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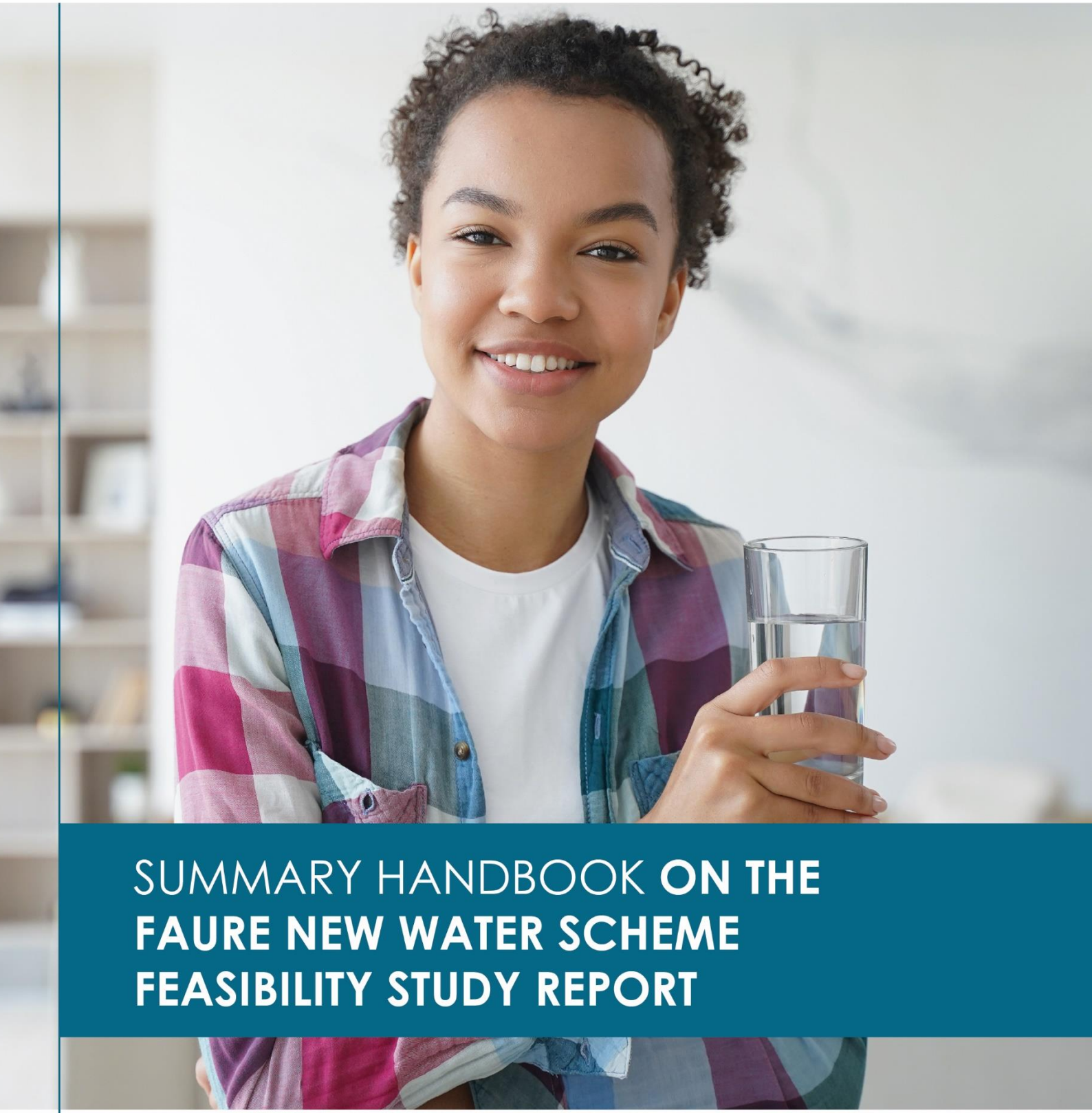


SUMMARY HANDBOOK **ON THE FAURE NEW WATER SCHEME FEASIBILITY STUDY REPORT**

Making progress possible. Together.

Summary handbook on the Faure New Water Scheme feasibility study report

Preface

This document is the City of Cape Town's summary handbook on the feasibility study report of the proposed Faure New Water Scheme. It contains a brief explanation of what the project is about, an update on the feasibility study and other project preparation work that the City has done so far, and key insights that the City obtained through the feasibility study.

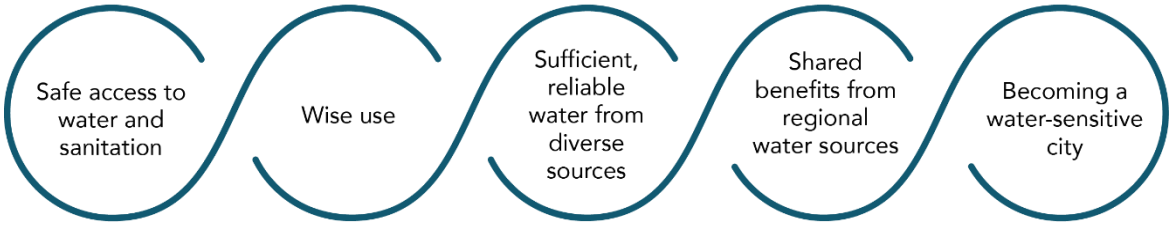
This document contributes to the ongoing public participation process related to the project, which is now reaching the important milestone where the City must decide how the project will be implemented.

Why has the Faure NWS been proposed?

From 2015 to 2017, Cape Town suffered its worst drought since 1904. It was approaching Day Zero, when its water supply would run out and the City of Cape Town – the City would no longer be able to provide adequate water and sanitation services. So Cape Town was facing a water crisis. As a result, the City was forced to declare Cape Town a disaster area.

Having declared Cape Town a disaster area, the City implemented emergency measures to ensure that the public would have water to drink: it imposed severe water restrictions on communities, implemented temporary desalination and reuse schemes, and began to speed up projects aimed at addressing water scarcity in Cape Town. In doing so, it managed to prevent Day Zero and the water crisis that that would have caused.

Because the City came so close to running out of water and being unable to provide adequate water and sanitation services, it developed and implemented its Water Strategy in 2019. The strategy is focused on five key commitments:



Turning Cape Town into a water-sensitive city requires a new relationship with water; it means thinking differently about water and how we use it. Water is a finite resource. In other words, the amount of water that we all can drink and use is limited. And because of factors such as population growth and climate change, that amount of water in the Cape Town region is becoming less. So the water that is available to Cape Town will eventually run out – unless we all start thinking of new ways to use water wisely.

In its efforts to think differently about water, the City realised that it could no longer rely solely on rainwater that is collected in dams: it would need to obtain water from alternative water sources if it wanted to maintain a steady water supply and keep providing adequate water and sanitation services.

In keeping with its Water Strategy and its goal to identify alternative water sources, the City developed its New Water Programme. The purpose of the New Water Programme is to enable the City to provide 300 million litres of water per day from a variety of water sources, including the following:

Surface water	Groundwater	Desalination	Water reuse
Surface water is the traditional supply from dams, rivers or streams. Existing systems are to be improved to make this source more reliable.	Groundwater is drawn from an aquifer, an underground layer of rock that stores water. To recharge the aquifer, treated wastewater from an advanced treatment plant is added back into the aquifer	Seawater is extracted and then processed to remove salt and other unwanted minerals, producing clean water that can be safely used.	Purification of treated wastewater using advanced technologies to produce drinking water that meets the highest drinking water standards.

Some of those water sources, and some of the many projects that the City is implementing to increase and diversify its water supply to ensure the public have adequate water now and in the future, are shown in the diagram below.

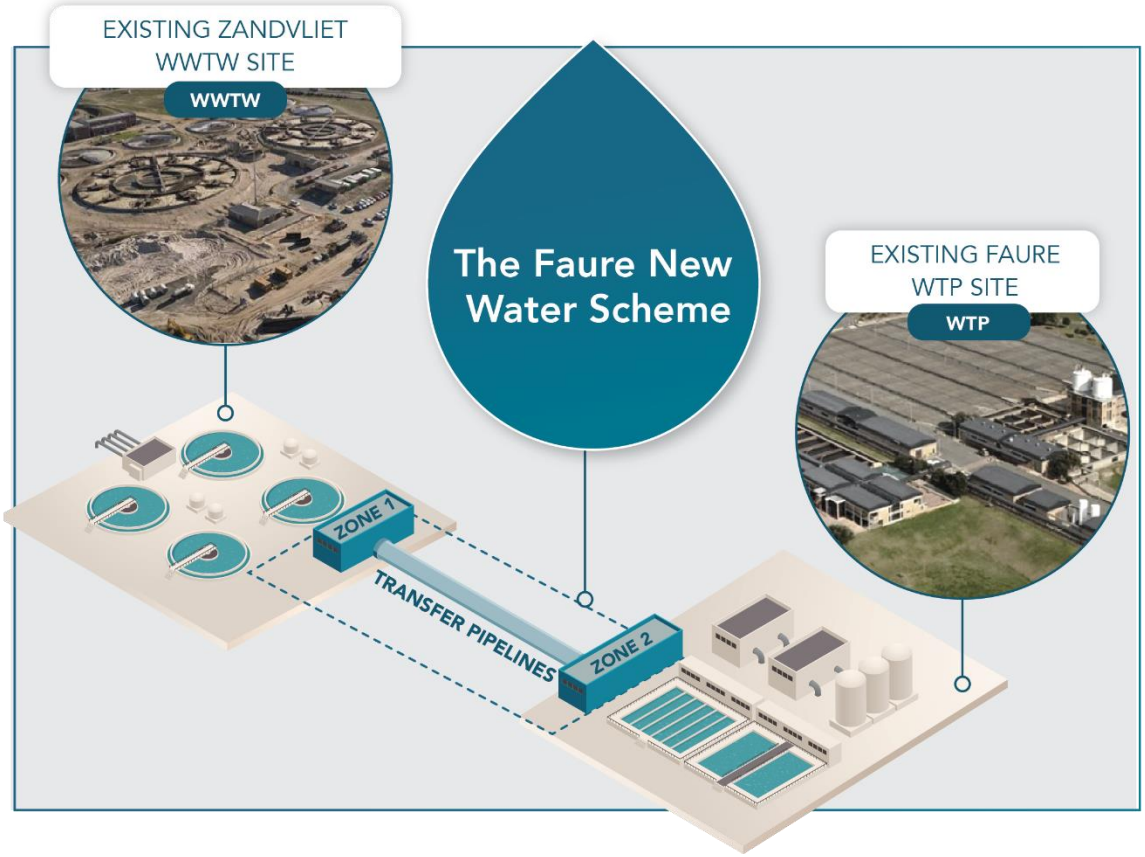
This summary handbook is focused on the Faure New Water Scheme – the Faure NWS. It contains a discussion of the process that the City has been following in exploring how best to implement the Faure NWS.

What is the Faure NWS?

The Faure NWS is a water reuse scheme that will increase the City's water supply. The concept of water reuse is not new and is already being used in other parts of the world. It is most commonly used in dry or water-stressed regions like Australia, southwestern USA (California, Texas), and Singapore. The most well-known water reuse project in southern Africa is the Goreangab Water Reclamation Plant in Windhoek, Namibia. That plant has been in operation for more than 50 years. Over time, the technology used in water reuse has continued to develop and is now highly advanced.

The City has appointed an advisory team to help design the Faure NWS. The design process is still ongoing. But at this point, the design includes mainly the following:

- Zone 1 will be located at the existing and recently upgraded Zandvliet Wastewater Treatment Works. In Zone 1, the following infrastructure will need to be constructed: a multi-barrier biological removal system, balancing storage reservoirs, and a pump station that will be used to pump water to the infrastructure in Zone 2.
- Zone 2 will be located at the existing Faure Water Treatment Plant. In Zone 2, an advanced water purification plant will be constructed to treat incoming water to drinkable standards.
- A main pipeline will be constructed to connect the infrastructure in the two zones.

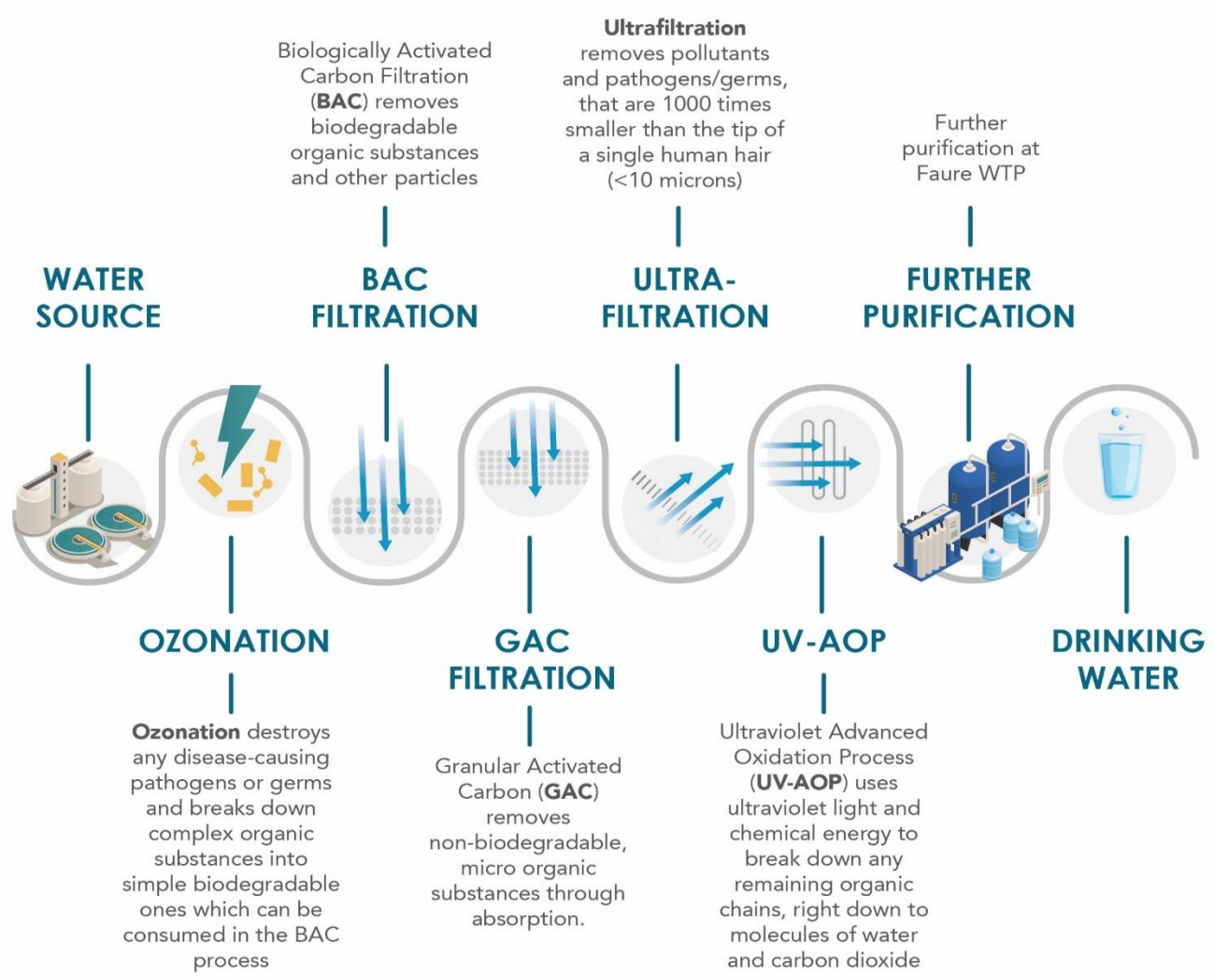


Based on the current design, the Faure NWS will enable the City to initially provide 70 million litres of water per day to the Faure Water Treatment Plant and, if more water is required, to ultimately provide 100 million litres of water per day. Once the necessary infrastructure has been constructed, the following process will be followed:

- Treated wastewater from the Zandvliet Wastewater Treatment Works will be purified at the advanced water purification plant.

- Water from the advanced purification plant will then be mixed with water from existing dam sources. The purified water will make up 25% of the mix.
- The mixed water will then be fed into the existing Faure Water Treatment Plant for further treatment before it is distributed into the drinking water network.

The treatment process involves multiple stages of treatment that work together to remove contaminants from the water to ensure it is safe to drink. The following process shows the steps 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:



What will be the cost impact of the Faure NWS?

Water from alternative water sources is more expensive than water from traditional sources like dams, rivers, and streams. But the City can no longer rely on traditional sources; it is forced to turn to alternatives. So the cost of water will increase. But the City is working hard to find different ways of implementing alternative water sources as efficiently and cost-effectively as reasonably possible. The Faure NWS will result in an increase in tariff for end-users unless the City can mitigate this by other means or subsidies. This expected increase is due to the cost of building and operating a new water supply scheme. The tariff will also be impacted by other New Water Programme schemes and the contribution from Faure NWS is calculated to be a once-off increase of ~ 6 to 8.5% in the year that the project is commissioned.

Who are involved in the project?

A project of this size and importance requires input from the entire water sector. Each group plays a role in making sure that the system is well designed, that the system meets legal requirements, and that the water that will be supplied is safe for public use.

Council

The Council is the water services authority (WSA) that is ultimately accountable to the community for ensuring service delivery. It has legislative and executive responsibilities regarding the City's powers and functions, which include the delivery of water and sanitation services.

The City

The City is the water services provider (WSP), delivering water and sanitation services to its community. In delivering effective and efficient service, a key function of the WSP is to plan and implement infrastructure. It owns the infrastructure and decides how to procure and operate the infrastructure to enable service delivery.

Transaction Advisory team

The City is supported by an independent multi-disciplinary Transaction Advisory team. The advisory 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.

Project Steering Committee

A Project Steering Committee has representation from the City, Transaction Advisory team, National Treasury's Government Technical Advisory Centre, and the 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.

What has been done on the project so far?

As one of the key projects in the City's New Water Programme, the Faure NWS has progressed significantly over the past few years. The design development for the project is advanced and has been peer-reviewed by an independent panel of local and international experts. The City has confirmed that the land on which Zone 1 and Zone 2 of the Faure NWS will be located is owned by the City, available, and zoned correctly. The City has also been granted a water use licence for the Faure NWS under the National Water Act.

The implementation of the Faure NWS will involve the use of new advanced technologies. It is a pioneering water reuse project that has not been done in South Africa at this scale. So the Faure NWS will be a significant upgrade to the services the City provides.

When the City wants to implement any significant upgrade to its services, it must, according to Section 77 of the Local Government: Municipal Systems Act, first conduct an investigation in keeping with the process set out in Section 78 of that Act. And the City has done that.

What did the investigation involve?

In terms of Section 78 of the Local Government: Municipal Services Act, an investigation must be done as follows:

Section 78(1) – Assessment and assessment report	The City must assess the financial, technical, operational, and human resources that will be required to construct, manage, operate, and maintain the Faure NWS, and determine if it has the necessary capacity, expertise, and resources to develop and implement the project on its own or if it might need to consider other suitable options. The City must then write a report on the assessment and submit it to the Council for approval.
Section 78(2) – Council decision	If the City's assessment report is approved by the Council, the City decides whether it will be able to construct, operate, and maintain the Faure NWS using its own resources. If not, the City must conduct a feasibility study to explore options to contract with an external party to carry out construction and/or operation and maintenance activities.
Section 78(3) – Feasibility study and feasibility report	If mandated to do so, the City must conduct a feasibility study. In the study, the City must consider technical, financial, and institutional aspects, and identify and explore suitable options to implement the construction and/or operation and maintenance activities for the project. The City must also engage and request the views of the public and organised labour. The City must then write a report on the feasibility study. In the report, the City must discuss the aspects and potential options it considered. It must also indicate its preferred option and state its reasons for preferring that option.
Section 78(4) – Council decision	The Council considers the City's feasibility report and decides if it is appropriate for the City to implement project construction and/or operation and maintenance activities using the preferred option.

Assessment and assessment report

- The City conducted the required assessment and submitted its assessment report to the Council for approval. Its findings included the following:
- The Faure NWS project aligns with national, provincial, and municipal strategies and policies, including the National Strategy for Water Reuse.
- The City has done much work towards planning and designing the Faure NWS.
- The City will be able to perform some of the functions and activities that will be required to implement the Faure NWS: if it has the means to finance the project, then the City will have the technical and human resources to procure, manage, and administer an external team to construct and commission the Faure NWS. And it will be able to do so by following its normal internal processes.
- Operating and maintaining the Faure NWS will require resources, protocols, rigour, agility, and staffing at a level that the City currently cannot meet. The City faces challenges to fill its current operational capacity and will struggle to build the skills and capacity required to operate and maintain a water reuse plant with the complexity of the Faure NWS. A management contract for the operation and maintenance of the Faure NWS could be an appropriate option.

Council's approval and decision

The Council approved the assessment report and in October 2023 authorised the City to undertake a feasibility study to explore the contracting options for the operation and maintenance of the Faure NWS.

Additional option to be considered

Before the feasibility study was begun, concerns were raised in the City's budget planning discussions that the City was nearing the limit of what it could borrow, and that the implementation of the Faure NWS would need to be delayed. But such a delay would compromise the New Water Programme and the City's commitment to make Cape Town a water-secure city. So the City had to explore other ways of financing the project.

The City's advisory team identified that a possible option was to enter into a public–private partnership – a PPP. The City, as part of the feasibility study, was already considering whether to outsource the operation and maintenance of the plant. The PPP would modify that approach by also looking at outsourcing the financing of the Faure NWS project.

Options assessment

The introduction of the PPP as an option required the City to revisit its original assessment and reevaluate the financial resources that it had available to implement the Faure NWS. Through the assessment, it was confirmed that the City was in a position to procure and oversee the construction of the Faure NWS, but that it would be difficult for the City to finance such a large investment with so many other projects competing for financing in the City's budget. The Faure NWS was found to be a potential candidate for a PPP, which would include financing in addition to its construction, operation and maintenance. This finding was recorded in a revised assessment report for the Council's consideration.

Council's approval and decision

In June 2024, the Council approved the City's revised assessment report and authorised the City to proceed with a feasibility study to consider alternative options for the procurement, financing, construction, and operation of the proposed Faure NWS. Those options now included a PPP.

What options and inputs did the feasibility study involve?

Feasibility study requirements

Because the feasibility study now included a PPP option, the City was required to consider the legal requirements set out in the Municipal Finance Management Act. That Act holds municipalities accountable for responsible financial management. Section 120 of the Act clearly governs the process for a municipality to enter into a PPP agreement.

The City registered the project as a potential PPP with National Treasury in October 2024. By registering the project with National Treasury, the City obtained the support and oversight of the PPP Unit in National Treasury's Government Technical Advisory Centre. The City conducted the feasibility study in keeping with the requirements stated in the Municipal PPP Regulations and National Treasury's Municipal PPP Guidelines.

Implementation options considered

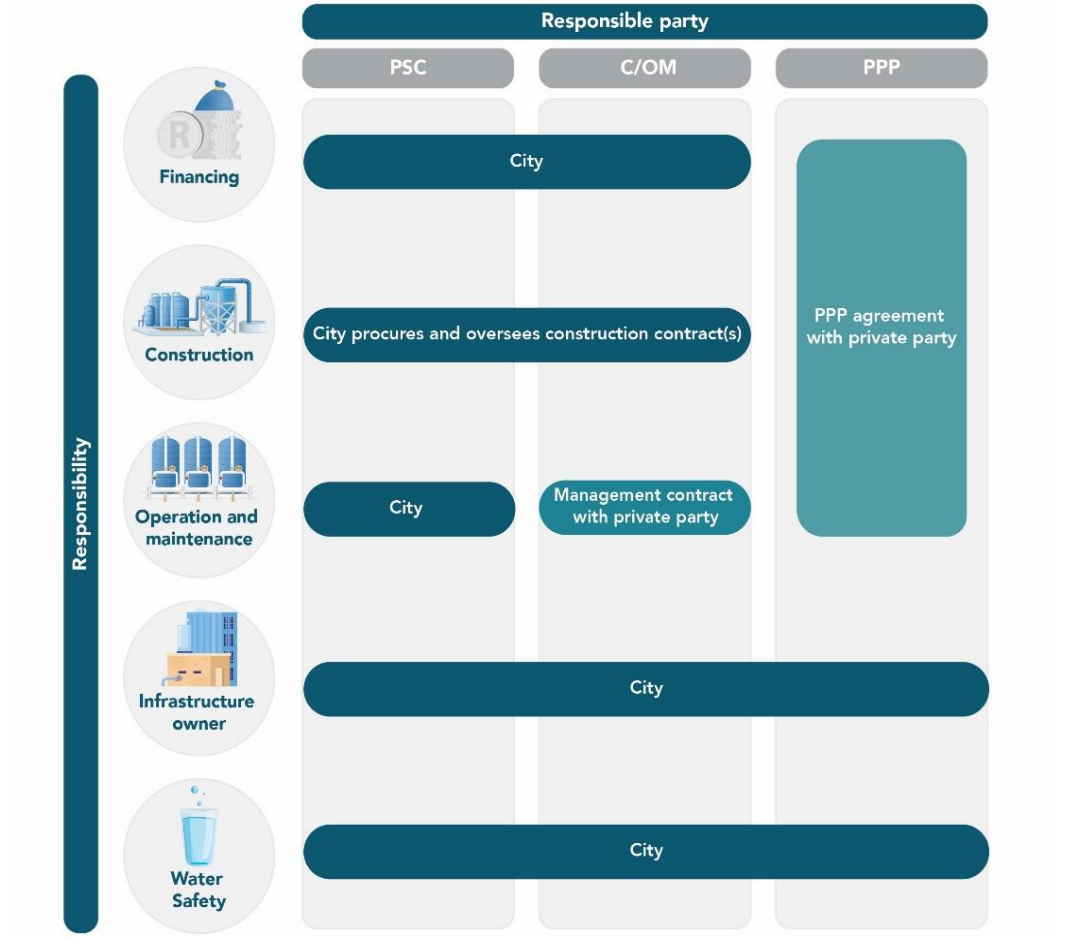
In the assessment that the City had initially done as part of the Section 78 process, the preferred way of implementing the project was for the City to finance, procure, and oversee the construction ("C") of the Faure NWS itself and for a private service provider to operate and maintain ("OM") the Faure NWS. In the feasibility study, this is referred to as the "C/OM" option.

In its revised assessment, the City introduced the possibility of a public–private partnership – the PPP option. Under that option, the City would procure a private party to take over the responsibility for designing, financing, constructing, operating and maintaining the Faure NWS. The project would initially be financed by the private party, but after the

construction of the Faure NWS, the City would pay for the water supplied from the Faure NWS through a unitary payment. This payment covers the costs of constructing and operating the Faure NWS.

The Municipal PPP Guidelines requires the PPP option to be compared with an option of the City itself carrying out all implementation functions. The City would implement the project under a series of contracts. And the City would pay for the construction and commissioning of the scheme from its capital budget, while it would pay for the operation and maintenance of the scheme from its operational budget. This City-only option is the public sector comparator (PSC) option.

The cost and other attributes of the PPP were measured against those of the PSC and C/OM option. The parties responsible for each of the implementation stages of the project are shown below.



Financial modelling and risk assessment

Having explored those three implementation options, the City's advisory team undertook a comprehensive financial modelling exercise to evaluate each of the options. An important aspect was to assess the potential risks that could occur during all the stages of the project and to consider how those risks could affect each of the implementation options. The advisory team conducted in-depth risk workshops to engage City stakeholders and gather their perspectives on potential risks and the possible effects of those risks on the implementation of the Faure NWS. Representatives from multiple departments within the municipality participated, contributing diverse viewpoints that enriched the overall assessment.

The individual risks were grouped based on the phases of the project lifecycle and assessed individually for their likelihood, effect, potential to be mitigated, and ownership. About 91 risks were evaluated, but two exceptional risks stood out: the cost of delaying the project and the cost of inefficiency in the operation of the Faure NWS.

Cost of delaying the project

For the City to ensure that its water supply can meet the anticipated demand, the Faure NWS must be fully operational and capable of delivering 70 million litres of water per day by 2031. So construction has to start in 2028/2029 at the latest. From the assessment of the City's finances during the Section 78 process and the significant amount of projects required to deliver on the New Water Programme, the project will be competing for financing from the City's capital expenditure budget. In the short to medium term, the Faure NWS cannot be accommodated. So if the City chooses the PSC or the C/OM implementation option, and decides to wait until it can add the project to its budget, the project could be delayed by at least six years. Such a delay might be acceptable under normal circumstances. But as stressed in the Water Strategy, the City can no longer rely solely on rainwater to fill up dams in the region. If Cape Town experiences another drought like that from 2015 to 2017, then one of the other projects in the New Water Programme would have to be brought forward as an emergency response. That project would be far less advanced in the design process and might cost even more to implement in an emergency scenario.

The reality of not having enough water to supply to the public may be even worse, such as resorting to temporary desalination, temporary water reuse, and water trucking. The economic implications to the City of not having water available at all are severe and unacceptable. Given the City's existing budgeting constraints for the short to medium term, the PPP option is more attractive as there is no delay to financing.

Operational inefficiency

Proper operation directly affects the ability of the Faure NWS to consistently meet water quality standards, protect public health, and reduce its impact on the environment. Over its lifetime, efficient operation and maintenance minimises energy use, chemical consumption, and maintenance costs. So an efficient operator will significantly lower operating expenses and extend the lifespan of the Faure NWS. The Faure NWS will incorporate advanced technologies that are new to the City and the project will require operational rigour at a level significantly higher than needed for the conventional water treatment plants operated by the City. By contrast, the two options where the operation of the scheme is outsourced, namely C/OM and PPP, will be subject to strict contractual and financial oversight, which would uphold efficiency throughout the lifespan of the project.

Key findings

These findings were key outputs from the financial modelling exercise when determining the best implementation option available to the City.

The C/OM option, which would involve City-funded construction and separate operation contracts, would work well in terms of operational efficiency but would also be subject to any delay costs of budget being available to the City in the short to medium term.

The traditional PSC option, which would entail City-funded construction but operating the scheme internally, would be subject to inefficiency concerns for operation as well as the cost of a delay to funding.

Under the PPP option, financing would be provided for by the private party from the start of the PPP agreement, while the operation of the works would be subject to strict parameters and controls to ensure that the scheme ran as efficiently as possible. In other words, if the financing of the project is delayed and inefficient operation is considered, the PPP option is the implementation option that provides the best value to the City. Based on these considerations, the City's advisory team independently recommended that the City proceed to competitively procure and implement the Faure NWS by means of a PPP agreement.

What would a PPP agreement look like for the City?

A PPP is a procurement choice made by the City. It requires a written contract – a PPP agreement – between the City and a private party.

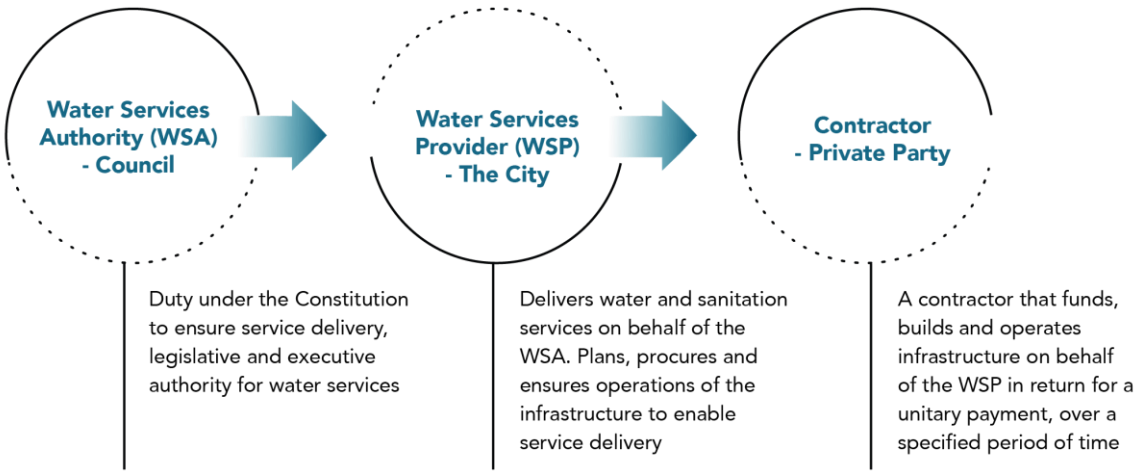
Under a PPP agreement, the private party will need to provide a service to the City to provide bulk water. It will need to provide that service to specified levels detailed in the agreement. It will also accept significant technical, financial, and operational risk, and will construct and operate the infrastructure it needs to deliver the required service.

The City will retain a major role as the main purchaser of the services that the private party provides. Although the private party will fund the construction of the plant, and will operate the plant, the Faure NWS will remain the property of the City. The City will pay the private party an agreed unitary payment over the duration of the agreement. This payment includes all the private party's cost (including the original financing cost of construction) as established under a competitive tender process. The first payment is only made when the project is fully operational. If the private party operates the plant efficiently, it will also earn a 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 where transparency and informed decision-making is required by law.

Does a PPP mean privatisation?

The first phase of the public participation process has already taken place for the Faure NWS. This process allowed for comments from the public on the proposed Faure NWS as well as the possibility of implementing the Faure NWS by means of a PPP. A common question that concerned the public around the involvement of the private sector in public infrastructure is whether a PPP is privatisation. It is not. Under a PPP agreement, the private party is a contractor to the WSP. The private party funds and builds the infrastructure and then operates the infrastructure to deliver an output to the off-taker, which in this case is the City. The City pays a unitary payment for the off-take if it meets the quality and quantity contracted for. Throughout the PPP agreement, the City is the owner of the infrastructure. If the PPP agreement is terminated, the infrastructure and operations revert to the City.



Are water reuse projects and PPPs recognised in South African law?

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), the Department of Water and Sanitation notes the need to reduce water demand and increase water supply through various sources, including the reuse of wastewater from wastewater treatment plants. The Department of Water and Sanitation, in partnership with the South African Local Government Association and the Development Bank of Southern Africa, has established the Water Partnerships Office to develop standardised national programmes for private-sector participation in municipal water and sanitation, including to facilitate blended financing and credit enhancement options. Water reuse is a prioritised standard programme under the Water Partnerships Office.

PPPs are recognised under South African law and have been part of the regulatory framework since 2003. National Treasury had a PPP Unit and now has the Government Technical Advisory Centre to support the PPP process. Infrastructure South Africa is a programme in the Ministry of Public Works and Infrastructure that is focused on public- and private-sector infrastructure projects. Accessing private-sector funding for infrastructure development is a national priority at the moment.

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, the City currently has no standard templates for procurement documents or PPP agreements. The PPP bid documents, and the terminology used in them, will be aligned to the City's SCM policy and practices for competitive bids and bid committees. It is the City's SCM Policy that will govern the competitive procurement and decision-making process regarding how the bid process is specified, evaluated, and approved.

What happens next?

Stakeholder engagement

The City has already conducted a public participation campaign on the Faure NWS and informed the public of the feasibility study process and the potential to implement this project through a PPP.

Now that the feasibility study has been completed, the City invites the local community and other interested persons to submit views and comments in respect of the Faure NWS and the proposed PPP.

The feasibility study will also be submitted to National Treasury, Western Cape provincial Treasury, Department of Water and Sanitation and COGTA.

Council decision

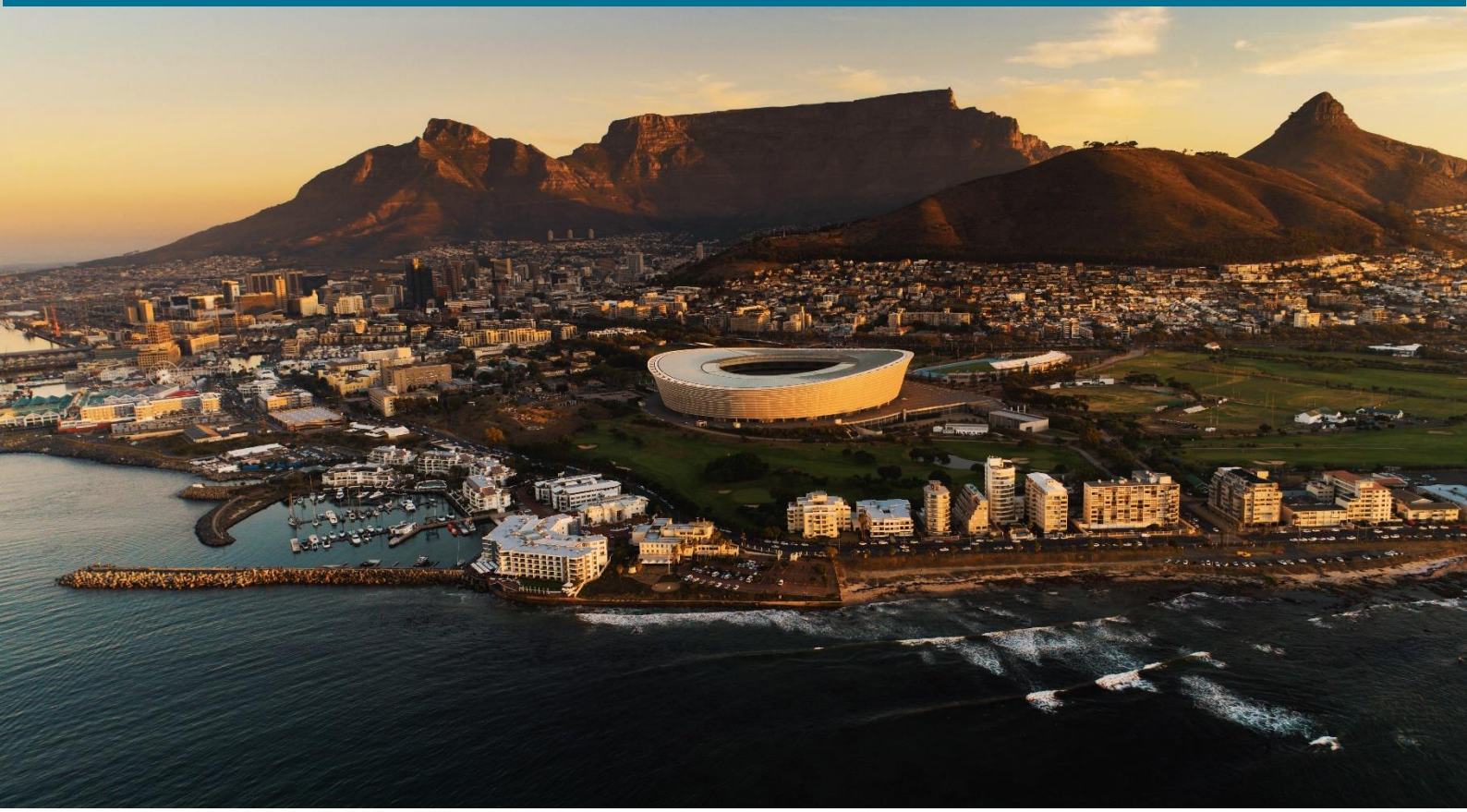
Once views and comments are received from the public, these will be presented to the Council together with the City's recommendations from the feasibility study. The Council will consider them when deciding whether the City should continue with the proposed PPP in principle.

It is anticipated that the Council will make a decision by December 2025. If the Council decides that the City should not proceed to procure a PPP, the City will need to address the need for bulk water supply through alternative means. But if

the Council decides that the City should proceed to procure a PPP in principle, the City will need to undertake a competitive procurement process to procure and conclude a PPP agreement.

Project preparation for the implementation of a PPP is an intensive process that requires multi-disciplinary skills and expertise. The City has organised itself accordingly and will continue to do so through the procurement and implementation processes.

After the procurement process, any draft contract and an information statement on the City's obligations in terms of the proposed contract will be made public and the local community and other interested stakeholders will again be invited to make comments in respect of the proposed contract and the future financial commitment.



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