2 — DESALINATION PHASE 2 PROPOSED ACTIVITIES – TERMS OF REFERENCE FOR AN INDEPENDENT ADVISORY PANEL FOR DESALINATION
- ANNEXURE A3 — RESEARCH PROGRAMME TO ESTABLISH THE TEST BENCH FOR THE PILOTING AND TESTING OF WATER REUSE PROCESS TRAINS
- ANNEXURE A4 — FAURE NEW WATER SCHEME (WATER REUSE) AND SEAWATER DESALINATION PLANT IAP PROGRAMME 10 YEAR PAYMENT SCHEDULE AND DELIVERABLES
- ANNEXURE A4.1 — 10 YEAR PAYMENT SCHEDULE AND DELIVERABLES FOR ANNEXURE A1
- ANNEXURE A4.2 — 10 YEAR PAYMENT SCHEDULE AND DELIVERABLES FOR ANNEXURE A2

DP8456: MOA - Annexure A1

**WATER REUSE PHASE 2 PROPOSED ACTIVITIES -
Terms of Reference for an Independent Advisory Panel
for the Faure New Water Scheme**

TERMS OF REFERENCE FOR AN INDEPENDENT ADVISORY PANEL (IAP) FOR THE FAURE NEW WATER SCHEME, CITY OF CAPE TOWN, SOUTH AFRICA

A. Background

The City of Cape Town (the City) approved a new Water Strategy¹, which sets out plans for augmentation of existing water supplies for the City together with a strategic vision guided by five commitments, namely: safe access to water and sanitation; wise use; sufficient, reliable water from diverse sources; shared benefits from regional water resources; and becoming a water sensitive city.

In developing the Cape Town Water Strategy, the City has committed to a “New Water Programme” to augment and diversify the City water supply via inter alia:

- Desalination.
- Groundwater sourced from the Table Mountain Group (TMG) Aquifer.
- Groundwater sourced from the Cape Flats Aquifer and supplemented by managed aquifer recharge with advanced treated wastewater.
- The Faure New Water Scheme (NWS), which will provide purified recycled water to augment the surface water sources that supply the existing Faure Water Treatment Plant (WTP).

The City requires the services of persons with suitable qualifications, expertise, and experience to serve as experts on an Independent Advisory Panel (IAP) to provide guidance for the stakeholder engagement, design, procurement, construction, commissioning, testing, validation, and operation phases of the Faure NWS. The City has entered a ten-year partnership with the South African Water Research Commission (WRC) to establish, coordinate and administer the IAP for the Faure NWS on its behalf, and to provide associated reporting, advisory and research services. This document prescribes the Terms of Reference for the IAP.

B. The Faure New Water Scheme, City of Cape Town

The Faure NWS is designed for an ultimate capacity of 100 ML/d and will be equipped initially to produce 70 ML/d, to augment the surface water that supplies the existing 500 ML/d Faure WTP. The water would be sourced from the existing Zandvliet Wastewater Treatment Works (WWTW). The upgrading of this WWTW and the extension of its capacity to 90 ML/d has recently been completed. A further upgrade is planned to deal with the anticipated growth in flows to the WWTW. The City has also recently commenced the upgrading of the nearby Macassar WWTW, from where additional flow may be sourced in future.

The treated wastewater will be purified in a new advanced water purification plant sited at the existing Faure WTP campus, with some pre-treatment, storage and pumping facilities sited at Zandvliet WWTW. The water produced by this plant will blend with surface water to augment the raw water feed to Faure WTP at a maximum blend ratio of 33%. The planning and design for the advanced water purification plant and supporting infrastructure is approximately 90 percent complete.

The City’s bulk water distribution network will be upgraded to allow flexibility to distribute the drinking water from the Faure WTP broadly across the City.

¹ Cape Town’s Water Strategy.
<https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies,%20plans%20and%20frameworks/Cape%20Town%20Water%20Strategy.pdf>

The City proposes to invite construction tenders for the advanced water purification plant and supporting infrastructure by June 2024, to commence construction in early 2026, and to commission the scheme in 2029. The City is carrying out a public engagement program, and has undertaken numerous consultations with key government, institutional, academic, religious, and industry stakeholders.

C. Composition of the IAP

It is intended that the members of the IAP constitute a distinguished group of engineers, scientists, and practitioners, who are nationally and internationally recognized experts in their respective fields, in one or more of the following disciplines in the context of potable water reuse:

- Public engagement and acceptance of water reuse, and related communication, social and behavioural sciences.
- Environmental regulation compliance.
- Water and wastewater engineering, including design, multi-barrier system reliability, treatment technology (especially of carbon-based systems and advanced water purification), process monitoring and control, process validation, sustainability, and residuals management.
- Water safety planning, including human health risk assessment, drinking water quality objectives, development and implementation of health-based targets.
- Microbiology and microbiological risk assessment.
- Micro-contaminant chemicals, unregulated and emerging contaminants, and the monitoring and treatment of these.
- Toxicology and water-related epidemiology.
- Plant operation and maintenance, particularly in the context of advanced water purification, including setting, complying with and enforcing contractual objectives, setting up and approving of operation and maintenance protocols and monitoring of compliance.

Further criteria necessary for an expert to serve on the proposed IAP also include:

- Demonstrated credentials and disciplinary expertise in one or more of the abovementioned disciplines.
- Willingness to commit time and contribute to achieving the objectives of the IAP as envisaged by the City.
- Demonstrated ability to work constructively and effectively on such panels or committees, cooperating with the team to achieve a shared goal.
- Background and experience that would contribute to the diversity and depth of perspectives on the IAP, such as geographical, social, cultural, educational and vocational backgrounds, and professional affiliations.

The secretariat role of the IAP will be provided by the WRC in consultation with the City.

D. Roles and Responsibilities of IAP Members

The City's objective in establishing the IAP is for it to support the promotion of the transparent development of potable water reuse, through the implementation of the Faure NWS, in a manner that enhances public health through the appropriate application of science, engineering and related best practices. The IAP members will thus provide expert scientific, technical, engineering, and project implementation advice, as appropriate, at a level expected of leading experts, in disciplines integral to the Faure NWS. The IAP members will be required to review project documentation; participate in scheduled, ad hoc and working sub-group

meetings; and to provide advice and support in response to questions raised by the City and its engineering team.

The IAP is required to provide expert advice and independent review in respect of the following, with individual members contributing according to their specific area of expertise:

- The stakeholder and public engagement programme, including providing recommendations for additional interventions to support and justify public acceptance of potable water reuse.
- The Faure NWS objectives, approach, and design, with a specific focus on public health.
- Source, intermediate and treated water quality criteria, and the related water treatment objectives during design and operational phases.
- Water safety planning.
- Contractual documentation for construction and operation and maintenance contracts.
- Commissioning, testing and validation protocols.
- Operation and maintenance protocols, including optimisation and performance of the advanced water purification plant, and an enhanced sewershed monitoring program.
- The water quality sampling and testing program, from planning through to operational phase, including in-line, on-site and independent laboratory aspects, as well as ensuring compliance to national and international water quality standards.
- Needs for additional planning or research to support the implementation of the Faure NWS.

E. Method of Operation of the IAP

The initial term of office of the IAP will be three years. Thereafter, the term of office of individual members will be reviewed annually and if required for the prevailing needs of the project, renewed by agreement of the member and the WRC in consultation with the City. The IAP will typically operate as follows:

- One in-person workshop will be held in Cape Town each year to discuss a spectrum of topics pertinent to the project, and to allow a curated opportunity for the IAP members to provide specialist advice and feedback.
- Occasional meetings will be held to discuss specific topics and allow the IAP members to provide related advice and feedback. It is envisaged that these meetings will be facilitated virtually and will each typically last half a day or less.
- Working groups made up of specific members of the IAP may be constituted by the WRC in consultation with the City from time to time, to review specific aspects of the project and provide associated specialist advice and feedback. For these, a working group chair may be appointed by the WRC, to arrange and chair meetings, and to provide collated written feedback and records of meetings. It is envisaged that these meetings will be facilitated virtually and will typically last half a day or less.
- Reading and commenting on project documentation in preparation for the various workshops and meetings, and in instances where specific review is requested by the City and its project team.
- Providing remote ad hoc advice when requested by the City and its project team.
- The WRC will, in consultation with the City, appoint one of the IAP members as co-chair of the IAP. The co-chair will assist the WRC and the City in planning the IAP activities, preparing meeting agendas, chairing of meetings, and coordinating IAP member feedback and advice.
- The City will provide a *water reuse programme leader*, who will:
 - Represent the City in consultations with the WRC and the IAP co-chair and the working group chairs.
 - Coordinate the work and interactions of the IAP and the City's project and operations teams.
 - Guide the development of a programme for the IAP activities.

- Set the topics to be discussed at the various meetings.
- Prescribe documents to be reviewed by specific members of the IAP.
- Request ad hoc advice from IAP members.
- Assist in chairing of meetings.

The format of the in-person workshops and the occasional meetings, and the IAP members required to attend each of these, will be determined by the WRC in consultation with the City, taking account of the stage of the project, the topics to be addressed, the advice sought, and the available budget.

F. Time Commitment of the IAP Members

As a provisional guideline, it is expected that members of the IAP will need to allocate the following time per year for the initial term of office:

- 5 days (40 hours) for the annual in-person workshop, which includes international travel time where required.
- 1 day (8 hours) for the occasional meetings (i.e., 2 meetings).
- 2 days (16 hours) for the working group meetings (i.e., 4 meetings). For working group chairs, this may increase to 4 days (32 hours) to allow for preparing for, coordinating, and documenting meetings.
- 6 days (48 hours) for reading and commenting on project documentation.
- 1 day (8 hours) for providing ad hoc advice.
- A provisional guideline total of 15 days (120 hours), and 17 days (136 hours) for working group chairs.

G. Reporting

The IAP members and where applicable, working group chairs, will assist the WRC and the City's project team to document and track feedback and advice. The WRC will prepare an annual report to the City, listing the IAP engagements for that year, and detailing the key feedback and advice.

H. Context of Advice by the IAP

The IAP is to carry out its duties in good faith and members will not be held professionally liable for their advice. The City commits to considering the advice in the context of its broader duties, plans, commitments, and protocols, alongside guidance from other internal and external advisors, and will execute its judgement as to if and how to act on the advice.

I. Contracting and Remuneration

Members of the IAP will be appointed by the WRC after consultation with the City, and a Letter of Appointment and Honorarium Agreement will be provided to each member. The IAP members are expected to carry out their duties as agreed, giving particular attention to matters relevant to the prevailing stage of the implementation of the Faure NWS, the perspective of their area of expertise, and the City's objective for establishing the IAP. The remuneration of IAP members in terms of the Honorarium Agreement will be per directive from the WRC in consultation with the City, and will be in the order of:

- ZAR 1800² per hour of approved contribution from members resident in South African or Namibia.
- ZAR 3500³ per hour of approved contribution from members resident in overseas countries.

² The amount shown is a provisional guideline. The actual amount must be agreed with the City before the WRC appoints the IAP members. The contract that the WRC signs with each IAP member must define an appropriate annual escalation of the hourly rate.

³ The amount shown is a provisional guideline and is nominally equivalent to US\$ 180. The actual amount must be agreed with the City before the WRC appoints the IAP members. The contract that the WRC signs with each IAP member must define an appropriate annual escalation of the hourly rate.

DP8456: MOA - Annexure A2

**DESALINATION PHASE 2 PROPOSED ACTIVITIES -
Terms of Reference for an Independent Advisory Panel
for Desalination**

TERMS OF REFERENCE FOR AN INDEPENDENT ADVISORY PANEL (IAP) FOR DESALINATION, CITY OF CAPE TOWN, SOUTH AFRICA

A. Background

The City of Cape Town (the City) approved a new Water Strategy¹, which sets out plans for augmentation of existing water supplies for the City together with a strategic vision guided by five commitments, namely: safe access to water and sanitation; wise use; sufficient, reliable water from diverse sources; shared benefits from regional water resources; and becoming a water sensitive city.

In developing the strategy, the City has committed to a “New Water Programme” to augment and diversify their water supply. Commitment 3 of the Water Strategy focuses on ensuring sufficient, reliable water from diverse sources through building new capacity to deliver approximately 300 million litres per day (ML/d) over the next ten years (the **Committed Program**) via:

- Desalination.
- Groundwater sourced from the Table Mountain Group (TMG) Aquifer.
- Groundwater sourced from the Cape Flats Aquifer and supplemented by managed aquifer recharge with advanced treated wastewater.
- The Faure New Water Scheme (NWS), which will provide purified recycled water to augment the surface water sources that supply the existing Faure Water Treatment Plant (WTP).

Thereafter, and in suitable increments, further planned “new water” resource developments are to be implemented in a way that is adaptable and robust to changes in circumstances (the **Adaptable Program**).

The City requires the services of persons with suitable qualifications, expertise, and experience to serve as experts on an Independent Advisory Panel (IAP) to provide guidance for the stakeholder engagement, design, procurement, construction, commissioning, testing, validation, and operation phases of desalination implementation. The City has entered a ten-year partnership with the South African Water Research Commission (WRC) to establish, coordinate and administer the IAP for desalination on its behalf, and to provide associated reporting, advisory and research services. This document prescribes the Terms of Reference for the IAP.

B. Seawater Desalination, City of Cape Town

The City has adopted a structured set of objectives towards the implementation of desalination at scale. There are 5 committed objectives towards achieving this, as shown in the following table.

¹ Cape Town's Water Strategy.
<https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies,%20plans%20and%20frameworks/Cape%20Town%20Water%20Strategy.pdf>

No.	OBJECTIVE	STATUS (@Nov 2023)	PHASE
1	Site Selection Investigations, Screening and Seawater Quality Monitoring	Complete	Pre-Feasibility
2	Preferred Site Selection, Detailed Technical Investigations & Conceptual Design	95% Complete	Feasibility
3	Determine the Optimal Project Finance, Procurement & Delivery Method	Recently Commenced	
4	Environmental Impact Assessment	Recently Commenced	
5	Delivery of first water		Execution

Through the **Committed Program** 50-70 ML/d of sea water desalination capacity is to be implemented by 2030. Two potential locations have been identified as possible sites to implement a plant at this scale. The first at a site along the North West Coast of the City at Witzands, and the second within the Cape Town Port Industrial Park, referred to as the PIP site. These two sites are being comparatively assessed as options for Location 1 desalination implementation by 2030. Despite many technical and cost benefit advantages of the PIP site, it is a constrained site. As such it can only support possible implementation to a maximum capacity of 70 ML/d.

Should the PIP Site be selected for Location 1 of choice, then subsequent implementation of further desalination phases (under the City's **Adaptable Program**) would need to be accommodated at the Witzands site (or an alternative), referred to as Location 2. These sites must offer adequate land space for phased implementation beyond 2030, currently anticipated to add an additional 180ML/d to the 50-70 ML/d from Location 1 by 2040, guided by the City's ever-evolving Bulk Water Masterplan. This plan will inform what infrastructure upgrades will be necessary to best integrate the product water from the desalination plants into the bulk water distribution network.

C. Composition of the IAP

It is intended that the members of the IAP constitute a distinguished group of engineers, scientists, and practitioners, who are nationally and internationally recognized experts in their respective fields, in one or more of the following disciplines, in the context of sea water desalination:

- Public engagement and acceptance of alternative new water sources, and related communication, social and behavioural sciences.
- Water safety planning, including human health risk assessment, drinking water quality objectives, development, and implementation of health-based targets.
- Water treatment, microbiology, water quality monitoring, treatment plant optimization, water quality management and development of drinking water standards.
- Sustainable water resources development, environmental and heritage protection.
- Desalination treatment processes, plant design and planning, treatment technology (notably of membrane-based systems), process monitoring and control, process validation, sustainability, and residuals management.
- Expertise in the implementation of large-scale desalination plants, latest technological advancements, including membrane technology, and lessons learned on international desalination projects.

- Development of desalination plants, knowledge of the desalination market, desalination equipment, evolution of technology, setting up and approving of operation and maintenance protocols and monitoring of compliance.
- Marine and coastal engineering, including expertise in marine constructability, marine pipeline installations, marine construction methods, associated project management and project delivery.
- Coastal and port engineering, coastal structures, sea water intakes, dredging systems, beach protection and the numerical modelling of associated hydraulic structures.
- Implementation of desalination plants, approaches and strategy to implementation, coordination with design and procurement entities, management of contractor teams, experience in commissioning and testing.
- Desalination construction expertise, including constructability, installation, construction methods and project delivery.
- Economics of bulk water supply schemes, project procurement and financing, cost benefit analysis, evaluation of bids and performance for infrastructure projects.
- Specialist marine biological expertise in coastal zones and related marine issues, conservation planning, monitoring and assessment of human impacts on estuarine, rocky shore and sandy beach ecosystems, as well as coastal and littoral zone processes, aquaculture, and fisheries.

Further criteria necessary for an expert to serve on the proposed IAP also include:

- Demonstrated credentials and disciplinary expertise in one or more of the abovementioned disciplines.
- Willingness to commit time and contribute to achieving the objectives of the IAP as envisaged by the City.
- Demonstrated ability to work constructively and effectively on such panels or committees, cooperating with the team to achieve a shared goal.
- Background and experience that would contribute to the diversity and depth of perspectives on the IAP, such as geographical, social, cultural, educational and vocational backgrounds, and professional affiliations.

The secretariat role of the IAP will be provided by the WRC in consultation with the City.

D. Roles and Responsibilities of IAP Members

The City's objective in establishing the IAP is for it to support the promotion of the transparent development of desalination, through the implementation of projects, in a manner that enhances public health through the appropriate application of science, engineering and related best practices. The IAP members will thus provide expert scientific, technical, engineering, and project implementation advice, as appropriate, at a level expected of leading experts, in disciplines integral to desalination. The IAP members will be required to review project documentation; participate in scheduled, ad-hoc and working sub-group meetings; and to provide advice and support in response to questions raised by the City and its engineering team.

The IAP is required to provide expert advice and independent review in respect of the following, with individual members contributing according to their specific area of expertise:

- The stakeholder and public engagement programme, including providing recommendations for additional interventions to support and justify public acceptance of desalination.
- The desalination objectives, approach, and design, with a specific focus on public health.
- Source and treated water quality criteria, and the related water treatment objectives during design and operational phases.

- Water safety planning.
- Contractual documentation for construction and operation and maintenance contracts.
- Commissioning, testing and validation protocols.
- Operation and maintenance protocols, including optimisation and performance of the desalination plant/s.
- The sea water quality sampling and testing program, from planning through to operational phase, including in-line, on-site and independent laboratory aspects, as well as ensuring compliance to national water quality standards.
- Needs for additional planning or research to support the implementation of desalination.

E. Method of Operation of the IAP

The initial term of office of the IAP will be three years. Thereafter, the term of office of individual members will be reviewed annually and if required for the prevailing needs of the project, renewed by agreement of the member and the WRC in consultation with the City. The IAP will typically operate as follows:

- In-person workshops will be held in Cape Town to discuss a spectrum of topics pertinent to the project, and to allow a curated opportunity for the IAP members to provide specialist advice and feedback.
- Occasional meetings will be held to discuss specific topics and allow the IAP members to provide related advice and feedback. It is envisaged that these meetings will be facilitated virtually and will each typically last half a day or less.
- Working groups made up of specific members of the IAP may be constituted by the WRC in consultation with the City from time to time, to review specific aspects of the project and provide associated specialist advice and feedback. For these, a working group chair may be appointed by the WRC, to arrange and chair meetings, and to provide collated written feedback and records of meetings. It is envisaged that these meetings will be facilitated virtually and will typically last half a day or less.
- Reading and commenting on project documentation in preparation for the various workshops and meetings, and in instances where specific review is requested by the City and its project team.
- Providing remote ad-hoc advice when requested by the City and its project team.
- The WRC will, in consultation with the City, appoint one of the IAP members as co-chair of the IAP. The co-chair will assist the WRC and the City in planning the IAP activities, preparing meeting agendas, chairing of meetings, and coordinating IAP member feedback and advice.
- The City will provide a *desalination programme leader*, who will:
 - Represent the City in consultations with the WRC and the IAP co-chair and the working group chairs.
 - Coordinate the work and interactions of the IAP and the City's project and operations teams.
 - Guide the development of a programme for the IAP activities.
 - Set the topics to be discussed at the various meetings.
 - Prescribe documents to be reviewed by specific members of the IAP.
 - Request ad hoc advice from IAP members.
 - Assist in chairing of meetings.

The format of the in-person workshops and the occasional meetings, and the IAP members required to attend each of these, will be determined by the WRC in consultation with the City, taking account of the stage of the project, the topics to be addressed, the advice sought, and the available budget.

F. Time Commitment of the IAP Members

As a provisional guideline, it is expected that members of the IAP will need to allocate the following time per year for the initial term of office:

- 7 days (56 hours) for the annual in-person workshop, which includes international travel time where required.
- 1 day (8 hours) for the occasional meetings (i.e., 2 meetings).
- 2 days (16 hours) for the working group meetings (i.e., 4 meetings). For working group chairs, this may increase to 4 days (32 hours) to allow for preparing for, coordinating, and documenting meetings.
- 4-16 days (32-128 hours) for reading and commenting on allocated chapters of project documentation.
- 1 day (8 hours) for providing ad hoc advice.
- A provisional guideline total of 15 days (120 hours), and 17 days (136 hours) for working group chairs.

G. Reporting

The IAP members and where applicable, working group chairs, will assist the WRC and the City's project team to document and track feedback and advice. The WRC will prepare an annual report to the City, listing the IAP engagements for that year, and detailing the key feedback and advice.

H. Context of Advice by the IAP

The IAP is to carry out its duties in good faith and members will not be held professionally liable for their advice. The City commits to considering the advice in the context of its broader duties, plans, commitments, and protocols, alongside guidance from other internal and external advisors, and will execute its judgement as to if and how to act on the advice.

I. Contracting and Remuneration

Members of the IAP will be appointed by the WRC after consultation with the City, and a Letter of Appointment and Honorarium Agreement will be provided to each member. The IAP members are expected to carry out their duties as agreed, giving particular attention to matters relevant to the prevailing stage of the implementation of desalination, the perspective of their area of expertise, and the City's objective for establishing the IAP. The remuneration of IAP members in terms of the Honorarium Agreement will be per directive from the WRC in consultation with the City, and will be in the order of:

- ZAR 1800² per hour of approved contribution from members resident in South African or Namibia.
- ZAR 3500³ per hour of approved contribution from members resident in overseas countries.

² The amount shown is a provisional guideline. The actual amount must be agreed with the City before the WRC appoints the IAP members. The contract that the WRC signs with each IAP member must define an appropriate annual escalation of the hourly rate.

³ The amount shown is a provisional guideline and is nominally equivalent to US\$ 180. The actual amount must be agreed with the City before the WRC appoints the IAP members. The contract that the WRC signs with each IAP member must define an appropriate annual escalation of the hourly rate.

DP8456: MOA - Annexure A3

**RESEARCH PROGRAMME TO ESTABLISH THE TEST BENCH FOR THE PILOTING AND TESTING OF
WATER REUSE PROCESS TRAINS**

RESEARCH PROGRAMME TO ESTABLISH TEST BENCH FOR THE PILOTING AND TESTING OF WATER REUSE PROCESS TRAINS

BACKGROUND

The advanced water purification technology proposed for the Faure NWS includes the following key processes in the process train:

Media biofiltration – ozonation – media granular activated carbon biofiltration – granular activated carbon adsorption-filtration – membrane ultrafiltration – ultraviolet light advanced oxidation – all followed by conventional treatment at Faure WTP including: sedimentation – media filtration – disinfection – stabilisation.

This process train for advanced water purification is broadly referred to as a carbon-based train. It was selected in preference to the membrane-based train of the Demonstration Plant for several reasons, including:

- Reverse osmosis (RO) membranes remove and concentrate contaminants in a brine stream, which must then be returned to the environment with significant consequences. The brine stream discharge volume is relatively insignificant for the small Demonstration Plant but would be far more substantial for the full-scale Faure NWS, requiring a formal marine outfall structure into a sensitive marine environment. The carbon-based process train proposed for the Faure NWS rather destroys and removes contaminants and hence has a net positive result for the environment, with no marine outfall required.
- The RO membrane-based train also removes molecules from the water that are not harmful to human health - some are in fact beneficial - and need not be removed, thus requiring a re-mineralisation step. Conversely, a carbon-based train targets removal of the contaminants only.
- A carbon-based train relies on treatment “in depth” as opposed to a “thin barrier”.
- The construction and operating cost, and the energy input are substantially less for a carbon-based train, resulting in a more sustainable solution with a lower carbon footprint.

The need for research support and pilot testing/demo is well-known in many water reuse schemes, such as in Windhoek (which has been operating for 52 years) currently makes use of a carbon-based train. This technology type was also compared and selected as preferred, over RO membrane-based trains for the SWIFT reuse project in Virginia Beach, USA, following extensive pilot testing. Carbon-based processes are used in many other advanced water purification facilities and applications. Results from these, as well as from many pilot test units, are widely reported in literature. Notwithstanding that carbon-based treatment is established, and that related data is available, there would be value gained in conducting pilot testing of the technology on the actual source water to be treated for the proposed Faure NWS.

The envisages research support presents a valuable opportunity to implement pilot testing in support of the proposed Faure NWS. Such testing would assist in:

- refining design parameters,
- verifying expected performance data, and
- establishing and preparing the operation protocols.

This would enable the City to proceed with the implementation of the Faure NWS with greater confidence. The potential gains could lead to overall project cost savings that far outweigh the cost of pilot testing.

Furthermore, the pilot testing presents an opportunity for building cooperation with academia and other research organisations, which would benefit the project, build credibility that the City is carrying out the necessary due diligence, and strengthen support for the City's new Water Strategy. Whilst the cost estimate provided allows for a single postgraduate student to be involved in the pilot testing, there is certainly opportunity for meaningful involvement of more than one.

The Faure NWS will profile the City of Cape Town as a leading city in the sustainable, energy efficient and environmentally beneficial use of water, and in re-thinking how we relate to and steward water. The project will attract, and in fact already is attracting, the attention of the world in the potable reuse industry. Taking advantage of the opportunity to implement pilot testing is commensurate with the significance of the project and the relatively small cost would be a well spent investment.

RESEARCH PROGRAMME OBJECTIVES

The objectives of this component is to:

- Establish research programme to Faure Reuse scheme as a support test bench analysis of pilot process trains
- Establish a facility which will allow rigorous scientific assessment and validation of various process trains which will support future design and optimisation of operations
- A national laboratory to support water reuse science and research for the country and the region
- Provide strategic operational and design advice

NB: The budget and detailed scope of this component will be established by the WRC, CoCT and other interested partners once funding is secured. The intention is to establish a sophisticated water reuse research laboratory at the Faure Treatment Plant. The research programme will be managed and run the WRC, with requirements and needs of the COCT and then expanded to needs of the country.



ANNEXURE A4: Water Reuse (Faure New Water Scheme) and Seawater Desalination Plant IAP programme 10 year payment schedule and deliverables

Budget Summary of Water Reuse (Faure New Water Scheme) and Seawater Desalination Plant IAP programme over 10 years

	Budget Year 26/27	Budget Year 27/28	Budget Year 28/29	Budget Year 29/30	Budget Year 30/31	Budget Year 31/32	Budget Year 32/33	Budget Year 33/34	Budget Year 34/35	Budget Year 35/36	Total Over 10 Years
Water reuse (excl. 15% VAT)	R 2 716 948,48	R 2 890 943,10	R 2 996 857,90	R 3 110 933,77	R 3 234 450,95	R 3 368 223,03	R 3 513 135,94	R 3 670 154,48	R 3 840 329,59	R 4 024 806,12	R 33 366 783,36
Desalination (excl. 15% VAT)	R 3 133 414,48	R 3 315 750,66	R 3 430 507,51	R 3 553 955,96	R 3 687 408,07	R 3 831 711,18	R 3 987 786,97	R 4 156 638,18	R 4 339 355,92	R 4 537 127,62	R 37 973 656,55
Total Programme (excl. 15% VAT)	R 5 850 362,96	R 6 206 693,76	R 6 427 365,41	R 6 665 889,72	R 6 921 859,02	R 7 199 934,21	R 7 500 922,91	R 7 826 791,67	R 8 179 685,51	R 8 561 933,74	R 71 340 439,92
VAT	R 877 554,44	R 931 004,06	R 964 104,81	R 999 883,46	R 1 038 278,85	R 1 079 990,13	R 1 125 138,44	R 1 174 018,90	R 1 226 952,83	R 1 284 290,06	R 10 701 065,99
Total (Incl. 15% VAT)	R 6 727 917,40	R 7 137 697,82	R 7 391 470,22	R 7 665 773,18	R 7 960 137,87	R 8 279 924,35	R 8 626 061,35	R 9 000 811,57	R 9 406 638,33	R 9 846 223,81	R 82 041 505,90





ANNEXURE A4.1: Water Reuse (Faure New Water Scheme) 10 year payment schedule and deliverables

	Unit	Budget Year 26/27	Budget Year 27/28	Budget Year 28/29	Budget Year 29/30	Budget Year 30/31	Budget Year 31/32	Budget Year 32/33	Budget Year 33/34	Budget Year 34/35	Budget Year 35/36	Total
HR	Sum	R 642 591,23	R 798 403,53	R 875 037,69	R 958 306,28	R 1 049 498,70	R 1 149 369,00	R 1 258 742,95	R 1 378 524,93	R 1 509 705,36	R 1 653 368,93	
Sub-total A		R 642 591,23	R 798 403,53	R 875 037,69	R 958 306,28	R 1 049 498,70	R 1 149 369,00	R 1 258 742,95	R 1 378 524,93	R 1 509 705,36	R 1 653 368,93	R 11 273 548,61
Operational Costs												
Annual in-person event workshops/ meetings in Cape Town 5 day back to back. an in person collaborate review workshop (think tank) package (IAP members, Project team (WRC, PSP, CCT, & CCT delegates) with site visits	Provisional Sum	R 125 000,00	R 132 500,00	R 140 450,00	R 148 877,00	R 157 809,62	R 167 278,20	R 177 314,89	R 187 953,78	R 199 231,01	R 211 184,87	R 1 647 599,37
Local/ Regional Travel to Cape Town/ S&T for 9 Local/ Regional IAP members (including accommodation) and 2 WRC officials	Provisional Sum	R 224 100,00	R 237 546,00	R 251 798,76	R 266 906,69	R 282 921,09	R 299 896,35	R 317 890,13	R 336 963,54	R 357 181,35	R 378 612,23	R 2 953 816,15
International Travel to Cape Town/ S&T for 3 international IAP members (including accommodation)	Provisional Sum	R 220 800,00	R 234 048,00	R 248 090,88	R 262 976,33	R 278 754,91	R 295 480,21	R 313 209,02	R 332 001,56	R 351 921,65	R 373 036,95	R 2 910 319,52
Local/ Regional Honorariums for 7 Appointed IAP members	Sum	R 1 008 000,00	R 1 008 000,00	R 1 008 000,00	R 1 008 000,00	R 1 008 000,00	R 1 008 000,00	R 1 008 000,00	R 1 008 000,00	R 1 008 000,00	R 1 008 000,00	R 10 080 000,00
International Honorariums for 3 Appointed IAP members	Sum	R 512 000,00	R 512 000,00	R 512 000,00	R 512 000,00	R 512 000,00	R 512 000,00	R 512 000,00	R 512 000,00	R 512 000,00	R 512 000,00	R 5 120 000,00
Disbursements: (including special PPE where required)	Provisional Sum	R 15 000,00	R 15 900,00	R 16 854,00	R 17 865,24	R 18 937,15	R 20 073,38	R 21 277,79	R 22 554,45	R 23 907,72	R 25 342,18	R 197 711,92
Sub-total B		R 2 104 900,00	R 2 139 994,00	R 2 177 193,64	R 2 216 625,26	R 2 258 422,77	R 2 302 728,14	R 2 349 473,83	R 2 399 473,34	R 2 452 241,74	R 2 508 176,24	R 22 909 446,96
Contingency (15%)		R 315 735,00	R 320 999,10	R 326 579,05	R 332 493,79	R 338 763,42	R 345 409,22	R 352 453,77	R 359 921,00	R 367 836,26	R 376 226,44	R 3 436 417,04
Project Total (incl. VAT)		R 3 063 226,23	R 3 259 396,63	R 3 378 810,38	R 3 507 425,32	R 3 646 684,89	R 3 797 506,36	R 3 960 888,56	R 4 137 919,27	R 4 329 783,36	R 4 537 771,61	R 37 619 412,61
Management Fee (2%)		R 61 264,52	R 65 187,93	R 67 576,21	R 70 148,51	R 72 933,70	R 75 950,13	R 79 217,77	R 82 758,39	R 86 595,67	R 90 755,43	R 752 388,25
Total (Incl. VAT)		R 3 124 490,75	R 3 324 584,57	R 3 446 386,58	R 3 577 573,83	R 3 719 618,59	R 3 873 456,49	R 4 040 106,33	R 4 220 677,66	R 4 416 379,03	R 4 628 527,04	R 38 371 800,86
Total (excl. 15% VAT)		R 2 716 948,48	R 2 890 943,10	R 2 996 857,90	R 3 110 933,77	R 3 234 450,95	R 3 368 223,03	R 3 513 135,94	R 3 670 154,48	R 3 840 329,59	R 4 024 806,12	R 33 366 783,36
Payment Schedule Year (excl. 15% VAT)												
Progress Report 1		R 905 649,49	R 963 647,70	R 998 952,63	R 1 036 977,92	R 1 078 150,32	R 1 122 741,01	R 1 171 045,31	R 1 223 384,83	R 1 280 109,86	R 1 341 602,04	
Progress Report 2		R 905 649,49	R 963 647,70	R 998 952,63	R 1 036 977,92	R 1 078 150,32	R 1 122 741,01	R 1 171 045,31	R 1 223 384,83	R 1 280 109,86	R 1 341 602,04	
Progress Report 3		R 905 649,49	R 963 647,70	R 998 952,63	R 1 036 977,92	R 1 078 150,32	R 1 122 741,01	R 1 171 045,31	R 1 223 384,83	R 1 280 109,86	R 1 341 602,04	



ANNEXURE A4.2: Seawater Desalination Plant 10 year payment schedule and deliverables

	Unit	Budget Year 26/27	Budget Year 27/28	Budget Year 28/29	Budget Year 29/30	Budget Year 30/31	Budget Year 31/32	Budget Year 32/33	Budget Year 33/34	Budget Year 34/35	Budget Year 35/36	Total Project
HR	Provisional Sum	R 642 591,23	R 798 403,53	R 875 037,69	R 958 306,28	R 1 049 498,70	R 1 149 369,00	R 1 258 742,95	R 1 378 524,93	R 1 509 705,36	R 1 653 368,93	R 11 273 548,61
Sub-total A		R 642 591,23	R 798 403,53	R 875 037,69	R 958 306,28	R 1 049 498,70	R 1 149 369,00	R 1 258 742,95	R 1 378 524,93	R 1 509 705,36	R 1 653 368,93	R 11 273 548,61
Operational Costs												
Annual in-person event workshops/ meetings in Cape Town 5 day back to back. an in person collaborate review workshop (think tank) package (IAP members, Project team (WRC, PSP, CCT, & CCT delegates) with site visits	Provisional Sum	R 125 000,00	R 132 500,00	R 140 450,00	R 148 877,00	R 157 809,62	R 167 278,20	R 177 314,89	R 187 953,78	R 199 231,01	R 211 184,87	R 1 647 599,37
Local/ Regional Travel to Cape Town/ S&T for 10 Local/ Regional IAP members (including accommodation) and 2 WRC officials	Provisional Sum	R 276 000,00	R 292 560,00	R 310 113,60	R 328 720,42	R 348 443,64	R 369 350,26	R 391 511,27	R 415 001,95	R 439 902,07	R 466 296,19	R 3 637 899,40
International Travel to Cape Town/ S&T for 4 international IAP members (including accommodation)	Provisional Sum	R 305 200,00	R 323 512,00	R 342 922,72	R 363 498,08	R 385 307,97	R 408 426,45	R 432 932,03	R 458 907,96	R 486 442,43	R 515 628,98	R 4 022 778,62
Local/ Regional Honorariums for 8 Appointed IAP members	Sum	R 1 152 000,00	R 1 152 000,00	R 1 152 000,00	R 1 152 000,00	R 1 152 000,00	R 1 152 000,00	R 1 152 000,00	R 1 152 000,00	R 1 152 000,00	R 1 152 000,00	R 11 520 000,00
International Honorariums for 4 Appointed IAP members	Sum	R 640 000,00	R 640 000,00	R 640 000,00	R 640 000,00	R 640 000,00	R 640 000,00	R 640 000,00	R 640 000,00	R 640 000,00	R 640 000,00	R 6 400 000,00
Disbursements: (including special PPE where required)	Provisional Sum	R 15 000,00	R 15 900,00	R 16 854,00	R 17 865,24	R 18 937,15	R 20 073,38	R 21 277,79	R 22 554,45	R 23 907,72	R 25 342,18	R 197 711,92
Sub-total B		R 2 513 200,00	R 2 556 472,00	R 2 602 340,32	R 2 650 960,74	R 2 702 498,38	R 2 757 128,29	R 2 815 035,98	R 2 876 418,14	R 2 941 483,23	R 3 010 452,23	R 27 425 989,31
Contingency (@15%) on Sub-total B		R 376 980,00	R 383 470,80	R 390 351,05	R 397 644,11	R 405 374,76	R 413 569,24	R 422 255,40	R 431 462,72	R 441 222,48	R 451 567,83	R 4 113 898,40
Project Total (incl. VAT)		R 3 532 771,23	R 3 738 346,33	R 3 867 729,06	R 4 006 911,13	R 4 157 371,84	R 4 320 066,53	R 4 496 034,33	R 4 686 405,80	R 4 892 411,08	R 5 115 388,99	R 42 813 436,31
Management Fee (@2% Operational costs)		R 70 655,42	R 74 766,93	R 77 354,58	R 80 138,22	R 83 147,44	R 86 401,33	R 89 920,69	R 93 728,12	R 97 848,22	R 102 307,78	R 856 268,73
Total (VAT incl)		R 3 603 426,65	R 3 813 113,26	R 3 945 083,64	R 4 087 049,35	R 4 240 519,28	R 4 406 467,86	R 4 585 955,02	R 4 780 133,91	R 4 990 259,30	R 5 217 696,77	R 43 669 705,04
Total (excl. VAT)		R 3 133 414,48	R 3 315 750,66	R 3 430 507,51	R 3 553 955,96	R 3 687 408,07	R 3 831 711,18	R 3 987 786,97	R 4 156 638,18	R 4 339 355,92	R 4 537 127,62	R 37 973 656,56
Payment Schedule Year (excl. VAT)												
Progress Report 1		R 1 044 471,49	R 1 105 250,22	R 1 143 502,50	R 1 184 651,99	R 1 229 136,02	R 1 277 237,06	R 1 329 262,32	R 1 385 546,06	R 1 446 451,97	R 1 512 375,87	
Progress Report 2		R 1 044 471,49	R 1 105 250,22	R 1 143 502,50	R 1 184 651,99	R 1 229 136,02	R 1 277 237,06	R 1 329 262,32	R 1 385 546,06	R 1 446 451,97	R 1 512 375,87	
Progress Report 3		R 1 044 471,49	R 1 105 250,22	R 1 143 502,50	R 1 184 651,99	R 1 229 136,02	R 1 277 237,06	R 1 329 262,32	R 1 385 546,06	R 1 446 451,97	R 1 512 375,87	

