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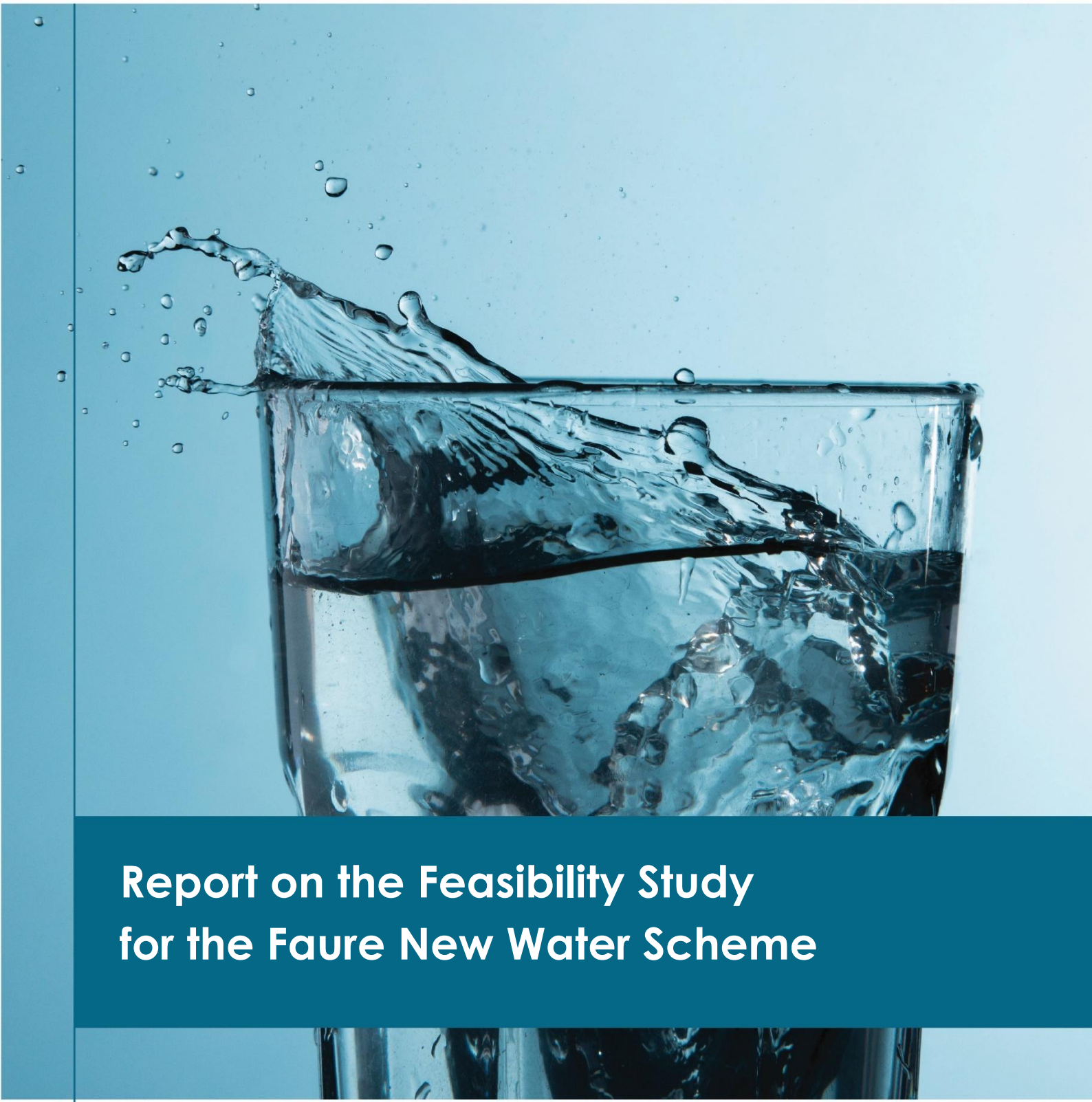

Report on the Feasibility Study for the Faure New Water Scheme

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Abbreviations

Abbreviation	Meaning
AOP	advanced oxidation process
AWPP	advanced water purification plant
BAC	biologically activated carbon
B-BBEE	Broad-Based Black Economic Empowerment
BW Branch	Bulk Water Branch
CAPEX	capital expenditure
CCP	critical control point
C/OM	construct, operate and maintain
C/OM-RA	construct, operate and maintain risk adjusted case
CRC	current replacement cost
DBSA	Development Bank of Southern Africa
DPR	direct potable reuse
DWS	Department of Water and Sanitation
Faure NWS	Faure New Water Scheme
Faure WTP	Faure Water Treatment Plant
GAC	granular activated carbon
HACCP	hazard analysis and critical control point
IDP	Integrated Development Plan
IPR	indirect potable reuse
ISA	Infrastructure South Africa
ML/d	Megalitres Per Day
MFMA	Local Government: Municipal Finance Management Act, 56 of 2003
MSA	Local Government: Municipal Systems Act, 32 of 2000
MTREF	Medium Term Revenue and Expenditure Framework
NEMA	National Environment Management Act, 107 of 1998
NPV	net present value
NWA	National Water Act, 36 of 1998
NWP	New Water Programme
OAT	one at a time
OPEX	operational expenditure
PPP	public–private partnership
PPPFA	Preferential Procurement Framework Act, 5 of 2000
PPP-RA	public-private partnership risk adjusted case
PSC	Public Sector Comparator

Abbreviation	Meaning
PSC-RA	Public Sector Comparator risk adjusted case
SALGA	South African Local Government Association
SCM	supply chain management
SPV	special-purpose vehicle
VfM	value for money
vs	versus
WPO	Water Partnerships Office
WRC	Water Research Commission
WSA	Water Services Act, 108 of 1997
W&S	Water and Sanitation
W&S Directorate	Directorate of Water and Sanitation
Zandvliet WWTW	Zandvliet Wastewater Treatment Works
ZAR	South African Rand

1 Introduction

1.1 Purpose of this report

This report presents the approach and outcomes of a feasibility study mandated by the City of Cape Town Council and carried out by a Transaction Advisory team appointed by the City of Cape Town (hereinafter referred to as "the City") in cooperation with the Water and Sanitation (W&S) Directorate project team. The feasibility study aims to establish the most appropriate option for the development and operation of the proposed Faure New Water Scheme (the Faure NWS) and complies with the regulatory processes prescribed and systematically addresses each of the feasibility study stages.

In addition to presenting the outcomes of the feasibility study, this report also invites comment to inform the City's decision on how the project will be implemented.

A shorter and simplified Summary Handbook on the Faure New Water Scheme Feasibility Study Report is available on the City's website at **www.capetown.gov.za/water-reuse**.

1.2 Project background

The City approved a new Water Strategy in 2019, 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" (NWP) 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
- Water reuse via the Faure New Water Scheme (Faure NWS), which will provide purified recycled water to augment the surface water sources that supply the existing Faure Water Treatment Plant (WTP)

The Faure NWS will source treated wastewater from the existing and recently upgraded Zandvliet Wastewater Treatment Works (WWTW). This water will be purified in a new multi-barrier advanced water purification plant (AWPP). The water produced by the plant will then be blended with surface water from dams to augment the flow through the existing 500 ML/d capacity Faure WTP at a maximum blend ratio of 33%.

The Faure NWS is designed for an ultimate production capacity of 100 ML/d and would be equipped initially to produce 70 ML/d. The nature and timing of the intended capacity upgrade will be determined by the City based on the growth in water demand and the availability of treated wastewater.

Most components of the AWPP will be sited at the existing Faure WTP campus, with some pre-treatment, storage and pumping facilities sited at Zandvliet WWTW.

The Faure NWS and associated infrastructure is required to expand the City water supply capacity and diversify its water sources. Accordingly, it is a bulk service function of the City, which must be undertaken to support and enable the City to execute its water services authority and provider functions.

The advanced water purification plant and supporting infrastructure will include new advanced technologies and will require more rigorous operation and maintenance protocols than the drinking water supply schemes currently managed by the City.

1.3 Project development process

As a pioneering water reuse project, the Faure NWS requires a process train of advanced technologies not previously used in South Africa. Since the project will be a significant upgrade to the municipal services provided by the City, the project triggered Section 77 of the Local Government: Municipal Systems Act, 32 of 2000 (the MSA), which mandates a Section 78 investigation into appropriate options and suitable contracting models to develop and operate the Faure NWS.

An investigation in terms of Section 78 is as follows:

Step 1: Assessment:

The City assesses the financial, technical, operational, and human resources required to construct, manage, operate, and maintain the Faure NWS, and determines if it has the necessary internal capacity, expertise, and resources (i.e. Section 78(1) assessment and report).

Step 2: Council decision:

The City Council decides whether the City can develop and operate the Faure NWS using internal resources or mandates it to conduct a feasibility study to explore alternative options (i.e. Section 78(2) decision).

Step 3: Feasibility study:

If mandated by Council, the City conducts a feasibility study of options to construct, manage, operate, and maintain the Faure NWS. The feasibility study must be compliant with applicable legislation and deal with technical, financial, institutional aspects. The associated feasibility report must identify the preferred option (i.e. Section 78(3) feasibility study report).

Step 4: Council decision:

The City Council reviews the feasibility study report and decides whether to proceed with outsourcing any services (i.e. Section 78(4) decision).

In November 2022, the Executive Mayor, together with the Mayoral Committee, granted authorisation to the City (MC 74/11/22) to commence an assessment in terms of Section 78(1) of the MSA, the first step in determining the best way forward to operate the Faure NWS.

1.3.1 Initial Section 78(1) assessment

The Transaction Advisory team in cooperation with the City's project team in the Water and Sanitation Directorate (W&S Directorate) conducted a Section 78(1) assessment. Based on the findings, the following was concluded:

- The City has already done the detailed planning and design of the Faure NWS and has the financial, technical, and human resources capacity and ability to procure. manage, and administer a multi-disciplinary contracting team to construct and commission the Faure NWS via the City's normal internal mechanisms and supply chain management (SCM) processes.
- The operation of the Faure NWS will require resources, protocols, rigour, agility, and staffing with specific skills and experience that the City currently cannot meet and may find demanding to meet over the medium to long term. This was determined as a result of the Bulk Water Branch (BW Branch) and its primary service providers being identified as already short-staffed and struggling to provide their full range of services. It will therefore be a challenge to build the capacity and skills required to operate the projects implemented as part of the New Water Programme (NWP) which gives effect to the City's water strategy. They may not be able to establish the management, operational, and maintenance capacity to operate the Faure NWS over and above approximately 600 projects that the Water and Sanitation Directorate (W&S Directorate) plans to implement.

In September 2023, the City submitted the Section 78(1) assessment report to the Water and Sanitation Portfolio Committee, then to the Executive Mayor and the Mayoral Committee, and thereafter to Council so that Council could make its decision in terms of Section 78(2) of the MSA.

1.3.2 Section 78(2) Council decision

In October 2023, Council authorised (C54/10/23) the City's W&S Directorate in terms of Section 78(2), to undertake a feasibility study in compliance with Section 78(3) of the MSA, to explore the possibility of outsourcing the operation of the Faure NWS.

1.3.3 Revised Section 78(1) assessment

Prior to the commencement of the Section 78(3) feasibility study, concerns were raised in the City's budget planning discussions about the affordability of the capital expenditure (CAPEX) budget for the Medium-Term Revenue and Expenditure Framework (MTREF) period because the City was already nearing the limit of what it can borrow. As a result, the W&S Directorate had to reprioritise its CAPEX budget for the 2026/27 and 2027/28 financial years. As the Faure NWS was a major item in the City's budget and a delay in the execution of the project would compromise the City's NWP, the City had to seek alternative ways of financing the project.

Due to national fiscus constraints grant funding from the national government was not considered an option. A suitable scenario to address the capital budgetary constraints was to reallocate the development of the Faure NWS from the CAPEX budget to the operational expenditure (OPEX) budget to develop and operate the Faure NWS via a public–private partnership (PPP).

Since the City wanted to add a PPP as an option for the development and operation of the Faure NWS, it had to revisit its original Section 78(1) assessment to re-evaluate the financial resources it had available for the construction, management, and operation of the Faure NWS.

In January 2024, the Executive Mayor, together with the Mayoral Committee, reviewed and amended its previous decision (MC 74/11/22) and resolved that the City revise the Section 78(1) assessment to include options suitable for financing, constructing, and operating the proposed Faure NWS (MC 46/01/24).

The financial, technical, and institutional findings of the revised Section 78(1) assessment led the Transaction Advisory team to submit a revised report recommending the inclusion of a PPP as an option to be investigated.

1.3.4 Revised Section 78(2) Council decision

On 12 June 2024, the Council approved the revised Section 78(1) assessment report through an MSA Section 78(2) decision (C05/06/24).

The Council's decision authorised the City's W&S Directorate to proceed with a feasibility study of alternative options for the procurement, financing, construction, and operation of the proposed Faure NWS. This was to be done in compliance with Section 78(3) of the MSA as well as Section 120(4) of the Local Government: Municipal Finance Management Act, 56 of 2003 (the MFMA). Since the City decided to include a PPP option in the feasibility study, it had to conduct the study in accordance with the Municipal PPP Regulations, 2005 published in terms of the MFMA and the Municipal Service Delivery and PPP Guidelines (the Municipal PPP Guidelines) of National Treasury and with a final Council decision about a preferred option to be in compliance with Section 78(4) of the MSA as well as Section 120(6) of the MFMA.

In compliance with Regulation 2 of the Municipal PPP Regulations and the Municipal PPP Guidelines, the City registered the Faure NWS project as a potential PPP with National Treasury on 21 October 2024 (Project Ref. No. M220). By having the project registered with National Treasury, the City brought on board the support and oversight of the PPP Unit in the Government Technical Advisory Centre (GTAC) of National Treasury.

1.3.5 Section 78(3) feasibility study

The feasibility study is the key process in the project cycle to explore alternative options for the development and operation of the Faure NWS and to identify and substantiate the affordability, risk transferred and value for money of the most suitable implementation option.

The matters to be considered and the content to be addressed when conducting a feasibility study to determine alternative options and to arrive at a preferred option for the development and operation of the Faure NWS are regulated by Section 78(3)(b) of the MSA, Section 120(4) of the MFMA, Regulation 3 of the PPP Regulations and guided by the Municipal PPP Guidelines.

Based on the project cycle provided in the Municipal PPP Guidelines, the feasibility study is divided into stages. The following sections and summarised content are covered in the feasibility study:

- **Section 1: *Needs analysis*** – a review of national, provincial and municipal strategic objectives and how the project aligns with these, analysing the project budget requirements and the availability of financial resources, analysing the institutional capacity, skills, and commitment within the W&S Directorate in respect of the development, operation and management of the Faure NWS, the roles and responsibilities of internal and external stakeholders, an outline of the project scope and its output specifications.
- **Section 2: *Technical options analysis*** – identification and evaluation of alternative design options, a comparative analysis of these options, and the selection of a preferred option.
- **Section 3: *Service delivery options analysis*** – identification and evaluation of internal and external options as provided for in legislation, a comparative analysis of viable options, summaries and findings, and interim recommendations.

- **Section 4: *Project due diligence*** – a comprehensive legal due diligence of all aspects of the project and its site enablement issues, including user rights, regulatory matters such as authorisations and licences, and Broad-Based Black Economic Empowerment (B-BBEE) considerations.
- **Section 5: *Value assessment*** – constructing a financial model representing the full costs of developing and operating the Faure NWS for each of the three options, including allowance for risk adjustments based on extensive risk assessments, cost and revenue assumptions, sensitivity analysis, demonstration of affordability, and value for money assessment. The aim of the value assessment is to determine which procurement choice and contracting model must be recommended to the Council as the best option for the project.
- **Section 6: *Procurement plan*** – unpacking the procurement practices and procedures for the project type, procurement choice and contracting model, outlining of milestones, approvals, challenges, project teams and stakeholders, security, confidentiality, and contingency plans.
- **Section 7: *Report on views and comments*** – contains the feedback, views, and recommendations as received from all stakeholders and the City's responses thereto thus a full record of stakeholder engagements.

2 Needs analysis

2.1 Strategic alignment

The Faure NWS aligns with key national, provincial, and municipal policy and strategic frameworks, including the following:

- The National Strategy for Water Reuse – Supporting sustainable water resource management
- The City's Integrated Development Plan (IDP), including the City's Water Strategy – Ensuring long-term infrastructure resilience
- The City's Economic Growth Strategy, 2021, Resilience Strategy, 2019, and Climate Change Strategy, 2020
- The Western Cape Water Supply System Strategy – Addressing regional water security challenges

The project is also prioritised in the City's infrastructure investment programme due to its potential to generate revenue while ensuring reliable water provision.

2.2 Legal and regulatory framework

The project must be executed in accordance with multiple legislative and regulatory requirements, including the following:

- Municipal Finance Management Act, 56 of 2003 (MFMA) – Governing municipal financial management and PPP approvals
- National Environmental Management Act, 107 of 1998 (NEMA) – Ensuring compliance with environmental regulations
- Municipal Systems Act, 32 of 2000 (MSA) – Outlining alternative options for municipal service delivery and prescribing public consultation processes
- Municipal Public Private Partnership (PPP) Regulations, 2005 – Defining the framework for structuring and procuring PPPs
- National Water Act, 36 of 1998 (NWA) – Regulating water uses and licensing
- Water Services Act, 108 of 1997 (WSA) – Setting national standards for drinking water, water services works, and process controllers
- City of Cape Town by-laws and policies

The City has the institutional skills and capacity to meet the applicable regulatory requirements and to ensure legal compliance throughout the project lifecycle.

2.3 Resources and capacity

The assessment of the City's financial, institutional, and human resources capacity identified key factors that will influence the City's ability to implement the project. Those factors include the following:

- The BW Branch, with the support of the broader W&S Directorate, has the institutional capacity to manage the project through its phases until the Faure NWS is operational. Since specialised construction will be involved, suitably skilled and capacitated contract management staff will be essential to successfully conclude the project's construction and commissioning phases.
- A key challenge identified for the operational phase is the City's current limited internal capacity to manage and operate the Faure NWS effectively. The AWPP will require a

high level of specific expertise along with agile and effective processes to operate and maintain the plant uninterruptedly with a high level of reliability, the BW Branch and its primary internal service providers are currently understaffed and lack the specific technical expertise required to operate a project of this complexity, a situation exacerbated by high vacancy rates and recruitment challenges. Over the next ten years the NWP's large infrastructure projects, each with additional staff expertise and capacity requirements, will add to these challenges.

- From a financial perspective, the City is focusing on basic services infrastructure upgrades. As a result, water and sanitation investments dominate the City's capital expenditure. The City's ability to self-fund the Faure NWS is constrained due to borrowing limits and competing infrastructure priorities. Due to the quantum of investment required for the Faure NWS, and because the project will be a new revenue-generating water source, the project has the potential to attract alternative financing options, including a PPP contracting and procurement model. Preliminary financial modelling suggested that a PPP may offer the best value for money, balancing affordability, risk allocation, and service efficiency.
- The City is committed to the project and heavily invested in it given its prominent role in the City's Water Strategy of working towards ensuring a water-secure Cape Town. This commitment includes setting B-BBEE and socio-economic targets for the project during its procurement process.
- The City has appointed and mandated a Project Officer in the BW Branch to oversee the project development and procurement processes, and the City is supported by an independent multi-disciplinary Transaction Advisory team with technical, financial, legal, local government, PPP, B-BBEE, and project management expertise and capacity. The Project Officer and Transaction Advisory team are further supported by a GTAC-assigned senior project advisor.

2.4 Stakeholder communication

In assessing the project needs and identifying the most suitable service provision option, the City involved key internal and external stakeholders, including government, organised labour, and the community. Such involvement included wider consultations on the IDP, budget, and water strategy, ongoing engagements with stakeholder groups through a structured communication strategy, engagements with an independent advisory panel that has international expertise and that is independently administered by the Water Resource Commission (WRC), specific project-related authorisations, and the legally required solicitation of comments and views in terms of the MSA Section 78 process.

As the project development and procurement processes continue, the City will further consult organised labour, the community, National and Provincial Treasury, and other departments as also required in terms of the MFMA. Internal assistance is rendered by the W&S Directorate's Communication and Partnerships Branch.

3 Technical options analysis

3.1 Technical options

In line with its Water Strategy, the City is committed to developing 300 ML/d of additional water supply capacity by 2030, so that it becomes water resilient and less reliant on rainfall supply. The New Water Programme (NWP) is a ten-year programme, which was developed to augment and diversify the Western Cape Water Supply System. Water reuse has been identified as one of these supply options. The Faure NWS was not the only option considered for reuse and was part of a pre-feasibility assessment which identified twelve potential reuse options.

The City compared direct potable reuse (DPR) options with indirect potable reuse (IPR) alternatives. A further elimination process, based on an environmental screening study, assessed the impact of freshwater ecology, archaeological/heritage, and botanical factors on the viability of each option. Five potential DPR options emerged as more favourable across these disciplines. During the pre-feasibility and feasibility stages of the project, by following an elimination process considering the location and size of the options based on a cost and capacity comparison, the City selected the current Faure NWS option for reuse at Faure WTP purifying Zandvliet WWTW effluent.

For the actual treatment processes, two process types were evaluated based on cost and environmental impact: reverse osmosis and a carbon-based treatment chain. Currently, reverse osmosis is used in a DPR plant in Beaufort West, South Africa, and carbon-based treatment at the Goreangab water reclamation plant in Windhoek, Namibia. Taking several factors into account, the City chose the carbon-based treatment chain because of its significantly lower costs, lower power consumption, avoidance of environmental impacts like sea outfall, lower waste generation, and considerably greater water quality protection via multiple barriers.

3.2 Design

The City's project design team, supported by an independent advisory panel, has developed a technically sound design for the Faure NWS, which comprises three main elements across two zones – the Zandvliet WWTW (Zone 1) and the Faure WTP (Zone 2):

- **Zone 1:** Includes a multi-barrier advanced water purification system with fine screen filtration and biofiltration; balancing storage reservoirs; and a pump station for transferring water to Zone 2.
- **Zone 2:** Contains the AWPP with its advanced treatment stages, including ozonation, biologically activated carbon (BAC) and granular activated carbon (GAC) filtration, ultrafiltration (UF), and an advanced oxidation process (AOP).
- **Rising main pipeline:** Connects Zone 1 and Zone 2.

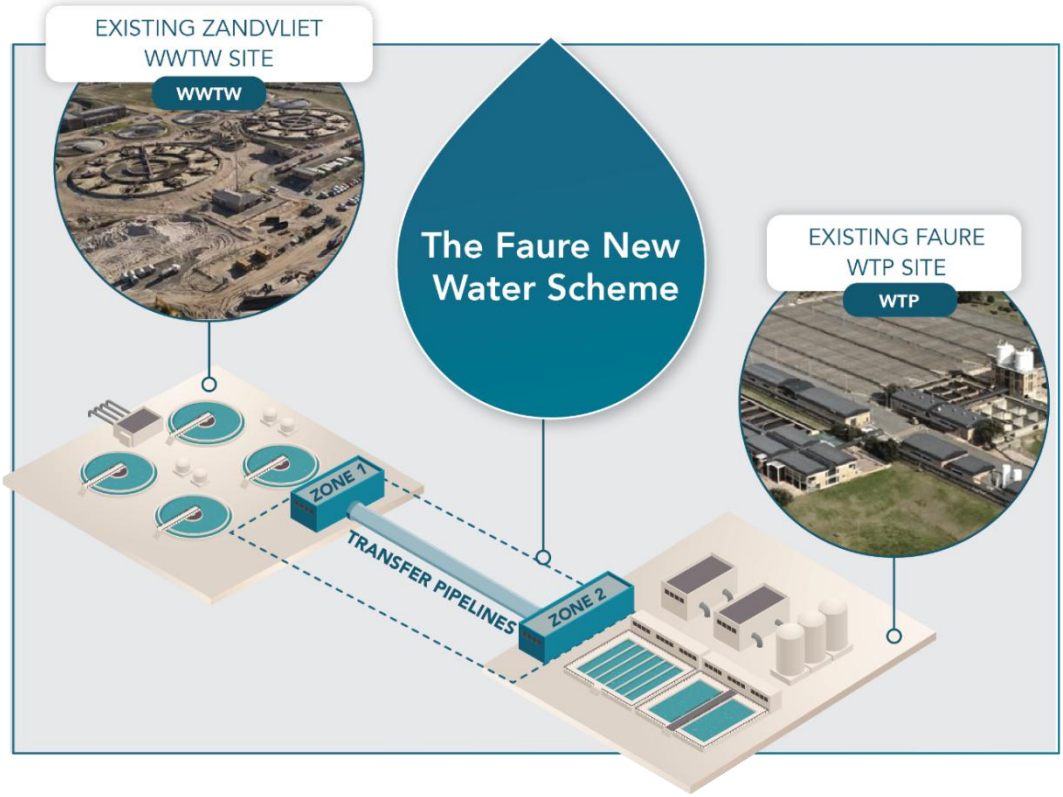


Figure 1: The Zone 1 and Zone 2 configuration of Faure NWS

The key design parameters for the Faure NWS include the following:

- **Source water quality and quantity**: Treated wastewater sourced from the Zandvliet WWTW, compliant with the design treated wastewater quality and quantity, and the associated Water Use Licence stipulations for the discharge of treated eflluent.
- **Capacity**: The Faure NWS is designed for an ultimate production capacity of 100 ML/d and would be equipped initially to produce 70 ML/d. The capacity upgrade can be implemented once the expected increase in wastewater flow to Zandvliet WWTW materialises and the WWTW has been upgraded to cope with the higher flows.

Due to the fact that there is some uncertainty regarding the rate of growth in wastewater flow to the Zandvliet WWTW, the timing of the associated capacity expansion has not been established. The scope of this feasibility study does not include the possible upgrading of the Faure NWS from 70Ml/d to 100 ML/d however the future expansion will be design enabled.

Included in the design process were global best practices and lessons from similar facilities, such as the Goreangab plant in Windhoek, and a hazard analysis and critical control point (HACCP) study conducted with international expert input. The treatment process involves multiple stages that work together to remove contaminants from the water. The process train in Figure 2 shows the stages involved in the advanced water purification process, ensuring that the water that will be supplied to the public meets the required health and safety standards.

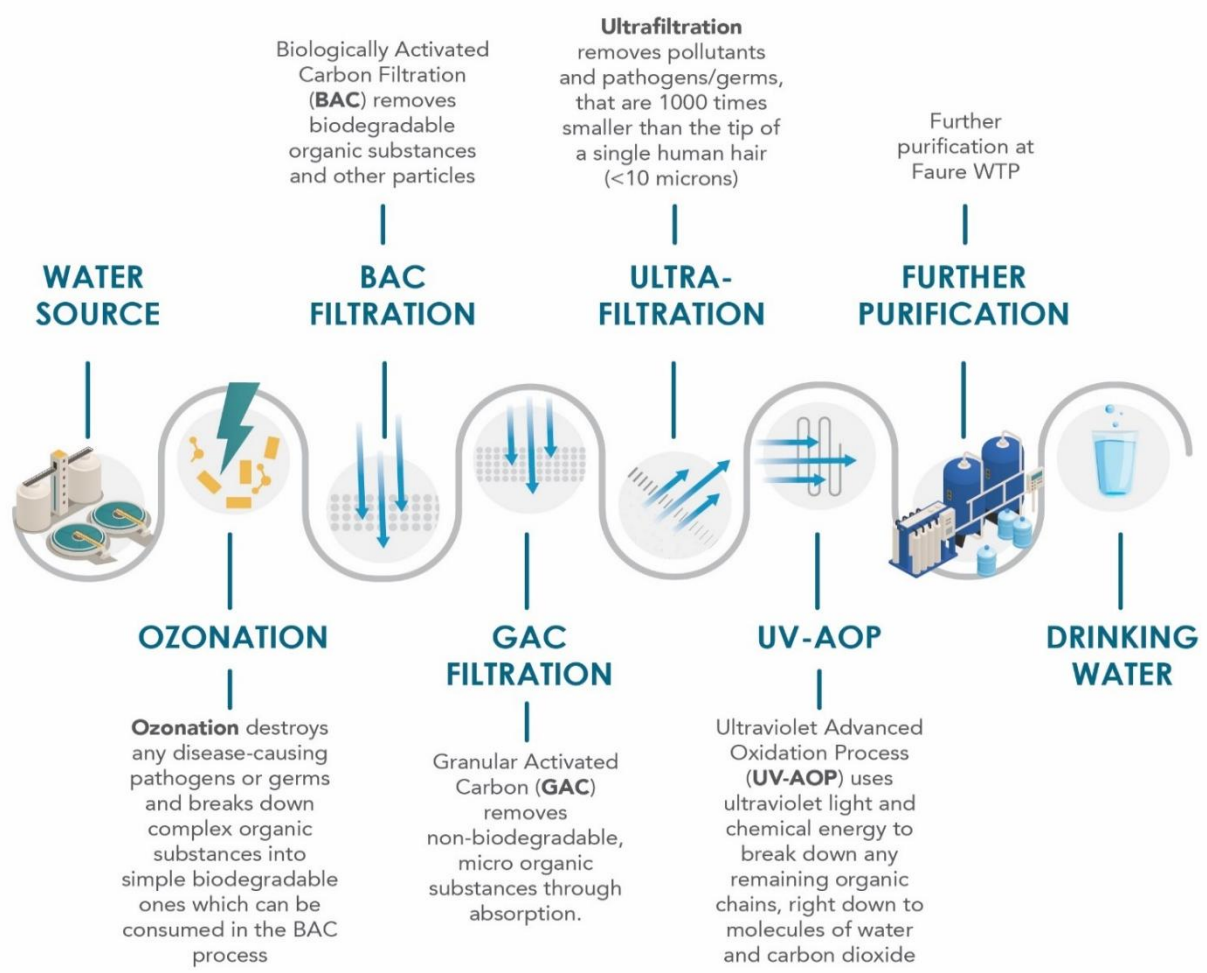


Figure 2: The Faure NWS's process configuration

The design prioritises operator needs, with separate administrative and industrial buildings. Site constraints at the Faure WTP are mitigated with landscaped educational areas included. Energy efficiency is promoted in the processes, and the Faure NWS is being considered for a Level 4 Industrial Green Star rating, reflecting the City's commitment to sustainability.

During the design development phase, a robust risk management process was implemented. This provided a foundation to build upon in the risk assessment process that informed the value assessment stage of the feasibility study.

4 Service provision options analysis

A challenge in conducting the feasibility study was identifying the most appropriate implementation options for the Faure NWS, to ensure cost-efficiency and quality control during construction and operation.

Given the institutional, financial, and technical resource and capacity constraints identified in the Section 78(1) assessment, the City found that none of the internal service provision options provided for in Section 76(a) of the MSA may be appropriate for the implementation and operation of the Faure NWS and established the need to explore alternative service provision options as provided for in Section 76(b) of the MSA.

The five alternative service provision options, i.e. an organ of state, e.g. a water board, municipal entity, another municipality, a legally competent non-governmental or community-based organisation or any other institution or entity provided for in the MSA were assessed at a high level with the only viable option for the Faure NWS found to be 'any other institution, entity, or person legally competent to operate a business activity'. Various project implementation arrangements are possible for this implementation option depending on who performs the operation and maintenance, the extent of capital investment required, the nature and extent of risk to be transferred to another entity or institution, and the most appropriate contractual duration.

The alternative options identified for the Faure NWS are as follows:

- **Conventional construction contract and an operation and maintenance contract (C/OM)** – The City finances the construction and operation activities of the project and follows two competitive procurement processes: a contract for the construction and commissioning of the Faure NWS (FIDIC Yellow Book) and a management contract for its operation and maintenance for an extended period. The City does not transfer financing or latent defect risk, but does transfer technical and operational risks. The City owns all infrastructure and carries functionality and latent defect risk of the completed works. This option aims to ensure the appropriate skills and capacity for the effective operation and maintenance of the Faure NWS.
- **Public-Private Partnership (PPP)** – The City competitively procures a private party to take over the responsibility to design, build, operate, maintain and finance the Faure NWS. This option aims to transfer substantial financing, technical, and operational risk to a private contractor through a special purpose vehicle (SPV) for an extended period. The City owns all infrastructure. The private party is compensated by means of a unitary payment inclusive of the financing costs and the operating costs. The City manages and oversees the contract to ensure that the SPV meets the required output specification (volume of water and water quality), and receives the bulk water produced for including in its delivery of municipal services to the community).

Each contracting option has advantages, disadvantages, and risks which were unpacked in the value assessment process and were considered to determine which of the options would be the most affordable, provide the best value for money and risk transfer.

5 Due diligence

The due diligence process assessed matters which may have impacted on the proposed Faure NWS to ensure that there were no issues in the chosen technical solution or the preferred service provision option that might significantly affect the proposed project or the estimated whole life costing.

5.1 Legal due diligence

The legal due diligence addressed all facets of the Faure NWS project. The City has the legal competence to provide water services, including reuse water, using the service provision and contracting options explored, and a private party can provide bulk reuse water supply services to the City, including the use of municipal property. This can be achieved through a management contract or a PPP contracting model, depending on the level of financial, technical, and operational risk to be transferred to the private party.

A detailed analysis of the regulatory environment pertaining to water services, integrated environmental management, solid waste management, air quality management, heritage, labour, and procurement concluded that there are no legal impediments in respect of national legislation, sector regulations, or City by-laws and policies prohibiting the City to proceed with its assessment of the value for money and affordability of procuring a private service provision option. Based on the legal assessment it can be noted that the operationalisation of the Public Procurement Act, expected in 2025, will have an impact on the procurement processes of City projects, which may include time and cost challenges in respect of the Faure NWS project.

5.2 Site enablement

The land to be utilised for the Faure NWS infrastructure at Zone 1 and Zone 2 is City-owned, correctly zoned, and available, and its usage by a private party can be regulated contractually. A detailed geotechnical engineering investigation was conducted to inform the design and earthworks.

The necessary licences, rights, and authorisations from the relevant sector departments and other affected government institutions were identified and either obtained or in process, i.e. the registration of servitudes. This carries low risk. Those included a recently amended and re-issued water use licence, an approved and carefully monitored environmental management programme, wayleave approvals, which are regularly updated, ongoing registration of servitudes over land traversed by the pipeline between Zone 1 and Zone 2, and heritage-related notifications of intent to develop. The possibility of a waste management licence and an air emissions licence was identified but has not yet been confirmed and no significant risks in respect of these licences are currently foreseen.

The reliability of Eskom bulk power supply to the AWPP remains uncertain but full back-up power is allowed for in the design and costing of the plant. Therefore, this uncertainty also carries low risk.

5.3 Human resources

Since the Faure NWS is a new project, and there are no existing staff involved that will have to be transferred, the procurement of a management contract or a PPP contract as explored will not trigger labour legislation, and a contract with a private service provider will mitigate

the challenges of lack of capacity and expertise as identified in the Section 78(1) assessment and re-affirmed through the due diligence process.

The due diligence process arrived at a level of detail of anticipated staff positions, numbers, and costs for all the options, i.e. internal operations, a management contract, and a PPP contract to contextualise the human and financial resource demands that operating the Faure NWS in-house will place on the City. It will trigger a definite risk area. More attainable will be for the City to ensure adequate internal staff for contract management of private party operations.

5.4 Technical due diligence

The technical due diligence process reviewed the process and studies through which the City arrived at a shortlist of water reuse options, including the environmental screening done to identify elements that would impact on the viability of the options considered. The due diligence review included the treatment processes that were considered, namely a carbon-based treatment chain and a possible reverse osmosis treatment chain. A comparative analysis of these treatment options re-affirmed the carbon-based process was technically feasible and was the financially and environmentally preferred option. The main parameters and decisions made to arrive at the final technical solution were put under scrutiny to make sure that the design parameters, key decisions, and influencing factors were clearly explained and transparent. The design parameters included the quality and quantity of the water source, the treatment method, the process configuration, and the mechanical, architectural, and civil designs.

5.5 B-BBEE and socio-economic factors

B-BBEE is expected to be adhered to in respect of private party contracting in accordance with the relevant legislation and guidelines, specifically the B-BBEE Codes, the PPPFA and its procurement regulations, the City's own SCM policy and protocols and the PPP Guidelines. As part of the due diligence process, the interplay and overlap of the legislative and policy guidelines were examined to determine the factors that would affect B-BBEE in the initial awarding of the bid and subsequently, the creation of a tailored B-BBEE scorecard for the project to ensure compliance throughout the contract duration. Constraints identified in reaching the desired B-BBEE objectives of the project have been recognised in terms of Ownership and Procurement. It is anticipated that the bidder will employ a Special Purpose Vehicle (SPV) that will likely incorporate foreign entities within the shareholding structure. The primary contractor is expected to be a large enterprise that may fall under the sector-specific code for construction, which could also potentially involve foreign shareholding. Additionally, the procurement of imported goods and services is expected during the construction phase. The City is preparing for these identified constraints that may impede the achievement of the B-BBEE objectives, which add layers of compliance complexity.

The Socio-Economic Development factors identified during the due diligence process include the positive economic enabling effect of water security. Furthermore, it is expected that the project will generate a significant number of permanent jobs, as well as a considerable number of construction-related employment opportunities will be created.

6 Value assessment

The purpose of the value assessment is to assess the affordability of the project, the relative value for money offered by the different options and the degree of risk reasonably borne by the various parties under each option. The comprehensive assessment was based on the procedure described in the Municipal Service Delivery PPP Guidelines.

6.1 Assessment procedure

6.1.1 Implementation options

Three implementation options were evaluated in the value assessment:

- The Public Sector Comparator (PSC): the usual implementation option whereby the City is solely responsible for financing, developing, constructing, and operating the works. The project would be executed under a series of contracts with selected project spending under the City's capital budget and other spending under its operational budget.
- PPP (public-private partnership): As described in Section 4 above.
- C/OM (construction contract followed by a separate operation and maintenance contract): As described in Section 4 above.

Figure 3 breaks down the responsible party during each stage of the project lifecycle for the implementation options, where the PSC is compared to the two reference options (i.e. the PPP and C/OM options).

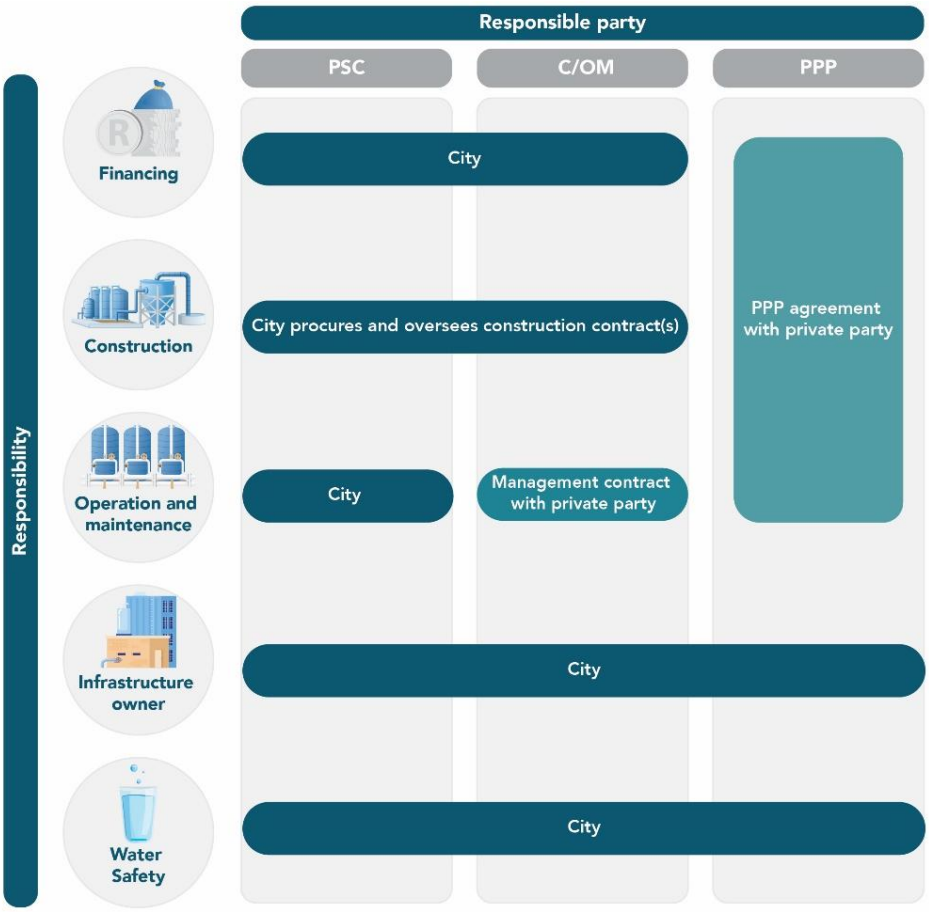


Figure 3: Responsible party during the project for the respective implementation options

6.1.2 Base vs risk-adjusted cases

All three project options were quantified considering the expected capital investment and OM costs, with respect to previous similar projects or based on original project-specific designs and requirements. Also, for the reference options (PPP and C/OM), some up-front adjustments were made to account for differences in private sector delivery. These were therefore the base cases.

The base cases were subsequently repriced considering the possibility and impact (the risk) of the underlying assumptions being too hopeful. Adjusting for risks makes the project more expensive and/or leads to longer execution time. Throughout the report, these risk-adjusted cases are denoted by the suffix "RA", e.g. PSC-RA for the risk adjusted PSC.

6.1.3 Affordability to the City

Affordability may be assessed at different points along the water supply chain. Ultimately, new water projects will affect the price that end users such as households, businesses, and industry pay. That price is discussed towards the end of the report. In this section the focus is on affordability to the City itself, specifically in terms of how the Faure NWS compares with other bulk water supply options.

The City's Water Strategy, with its complementary documents, serves as a foundation for the planning of water capital projects. With the expected increase in water demand, the City will reach its allocated supply from the Western Cape Water Supply System. Aging infrastructure and potential changes in raw water quality imply that water reuse and desalination are essential in maintaining water security, with such projects requiring to be introduced by year 2030. Importantly, all technologies being explored require large investments and are operationally complex and are therefore more expensive to deliver (i.e. have a higher Rands per kilolitre (R/kl)) than traditional resources. New forms of water supply will unavoidably require the City Bulk Water budget to be increased and the cost to be recovered from the water customer base.

The appropriate measure of affordability to the City is whether the Faure NWS is the lowest-cost option from the array of possible water supply options. After the Faure NWS, the next viable option identified in the Water Strategy is an accelerated desalination initiative, and such a project effectively sets the benchmark for affordability. If the roll-out of supply options are delayed, the City would have to resort to temporary desalination, temporary water reuse and water trucking as was done under recent drought conditions. The cost of water from these alternatives would most likely be even higher than the desalination proxy rate.

Apart from being the reference point for affordability, the benchmark cost is also useful in that it allows non-production to be properly valued. Non-production occurs if the project is delayed or underperforms, resulting in a shortage that has to be made up from elsewhere at the benchmark unit rate at least.

In the feasibility study, preliminary (affordability benchmark vs Public Sector Comparator (PSC) base case) and normal affordability (vs risk-adjusted PSC) were compared. Actual affordability would be assessed if the PPP option is pursued.

6.1.4 Value for money

Value for money (VfM) is determined by comparing the public sector and private (reference) risk-adjusted options on a quantitative basis. VfM is achieved if the cost of one or both reference options is lower than PSC option. The comparison is done in terms of net present

value, using the City's cost of capital as discount rate, and considering all cashflow implications.

The Value Assessment Section of the feasibility study proceeds to determine preliminary VfM, i.e. comparing the present-day cost of the risk-adjusted PSC-RA, with that of the risk-adjusted PPP-RA and/or risk-adjusted C/OM-RA cases. Actual VfM will be established after procurement when the private party's proposal can be compared with the PSC-RA.

6.2 Base cases

The options base cases established on the original costing of each option (before any risk adjustments are made) were quantified considering the expected capital investment and operation and maintenance costs with reference to previous similar projects or based on original project-specific designs and requirements. For the reference options (PPP and C/OM) base cases, some up-front adjustments were made to the PSC base model to account for differences in private sector versus public sector delivery.

6.2.1 Financial model

The base cases were quantified by means of a comprehensive financial model developed in accordance with National Treasury PPP Practice Note Number 05 of 2004 'PPP Feasibility Study'. It establishes the base case costs required to deliver each of the PSC, PPP and C/OM options by considering all capital and operating expenses related to the project. The model comprises three core sections: inputs (costs, macro-economic, and operational inputs), calculations, and outputs (pro forma financial statements and value metrics).

6.2.2 Direct costs

The actually incurred historic project development costs associated with financial, legal, procurement, technical and project management services are included at the same amount for the three implementation options. Further allowances for professional and other fees over the procurement and construction period are made based on the construction value.

Direct capital costs are based on the Engineer's Estimate Report for the Faure NWS and amount to ≈ZAR 3 billion (in real 2025 terms). These include the costs of constructing the new facility and are aligned to the cashflow programme in the same report. Direct maintenance costs are provided in the financial model to keep the assets in the necessary functional condition to deliver the specified outputs. These costs include raw materials, tools and equipment, and labour associated with maintenance. The assumed level of maintenance is aligned to the CRC values of the constructed assets.

Direct operating costs are provided for the day-to-day operations of the service. These are the full cost-to-company costs of the staff complement, as well as direct operating costs, including raw materials, consumables, direct management, and insurance.

It should be recalled that the Faure NWS project was originally conceptualised as a conventional construction project, and the design is advanced. The implication for the VfM assessment is that the direct capital and maintenance costs under the PSC, PPP and C/OM base cases are assumed to be the same, with only a small difference between operating cost in the options (with the private options being only slightly more efficient in the base cases). The matter of operating efficiency is returned to later, for in the risk-adjusted cases the efficiency differential is a major driver of VfM.

Direct Broad-Based Black Economic Empowerment (B-BBEE) costs are provided to achieve the B-BBEE objectives for the project, subject to a 10% premium ceiling as provided in the Preferential Procurement Policy Framework Act, 5 of 2000 (PPPFA).

The direct costs are the same for the three base cases, except for operating costs, where a small labour cost saving is projected for the reference options.

6.2.3 Indirect costs

Two pertinent indirect costs are associated with the project. The first is City overhead costs such as accounting, billing, legal services, and other managerial resources used for the project. The amount provided for in the PSC base case is slightly lower for the two reference cases, where the services are obtained from the private party.

The second indirect cost is the cost of overseeing the project if it is executed under either a C/OM or PPP option, i.e. the cost of supervising the performance of the private party or parties, contract performance measurement, and related costs The amount budgeted does not form part of the cashflow of either the PPP or the C/OM options but is retained as a cost to the City itself.

6.2.4 Lost production costs

Lost production costs arise if the project is not available as planned. Should production be delayed (e.g. if the project is postponed because of financing constraints) or reduced (e.g. the plant is operated less efficiently), then the cost of obtaining such unavailable water elsewhere (outside of the Faure NWS) has to be added as an additional cost to the project. If this is not done, such a delay or reduction would paradoxically reduce the cost of the project in net present value terms, since costs would be later (CAPEX) and less (OPEX).

The reference value for lost production is the next water supply alternative, i.e. the affordability benchmark discussed previously. The appropriate benchmark is the Paarden Island Desalination Plant, which is currently being assessed and whose contractual unit rate is estimated (based on certain assumptions) to be between R55/kl and R65/kl, base dated to June 2024. Importantly, using the Paarden Island unit rate as a proxy for opportunity cost does not express an opinion on the relative priorities of Faure vs. Paarden Island, or of other projects currently under investigation by the City which may move up the water supply hierarchy. Both the reuse and desalination project are required as part of the NWP to ensure sufficient and reliable water supply, and the City is likely to proceed with both. Although other supply options may become available, at this point the most likely project after Faure NWS and the Paarden Island Desalination Plant would be another desalination plant and therefore the cost of the Paarden Island Desalination Plant is a convenient proxy for the cost of production in the near future.

6.2.5 Other key assumptions

The pricing reference date is February 2025. The options are modelled for an operational period of 20 years, which leaves enough of a tail for debt servicing, accommodates the first wave of reinvestment, and allows for a reasonable payback and equity return period. For the PSC and C/OM options, procurement is assumed to take 20 months (24 months for the PPP) and construction 36 months (32 months for the PPP).

The base and risk-adjusted cases were developed using nominal (inflated) values. Future inflation rates are disaggregated per major cost type and linked to the baseline inflation

forecast (i.e. CPI + …% per cost type). Foreign exchange rates for imported costs are based on an assumed rate of currency depreciation.

The above inflation rates were applied in reverse to demonstrate real (current) values in the report. To achieve net present values, a discount rate of 11.66% was applied, representing government cost of capital over a comparable period as the project life.

For the financing of the PSC and C/OM options it was assumed that the capital costs for project construction will be fully covered through debt incurred by the City, shared 40% from a concessional source and 60% from a commercial source. Under the PPP option, typical gearing and financing terms for a project of this nature were assumed.

Under all three options, the client of the project will be the City itself, i.e. the Bulk Water branch, so that the project per se does not service or recover revenues from end users. A unitary payment is provided monthly to cover the costs of the private party. For the PPP, the unitary payment is set to achieve a nominal equity internal rate of return commensurate with an investment of this nature.

6.2.6 Base model results and preliminary affordability

At this stage of the value assessment, i.e. before risk adjustments, the PSC option appears to have the lowest cost. On the one hand, this is due to the construction cost being similar across the three options, development timeframes are similar, and the PPP and C/OM options have only slightly lower OM costs. On the other hand, the cost of capital of especially the PPP option is somewhat higher than under the PSC and C/OM options.

As discussed before, the affordability reference rate applied in this assessment is the real rate of the alternative bulk water supply project under consideration by the City (≈R55/kl to 65 R/kl). Converting the costs of the base case (non-risk-adjusted) options to real rates results in a range of R21.52/kl to R 31.35/kl. These are all substantially lower than the reference rate, and at this preliminary stage of the value assessment (before risk adjustment and allocation), the project is clearly affordable.

6.3 Risk-adjusted options

The risk-adjusted models account for the risks associated with each of the project options. 'Risk' refers to the likelihood and effects of the project not being delivered as expected or not achieving all the planned-for benefits. Usually, the expectation is that the PSC option is more likely to experience time and cost overruns than the PPP option, where the forces that keep the delivery agent honest (shareholders, lenders, regulators, etc.) are arguably more demanding than for the public sector. The three repriced base cases become the risk-adjusted (RA) PSC-RA, PPP-RA and C/OM-RA cases.

The risk evaluation process followed entails the orthodox steps of identifying relevant risks, determining the impact and probability of the risks, allocating (sharing) risk between the government and private sector, and updating the assumptions for the risk-adjusted model scenarios based on these effects. Extensive risk workshops were held with stakeholders representing various project aspects and from a wide range of departments within the City, and the results recorded in the risk register. By means of consensus, standard risk events were identified, assessed for their likelihood and impact, and (for the PPP and C/OM options) shared between the City and the private party. Impacts relate to time (delays or outage durations), cost (additional capital or operating costs), and loss in production. Delays, outages, and loss in production are valued in terms of the affordability benchmark value.

Whereas the above process addressed the standard risks associated with a project of the nature of Faure NWS, two further 'exceptional' risks were considered relating to the availability of capital and the efficiency of operation. The 'availability of capital' risk recognised that a key assumption underlying the PSC is that the City is in a position to borrow on behalf of the Faure NWS project, and that it will prioritise this project accordingly. However, it was confirmed that the project is not included in the next MTREF capital budget, and given the number of competing projects, it is unlikely to be accommodated in the next round of capital budgeting either. This means that realistically, if the project is financed by the City, it will be delayed by six years or more.

The 'efficiency of operation' exceptional risk reflects that the City as potential operator of the project is exposed to various resourcing, skills, and capacity constraints. This is based on the section 78(1) assessment (reaffirmed in the feasibility study) pointing out the current understaffing, vacancy rates and recruitment challenges within the City. Furthermore, additional staff expertise and capacity will be required due to the imminent roll-out of large infrastructure projects planned by the City. Given the City's challenges to address and minimise these constraints, it is reasonable to expect that such lack of short-term resource readiness to operate the plant will extend to the medium and longer term as well. This would result in a growing efficiency differential over the project life (i.e. the private operation being more efficient than the public operation).

Figure 4 shows the sliding scales for the two exceptional risks together. The combined effect of the most likely combination of delay (6 years) and efficiency level (30% differential) is for the cost of the PSC-RA option to become approximately R14.58/kl higher than the PPP-RA option.

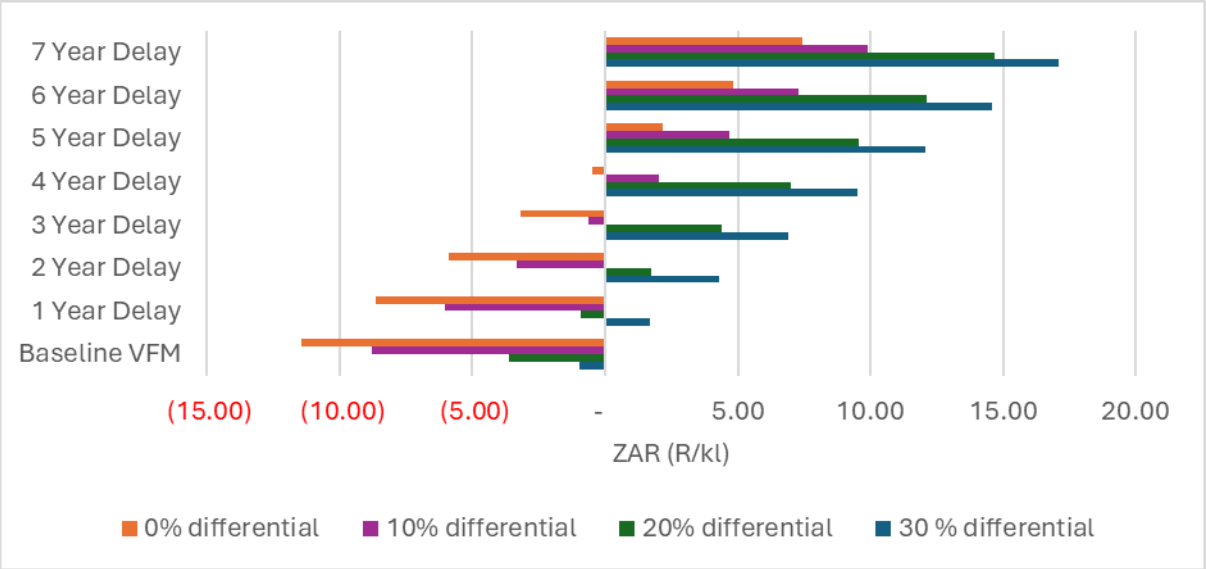


Figure 4: Additional cost of PSC-RA vs PPP-RA under delay/efficiency scenarios (Real – R/kl)

After determining the adjustments for standard risks and then applying the pivotal considerations of the timing of capital availability (delay of two MTREF cycles) and the City's capacity for operational efficiency (efficiency declining to a 30% differential), results are shown in the comparative values per option in Table 1. The effect on the value and unit rate of the PSC-RA is particularly stark compared with the PPP-RA case. A similar effect of the C/OM-RA unit rate increasing occurs, since in this case, too, the City will finance the project which will be accordingly delayed by 6 years.

Table 1: Total risk and opportunity cost of PSC RA, PPP RA and C/OM RA models (Real ZAR)

Total risk impact	PSC-RA	PPP-RA	C/OM-RA
	R/kl	R/kl	R/kl
Baseline	21.52	31.35	22.72
Risk adjustments	29.61	5.21	24.81
Total after risk adjustment	**51.13**	**36.56**	**47.53**
Unit rate change vs PSC-RA	-	14.58	3.50

6.4 Value for money

The assessment of VfM entails comparing the project options on the basis of equivalent levels of service in terms of net present value. VfM is represented by PSC-RA minus either of the reference options (PPP-RA or C/OM-RA). After the standard risk adjustments, VfM is negative, but the effect of the exceptional risks is to increase VfM and make it significantly positive. Importantly, even a much more lenient view on the delay/efficiency combination (e.g. 3-year delay with 20% differential in Figure 4) will still achieve meaningful positive VfM.

The VfM results are presented in Table 2 in terms of new present values (ZAR million). VfM is achieved if a private risk-adjusted option has a lower net present value (NPV) than the PSC-RA. It is clear that both reference options have lower NPVs than the PSC-RA and both therefore demonstrate preliminary VfM. The PPP-RA has the lowest NPV and thus presents the highest VfM.

Table 2: VfM result (NPV – ZAR million)

Description	PSC-RA	PPP-RA	C/OM-RA
Baseline, including oversight costs	5,866	7,728	6,162
Risk costs	6,424	1,256	5,546
Total after risk adjustment	**12,290**	**8,984**	**11,708**
VfM		3,306	582

The Faure NWS has an ultimate capacity of 100ML/d, but the value assessment has been carried out considering that while design is enabled for the higher flow rate, it will initially be equipped and operated for 70ML/d. The final confirmation of the need for, and the timing of, this upgrade is still to be determined. However, since the upgrade requirements will be the same for all three options, it is reasonable to conclude that the value propositions of the three options will end in the same relative positions as now.

6.5 Risk Retained, Transferred & Avoided

Under the PPP option nearly all financing risk and risks during the development period, and effectively all operation and maintenance risks are transferred to the private party. The City remains largely responsible for procurement-related and site readiness matters, and it retains commercial risk in the sense that it has to pay the unitary payment to the concessionaire and recover this cost from its own customers. Compared with the above risk allocation, under the C/OM option the City also retains the financial and development period risks.

Over-and-above this significant risk transfer to the private party, the project also entails substantial risk avoidance especially under the PPP option. This relates to the exceptional

items discussed in Section 6.3, i.e. the City's availability of capital and operating efficiency. These risks inflate the cost of the PSC and C/OM options, while leaving the PPP option largely unaffected – because the private party is judged to be in a much stronger position to effectively prevent such costs from occurring. This is not a case of risk 'transferred' to the private party under the PPP per se, but rather risk 'retained' by the City and 'avoided' under the PPP option.

6.6 End-user affordability

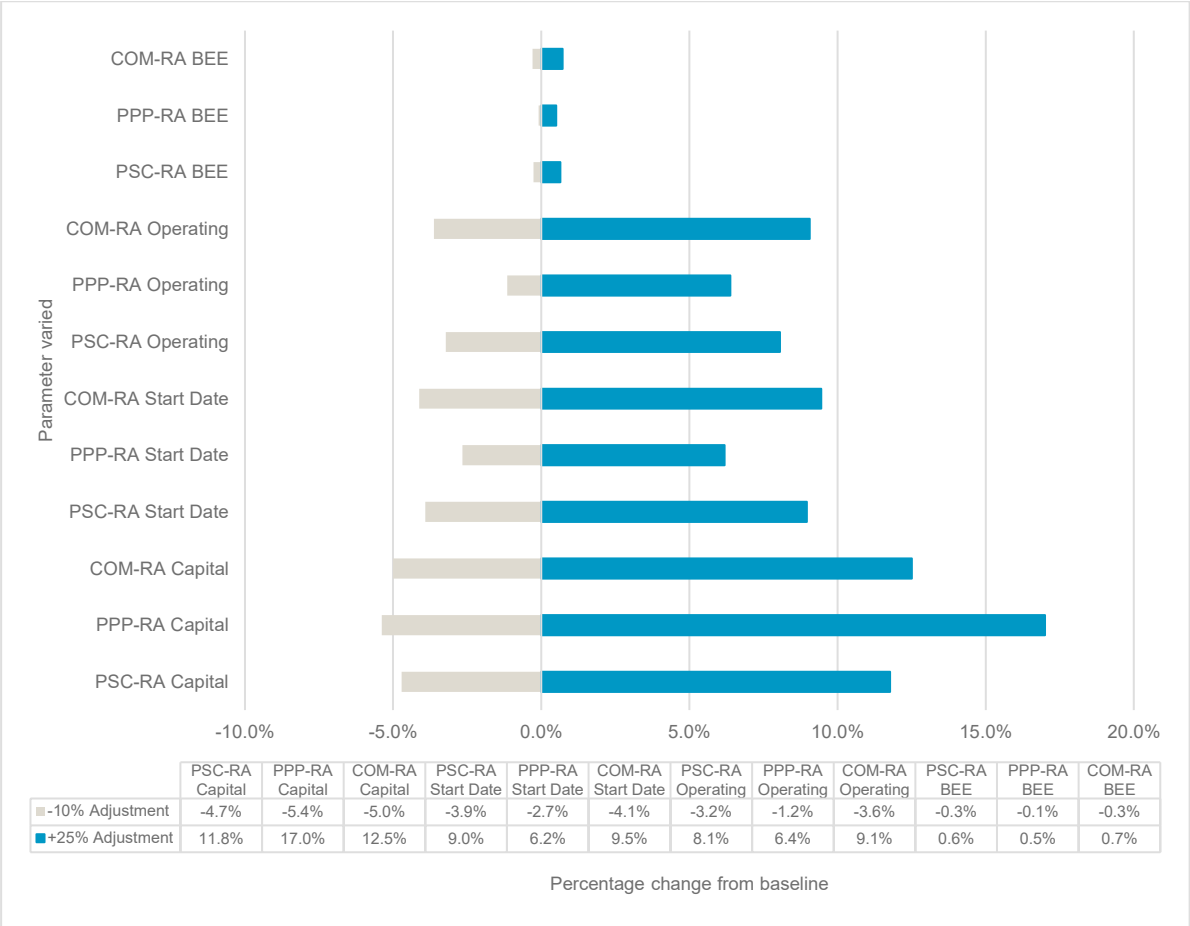
While the evaluation of value for money is focused on bulk water costs of the project to the City, it is inevitable that such cost of new infrastructure with associated ongoing operations will increase the tariffs paid by end users. The City has projected what the compound effect will be of rolling out a package of projects and interventions under different scenarios (i.e. changing the mix and timing of specific projects). In the scenario that requires the smallest overall increase in end-user tariffs, the City will initially have to implement a higher tariff increase in the short to medium term to meet its commitments in respect of implementing the envisaged projects. In the next seven years, annual increases to ensure cost recovery will range from about 7% to 20% on the water tariff and then be somewhat lower after that. The City's calculation is that the introduction of the Faure NWS will lead to an approximate once-off increase of 7%. The Transaction Advisory team, following a different assessment approach, determined that the introduction of the Faure NWS will have the once-off effect of increasing end-user tariffs ≈6%-8.5% in FY30/31. This increase will be incurred irrespective of the option selected for implementing the Faure NWS. It is however noted that for the PPP option, future inflationary increases (after the once-off increase) are expected to be lower than for the PSC option. This is because the private party payments would be linked to an agreed index, whereas cost increases for the PSC option may exceed such an index.

All three implementation options would benefit from grant funding. This would reduce the amount of investment needed, lower the project's financial costs, and help keep tariffs down for end users. The City will therefore seek support from relevant grant providers, such as National Treasury (e.g. through the Budget Facility for Infrastructure and other conditional grants).

6.7 Sensitivity analysis

Sensitivity analysis is used to test how susceptible the output of a financial model is to changes in the value of the inputs and in so doing identifies the input variables with the greatest impact. The procedure is to make one-at-a-time (OAT) changes where one input variable is altered while others are kept constant.

Changes to the model for the project were tested in 5% increments from -10% (decrease from baseline) to +25% (increase on baseline). Figure 5 shows the results of the analysis in terms of effects on NPVs of the three options. The cost of construction is the second most sensitive variable, representing not only the construction cost itself but also the compounding effect of the project financing assumptions. For the most part, the PPP-RA option is the least susceptible of the three options to the sensitivity tests. However, for project capital investment, it is most sensitive because of the private party's higher cost of capital, including being liable to pay corporate tax.



	PSC-RA Capital	PPP-RA Capital	COM-RA Capital	PSC-RA Start Date	PPP-RA Start Date	COM-RA Start Date	PSC-RA Operating	PPP-RA Operating	COM-RA Operating	PSC-RA BEE	PPP-RA BEE	COM-RA BEE
-10% Adjustment	-4.7%	-5.4%	-5.0%	-3.9%	-2.7%	-4.1%	-3.2%	-1.2%	-3.6%	-0.3%	-0.1%	-0.3%
+25% Adjustment	11.8%	17.0%	12.5%	9.0%	6.2%	9.5%	8.1%	6.4%	9.1%	0.6%	0.5%	0.7%

Figure 5: Sensitivity analysis outcomes (-10% and +25% parameter adjustment)

6.8 Qualitative considerations

The affordability and VfM assessment presented above is based purely on quantitative measures. These do not consider the wider implications in terms of macro-economic impacts (growth, employment, productivity, etc.), social effects (health, dignity, etc.) or environmental outcomes (e.g. more efficient and responsible use of scarce water resources). Such effects were in full view during the 2015–2017 drought experienced in the Cape Town area. The project's contribution to preventing a repeat of such a situation adds additional support to considering it favourably.

The project has excellent project finance attributes. This means that it can be financed based on its own merits without incurring loan finance liabilities on the sponsor's (the City's) balance sheet or even requiring explicit guarantees from the City. Since the project will be reimbursed from future spending from the operational budget (paying the unitary payment), it will free up City capital resources, which can then be applied to additional projects that will otherwise take longer to deliver.

6.9 Recommended option

The project will be affordable, whether delivered under a public or private model, in the sense that it will be substantially less costly than any of the next-best alternative bulk water projects available and provided for in the future planning according to the Water Strategy.

In terms of value for money, either of the private implementation models will offer an advantage over the PSC. The PPP case presents the greatest value gain (cost reduction) of

more than a quarter compared with the PSC. Even if the City capital and capacity considerations play out more favourably, a notable value differential favouring the PPP option will persist.

As regards risk transfer, under the PPP option nearly all financing risk and risks during the development period, and effectively all operation and maintenance risks are transferred to the private party. Under the C/OM option the City also retains the financial and development period risks.

Based on these considerations, the recommended option is that the Faure NWS proceed as a PPP where both the original construction and ongoing operation and maintenance are delegated as one package to a private partner.

7 PPP procurement plan

7.1 Approach

The outcome of the value assessment of three implementation options to deliver the project demonstrates that the PPP option shows indicative value for money and affordability, as compared with the PSC and the C/OM option. The procurement plan is thus focused on the PPP option for the implementation of the Faure NWS and is aligned to the requirements in the PPP Guidelines.

A procurement plan is not a stand-alone or standardised outcome, but rather a consequence of an implementation choice and associated contracting model. Accordingly, to develop a procurement plan, project implementation options are assessed, and appropriate contracting strategies are developed. Those options and strategies then inform the procurement strategy and consequently the procurement plan and programme. The approach followed to produce a PPP procurement plan includes identifying the project contracting parameters, considering the PPP framework and guidance regarding the PPP as a contracting strategy, and developing a procurement strategy and indicative timeframes.

An outcome of Council's decision as to whether or not to proceed in principle to procure a PPP will inform the next steps, and the procurement plan and associated programme will be refined and updated accordingly.

7.2 Project contracting parameters

For the purposes of creating a procurement plan to implement the project, the key contracting parameters of the project that will influence the contracting strategy and the design of the procurement approach were considered and are highlighted below.

7.2.1 New bulk water source

The Faure NWS will augment the City's bulk water supply mix, enabling the City to continue delivering water and sanitation services to the community. This activity is a water use and is licensed under the NWA.

7.2.2 Infrastructure development

The project requires new infrastructure and technology to treat wastewater effluent to potable standards. In the implementation phase, this requires access to land and planning approvals. The infrastructure has been designed such that it can be upgraded to deliver increased bulk water supply capacity over time. In the project preparation phase, it requires City capital planning approvals (stage gate).

7.2.3 Operation and maintenance

Once the infrastructure has been developed, it needs to be operated and maintained, requiring particular skills and expertise. The correct operation and maintenance is essential to ensure that the infrastructure delivers the output required, namely water treated to potable drinking water standards. As demonstrated in the value assessment, the efficiency of operation and maintenance has a direct impact with value for money of the investment in the infrastructure.

7.2.4 Input and supply

The Faure NWS will receive treated wastewater from the Zandvliet WWTW. The City will be responsible for the quality and the quantity of the supply, both of which will need to be measured. The City remains responsible for the input from the Zandvliet WWTW and for the supply. The contractual interface with the Works will need to be managed by the City, irrespective of its existing or future contracting arrangements at the Zandvliet WWTW.

7.2.5 Output and off-take

The Faure NWS will receive treated wastewater and will treat it to potable standards to supply to the City. The City will be the off-taker of the bulk potable reuse water and will pay for the water at the off-take point supplied at the right quantity and quality. The payment will be a contractual charge established in the PPP agreement. This will be a future financial commitment and will be subject to transparency, consultation, and Council approval (Section 33 of the MFMA). The contractual charge the City will pay for the bulk supply is not a tariff set by the Council. The contractual charge will need to be included by the City (water services provider), in the determination of its annual budget and tariff proposal for submission to the Council (water services authority), who will promulgate the municipal service delivery tariff for the community (a reserved Council function). The tariff promulgated by the Council will include the contractual charge as an input cost.

7.2.6 Impact on City's staff

The project is a new activity, requiring new institutional and human resource capacity and particularly advanced and specialised skills. The City has assessed its current institutional and human resource capacity in the S78(1) assessment report. The City has established that it does not have the current capacity to address the requirements of the project, nor the potential future capacity. As it is a new activity, there will be no transfer of existing staff as a going concern, which could trigger Section 197 of the Labour Relations Act, 66 of 1995 (i.e. no existing staff are directly impacted). There will be a need to introduce standard operating procedures with existing staff or contractors at the supply side and the off-take side. New City institutional and human resource capacity and systems will be required to monitor and manage the implementation of the project, irrespective of the contracting model.

7.2.7 Project funding

The City will pay for the project. How it will pay for the project will depend on how the contract and the payment mechanism are structured, which can impact the cash flow implications for the City. Two of the implementation options require the City to fund the construction from internal City resources – which will require the City to have confirmation of the funding before going out to procurement. The PPP, as the third option, is a contracting model where the funding risk for the construction phase is transferred to the private sector. The private party must raise the finance to fund the construction costs. Once the construction is completed, and operations have commenced, the City pays a unitary fee, including the capital portion, over the operation period.

7.2.8 Monitoring and enforcement

The City will need to ensure contract management capacity for the project, irrespective of the implementation option. Because of the risk transfer in a PPP option, the requirement is regulated. The function will require capacity for contract management, performance

management (during both the construction and the operation phase) and contract administration. This monitoring and evaluation will be a critical function in the implementation of any contract with the private sector, irrespective of contracting strategy. In the initial stages, this will ideally be led by the City's Project Officer, nominated to help the City prepare the project, to conclude contract negotiations to ensure continuity of institutional project knowledge, and to manage the risk transfer and value for money during the project preparation and the project implementation phases, until PPP agreement expiry.

7.3 PPP overview

7.3.1 Power and function to procure a PPP

Water and sanitation services are a constitutional power of local government. The Council of the City of Cape Town has legislative and executive authority functions. The City provides water services by way of an internal service delivery mechanism. Its internal mechanism functions as a water service provider (WSP) under the Executive Director: Water and Sanitation and is accountable for service delivery to its water services authority (WSA), the Council, as well as to the community to whom it provides the service. Bulk water management is a function of the WSP. This includes ensuring adequate supply and addressing effectiveness and efficiency.

The City has identified the opportunity to augment the current bulk water supply mix by introducing water reuse. This requires new infrastructure and capacity. The Council has authorised the WSP to assess the feasibility of undertaking the project by way of a PPP. This authorisation follows the Section 78(1) assessment, triggered by the anticipation of the significant expansion of the infrastructure. The key objective of the feasibility study is to assess if the project is affordable and if there is value for money to structure the transaction to access private finance through private sector participation. If the Council decides in principle not to proceed by procuring a PPP, the City either will not undertake the project due to capital budget prioritisation constraints or will undertake the project by procuring the infrastructure (following standard SCM procedures) and will need to find an operating solution – either expand the internal organogram with the right capacity or contract suitable capacity and expertise.

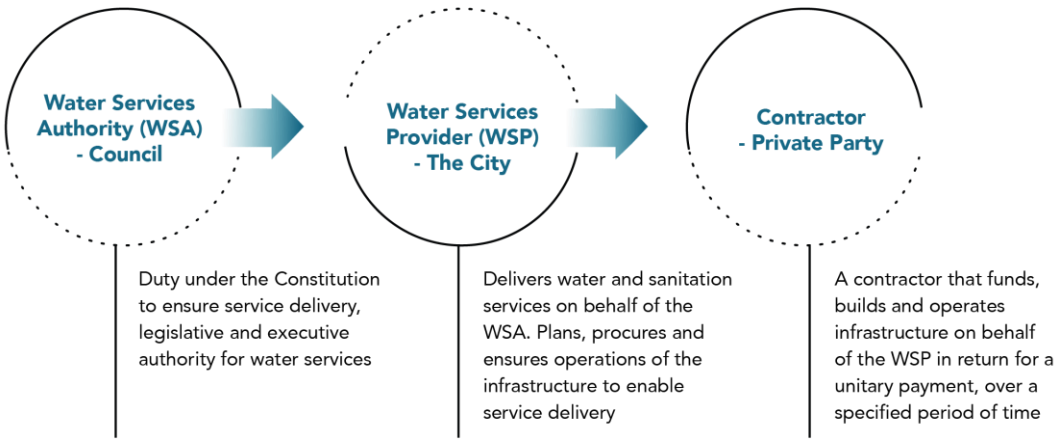


Figure 6: Functions of the WSA, WSP and the Contractor

7.3.2 Contract scope

The scope of the PPP agreement will be to supply bulk water to the City. The private party will accept significant technical, financial, and operational risk and accordingly undertake construction of infrastructure and operations to deliver a service to specified service levels. It is important to distinguish the bulk water supply function from the municipal services delivery mechanism. The City will continue to be accountable for water and sanitation services delivery to the community by way of an internal mechanism. If scoped as a PPP, the Faure NWS will deliver infrastructure and a mechanism for operations of that infrastructure, enabling the City's internal municipal service delivery mechanism to be accountable to the Council in its capacity as water services authority to undertake service delivery to the community.

7.3.3 PPP is not privatisation

A PPP contract for water reuse infrastructure development is not privatisation. The Council remains the water services authority with a constitutional duty to ensure water and sanitation services delivery. The City is the nominated water services provider directly accountable as the municipal service delivery mechanism to the WSA. Irrespective of the contracting model the City will be the infrastructure owner and will be responsible for service delivery to the community. In a PPP contracting model, the private party is a contractor to the WSP. The City will be the purchaser of the services that the private party provides (the bulk water from the Faure NWS). Although the private party will fund the construction of the plant, and will operate the plant, the Faure NWS will be the property of the City. The City will pay the private party an agreed unitary payment over the duration of the agreement. This payment reflects the private party's costs (including the original financing cost of construction, the operating costs and a reasonable rate of return for taking significant technical, financial and operational risk) as established under a competitive tender process. The first payment under the PPP model is only made by the City when the project is fully operational and the Faure NWS is delivering bulk water. If the private party operates the plant efficiently, it will earn its contractual return for taking the risk.

For both parties, the PPP agreement must be affordable and must provide value for money. The decision-making process is well regulated with transparency and informed decision-making required by law.

7.3.4 National policy

Water reuse is supported in national policy. The Water Reuse Policy has been in place since 2011. In the South African National Water and Sanitation Master Plan (2018), reference is made to the need to reduce water demand and increase water supply through various sources, including the reuse of effluent from wastewater treatment plants. The Department of Water and Sanitation (DWS), in partnership with the South African Local Government Association (SALGA) and the Development Bank of Southern Africa (DBSA), has established the Water Partnerships Office (WPO) specifically to develop standardised national programmes for private sector participation in municipal water and sanitation, including to facilitate blended financing and credit enhancement options (guarantee facility). Water reuse is a prioritised standard programme under the WPO.

Concluding a PPP contract is a procurement choice. It is recognised under South African law and has been part of the regulatory framework since 2003. National Treasury had a PPP Unit and now has the Government Technical Advisory Centre (GTAC) to support the PPP project pipeline. Infrastructure South Africa (ISA) is a programme within the Ministry of Public Works and Infrastructure that is focused on public and private sector infrastructure projects.

Crowding in private sector participation, and if appropriate accessing private sector funding for infrastructure development, is a current national priority.

7.3.5 Alignment to City's SCM policy

In its Supply Chain Management Policy (March 2025), the City specifically recognises PPPs as a procurement option. Although the contracting option is recognised in the SCM policy, there are currently no City standard templates for procurement documentation and PPP agreements. The PPP bid documentation and its terminology will be aligned to the City's SCM policy and practices for competitive bids and bid committees.

7.4 PPP contracting strategy

Implementing a PPP will require that the City competitively procure a private party to build, finance, and operate the Faure NWS. In this instance, the private party funds the infrastructure through a project finance mechanism, including a mix of debt and equity. The City pays for the service (treated water at the right quantity and quality) from the infrastructure only once the service commences. The payment is by way of a unitary fee (less penalties when relevant) from the City to the private party, which includes a capital component to repay the construction over the life of the project. The Council remains the water services authority accountable for ensuring service delivery.

If available, national fiscus grant funding for the project can be contributed by the City to the project. This can be paid during the construction period or the operation period, depending on availability and conditions, and will need to be programmed and agreed contractually in the project funding model. The City's contributions will not be for the benefit of the private party (the private party does benefit directly from the grant funding made available by the City) but will rather be for the benefit of the project, effectively decreasing the unitary fee obligation and making the project more affordable.

7.5 PPP procurement strategy

A standard PPP procurement process can be followed, aligned to the PPP Guidelines, noting that the guidelines are not prescriptive but rather help establish best practice. The procurement process philosophy for the project is based on the following considerations, amongst other things:

- An appropriate procurement strategy for the identification of bidders (pre-qualification)
- A shortlist of bidders to whom the RFP will be issued
- Interaction with bidders at a very early stage
- A curtailed negotiation phase with prompt financial close

In the approach, the procurement phases and their intended outcomes are distinguished as shown in Table 3.

Table 3: Procurement phases and outcomes

	Procurement phase	Outcome
1	Project preparation	The project is structured to demonstrate indicative value for money and affordability.
2	Identification of bidders Request for qualification (RFQ) process	Because of the complexity of the project, a shortlist of interested parties are pre-qualified based on their technical experience, skills, expertise, and ability to execute the project.

	Procurement phase	Outcome
3	Competitive bidding process with functionality criteria Request for proposal (RFP) process	The preferred bidder is identified and an agreement negotiated. The reserve bidder will be notified that it will be called upon if the negotiations with the preferred bidder are not successful.
4	Contract authorisation, following the prescripts of the SCM policy, and S33 and S120 of the MFMA	A PPP agreement is duly authorised for implementation. Commercial close (contract signing) is closely followed by financial close (the conditions precedent are met).
5	Implementation	The project is managed to deliver the required works and services, and to achieve value for money for the City and the private party and service delivery for the benefit of the community.

The City's SCM policy will govern the competitive procurement and decision-making process regarding bid specification, evaluation and adjudication composition and standard operating procedures. The bid committee structures and representation are authorised transparently through the SCM policy, and the composition is determined at bid initiation phase.

7.6 PPP implementation plan

The indicative timeframes shown in **Figure 7** are anticipated per project phase.

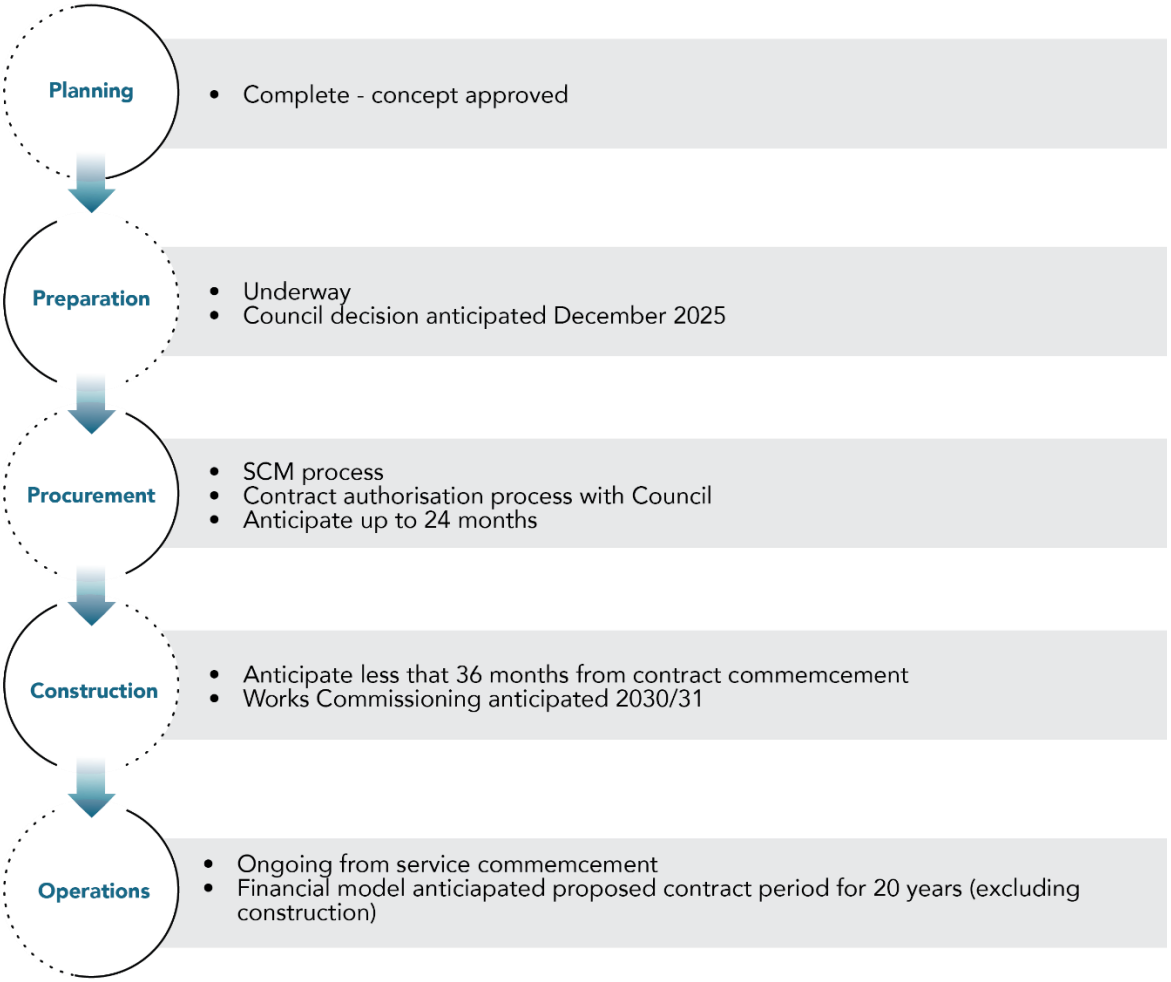


Figure 7: Project implementation timeframes (indicative)

7.7 Project team

Project preparation for the implementation of a PPP is an intensive process that requires multi-disciplinary skills and expertise.

The City Manager is the delegated authority for the process of assessing implementation options, following due process set out in Section 78 of the MSA. The **Executive Director: Water and Sanitation** is the delegated authority to submit the feasibility study to National Treasury under Section 120 of the MFMA. The City's project team is led by the City's BW Branch under the Bulk Services department. The City appointed and mandated the **Project Officer** to oversee the process. The project team will have ongoing engagement and liaison with the City branches and other departments as required during the project preparation phase.

The City is supported by an independent multi-disciplinary **Transaction Advisory team**. The team has technical, financial, legal, local government regulatory, PPP, and B-BBEE advisory capacity. The technical engineering specialists are supported by a team of suitably qualified multidisciplinary experts. A **Project Steering Committee** has representation from the City, the Transaction Advisory team, National Treasury's Government Technical Advisory Centre (GTAC), and Western Cape Provincial Treasury. The Project Steering Committee meets regularly to guide the development of the project during the project preparation phase and will continue into the procurement phase until financial close.

7.8 Concluding remarks

The PPP contracting model is an implementation option for the public sector where public infrastructure is required to be designed and developed to deliver a service, and the service can be paid for over the contract period, inclusive of the capital costs. Because the private sector takes significant technical, financial, and operational risk in the early stages of the contract and is paid a unitary fee over the contract period, the partnership aspect is important.

Based on the project parameters, the Faure NWS project can be structured as a PPP and the standard PPP contracting structure and procurement approach is appropriate. Implementing infrastructure projects by way of a PPP model is currently supported in policy at a national level. The regulatory framework is enabling. The process is rigorous, but for good reason, given the introduction of private sector participation. There will need to be ongoing active participation from all stakeholders, internal and external, to get the project procured, authorised, and implemented to achieve the additional bulk water supply required.

8 Consultation Strategy

The options assessment and feasibility study process followed by the City has been undertaken transparently, both internally and externally. Through the process has been ongoing engagement with, and reporting to:

- Council
- Community and interested stakeholders
- Organised labour
- National and provincial regulators
- Government Transaction Advisory Centre

Comments and views and recommendations received will be consolidated and reported on to Council to inform Council's decision-making process as to whether or not to in principle to proceed to procure a PPP.

If a procurement process is pursued by the City, and a contract with future financial commitment is negotiated, before concluding the Contract, there will be further opportunity for the community, stakeholders and regulators to consider and provide comments or views and recommendations.

There will be ongoing public participation processes and engagement regarding the implementation of the City's water strategy and the various projects and initiatives, including water reuse.

9 Conclusion and recommendation

The Faure NWS has been assessed thoroughly in the feasibility study in accordance with the framework and following the guidance in the Municipal PPP Guidelines. There is a demonstrated need for the project to progress as it aligns with the City's Water Strategy and will diversify and improve the resilience of the City's future bulk water supply. The Faure NWS has been through a robust design and risk assessment process developed over time and according to international standards. Due diligence review of project parameters has shown that the City has the legal and regulatory approvals in place and secured the required land to deliver the project without delay.

A rigorous value assessment evaluated the potential options that the City has to implement the project. This evaluation demonstrated that the project is affordable, and that the PPP presents the optimal value for money with the added advantage of substantial technical, financial and operational risk transfer from the City to a private party. From a project financing perspective, the Faure NWS demonstrates good prospects of attracting private financing as it has clearly defined inputs and outputs and can be physically and financially ringfenced. The Faure NWS position in the water supply chain is clear, there is a single public off-take and the commercial arrangements are simple. Delivering the Faure NWS as a PPP also presents an opportunity for one of the many projects on the City's extensive Water and Sanitation portfolio to be implemented without the need for the City to finance the capital directly and thus will allow for the City's funding sources to be directed to other prioritised projects. Implementation of projects by way of a PPP procurement and contracting strategy is supported in national legislation and currently prioritised in the South African government's policy and fiscal framework. The project contracting parameters and the regulatory framework supports the City to deliver the Faure NWS via a competitive bidding process, ensuring the best value for the City while financing the project in exchange for a unitary payment for water ultimately delivered to the public.

Delivering the project as a PPP does not constitute privatisation of public water services delivery as the City remains the owner of the asset and retains its water service authority and water service provider roles throughout the lifespan of the PPP agreement. On expiry of the PPP agreement period, the City will have the use of the asset returned in good condition able to continue to deliver bulk water. Based on the findings highlighted in the feasibility study it is recommended that the Faure NWS be implemented as a Public-Private Partnership.

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