



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

**PUBLIC PARTICIPATION TO OBTAIN VIEWS OF THE LOCAL COMMUNITY ON THE
EXPLORATION OF THE POSSIBILITY OF PROVIDING A MUNICIPAL SERVICE
THROUGH AN EXTERNAL MECHANISM: MSA S78(3)(b)(iii)**

DSL1 – PAARDEN EILAND DESALINATION PROJECT
12 and 19 February 2025



Making progress possible. **Together.**

Content

1. Background and objective of this public participation event
2. Needs Analysis
3. Technical Solution Options Analysis
4. Service Delivery Option Analysis
5. Delivery mechanism summary and interim recommendations
6. Due diligence
7. Way forward - Value assessment (and Economic Valuation)
8. Way forward - Procurement plan
9. Way forward - Final feasibility study report and decision by Council
10. Additional control measures
11. Frequently asked questions
12. Questions and comments

1. Background and objective of this public participation event

1.1 MSA Section 78 Process overview and steps to date

1.2 Objective of this event

1.1 MSA Section 78 Process overview and steps to date

- In terms of Section 77 of the Municipal Systems Act (MSA), Act 32 of 2000, a Municipality must review and decide on the appropriate mechanism to provide a Municipal Service when, inter alia,
 - Reviewing the Integrated Development Plan
 - A new Municipal Service is to be provided
 - An existing Municipal Service is to be significantly upgraded, extended or improved
- The provision of potable water through desalination will extend and improve an existing Municipal Service to provide potable water.
- The planned Desalination Plant has been included in the Cape Town Water Strategy (2019) as well as the latest Integrated Development Plan (2022-2027) and is reported on publicly in the annual Water Outlook
- Both the CCT Water Strategy and the IDP adoption included Public Participation Processes.
- Section 78 of the MSA sets out the criteria and process for deciding on appropriate mechanisms to provide Municipal Services.

1.1 MSA Section 78 Process overview and steps to date 'ctd

- Section 78 requirements can be broadly categorised into 4 parts
 1. S78(1), which requires the municipality to investigate the suitability to provide the Municipal Service through an **internal mechanism**
 2. S78(2), which states that the internal mechanism can be selected if suitable, or if unsuitable, it must **explore the possibility of providing the service through an external mechanism**
 3. S78(3), which provides the **requirements if an external mechanism is explored**
 - a. One of these requirements is to assess the different service delivery options, taking into account the views of the local community
 4. S78(4), which states that a municipality must **decide on the appropriate internal or external mechanism after all requirements in S78(3) have been met**



WE ARE HERE, NOW

Overview of the Feasibility Study process

Status of Feasibility Study:

Stage 1: Needs Analysis – Complete ✓

Stage 2: Technical Solution Options Analysis – Complete ✓

Stage 3: The Service Delivery Options Analysis – Complete ✓

Stage 4: Delivery Mechanism Summary and Interim Recommendation - Complete ✓

Stage 5: Due Diligence – In progress

Stage 6: Value Assessment – In progress

and Economic Valuation In progress

Stage 7: Procurement Plan – In progress

Stage 8: Submit Feasibility Study Report to Council – Process planned for the latter half of 2025

1.1 MSA Section 78 Process overview and steps to date 'ctd

Indicative timeline overview of 2024 and 2025

S78(2) Council Approval

Council approved, on 27 Mar '24, that a detailed feasibility study be conducted, in line with S78(3) requirements, of alternative options for the implementation and operation of CCT 1st Permanent Desalination Plant.

This was informed by the following detailed reports generated in consultation with National Treasury

1. Needs Analysis
2. Technical Options Analysis
3. Service Delivery Options Analysis
4. Delivery Mechanism Summary and Interim Recommendation

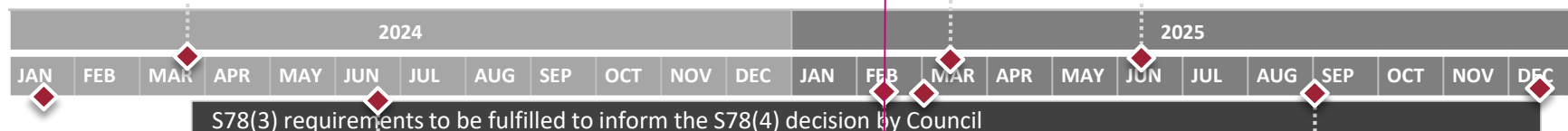
Procurement plan

This plan will include, inter alia;

1. Procurement timelines for the recommended procurement choice
2. Required governance processes to inform decision making
3. Approval requirements within and outside of the municipality
4. Appropriate quality assurance processes

Completion of feasibility study

The feasibility study report includes the findings of all the investigative reports which forms part of the S78 process



S78(1) Council/Mayco approval

Council/Mayco approved, on 16 Jan '24, that the assessment to identify the most suitable mechanism for the implementation and operation of CCT 1st Permanent Desalination Plant can be done in line with S78 requirements

Due diligence investigation completed

Includes legal, site enablement, BBBEE and other socioeconomic considerations

Value assessment report

This report will summarize the findings related to inter alia;

1. Affordability and value for money
2. Value of risk transfer related to an external service delivery mechanism
3. Qualitative considerations
4. Recommend a procurement choice

S78(4) Council decision

In principle decision from Council to continue, or not continue, with the procurement of the recommended service delivery mechanism.

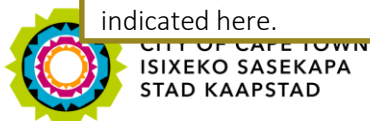
Note: Certain statutory and regulatory processes will also have their standalone, purpose specific Public Participation Process (EIA, LUMA requirements etc) in addition to of the S78 processes indicated here.

Public Participation

To solicit the views of the local community on the potential to provide a Municipal Service through an external mechanism

Public Participation

To solicit comments from the public on the findings and recommendations in the feasibility study report



1.2 Objective of this event

This session, today, aims to **collaborate with the local community** in a public participation process to **solicit the views** of the local community on the **exploration** of CCT of extending the water supply, through an **external delivery mechanism**. The facility identified is a Desalination plant in Paarden Eiland.

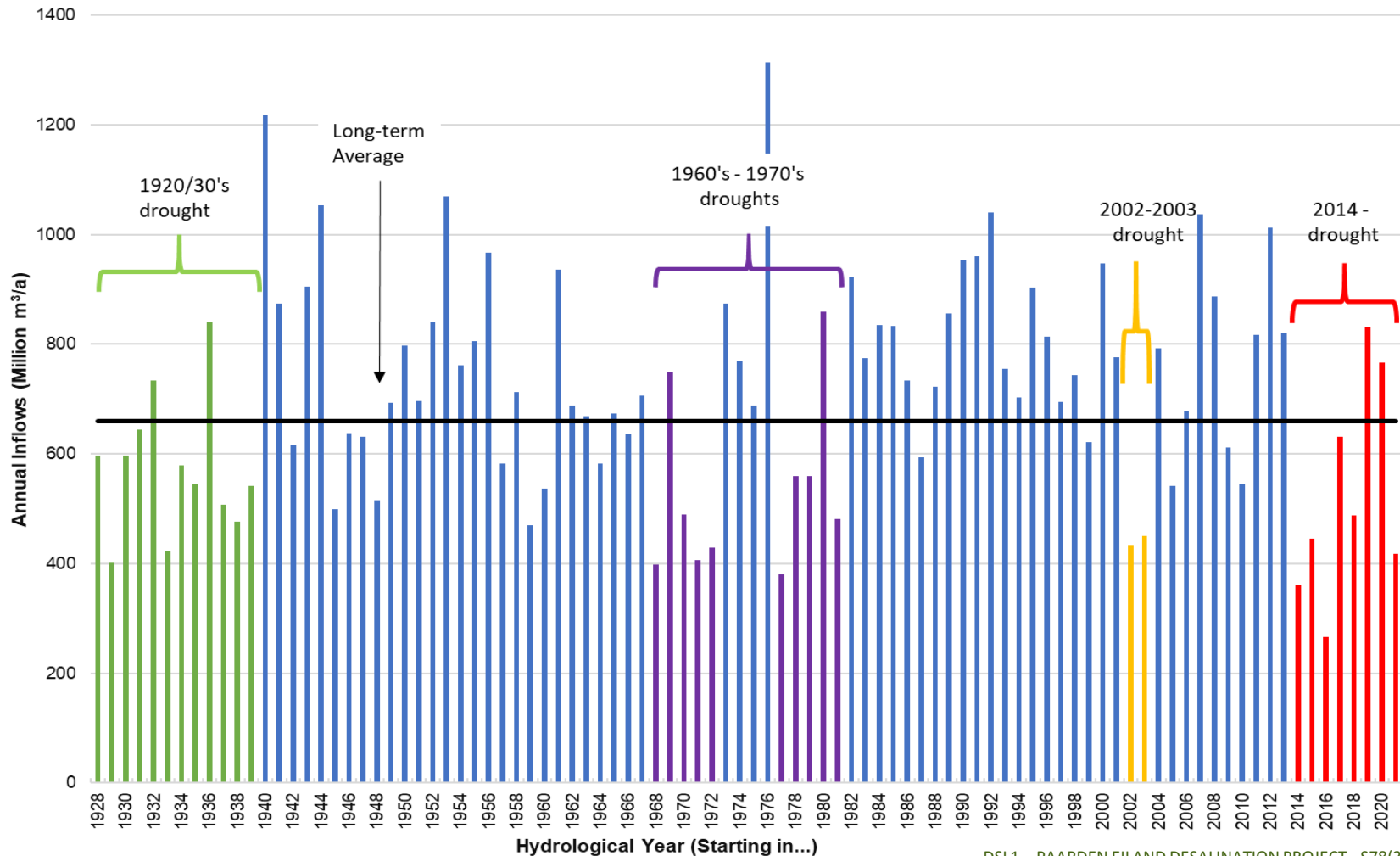
2. Stage 1: Needs Analysis

Alignment with the City's Strategic Objectives and Defining the Project

Runoff into the WCWSS dams

Cape Town is prone to droughts

Day zero was a wake-up call. Cape Town will experience this, and possibly worse, in future



DSL1 – PAARDEN EILAND DESALINATION PROJECT - S78(3)(b)(iii) PRESENTATION

2014-2018 drought a 1-in-590 year event

In response to the drought



Approved May 2019



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD



Five commitments in the Water Strategy

1. **Safe access to water and sanitation** for all

Inclusion

"Do the basics better"

2. **Wise water use** through pricing, regulation, active citizenship, network management

Resilience

(drought response)

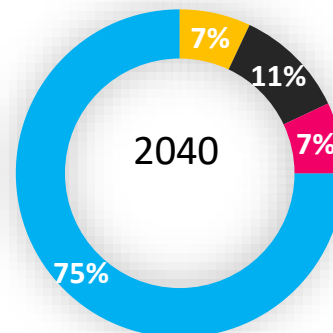
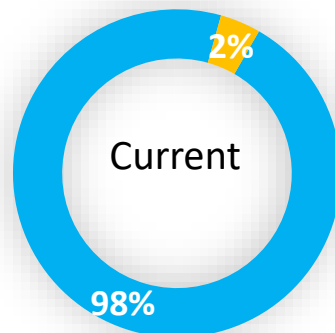
3. **Sufficient, reliable water from diverse sources:**
surface, ground, desalination, reuse

New Water Programme

4. **Shared benefits & managed risks** from regional water resources

5. **Water sensitive city** by 2040

Sustainability



Stage 1: Needs Analysis

A key objective of the Needs Analysis phase is to demonstrate that the Project aligns with the City's strategic objectives and to define the Project accordingly.

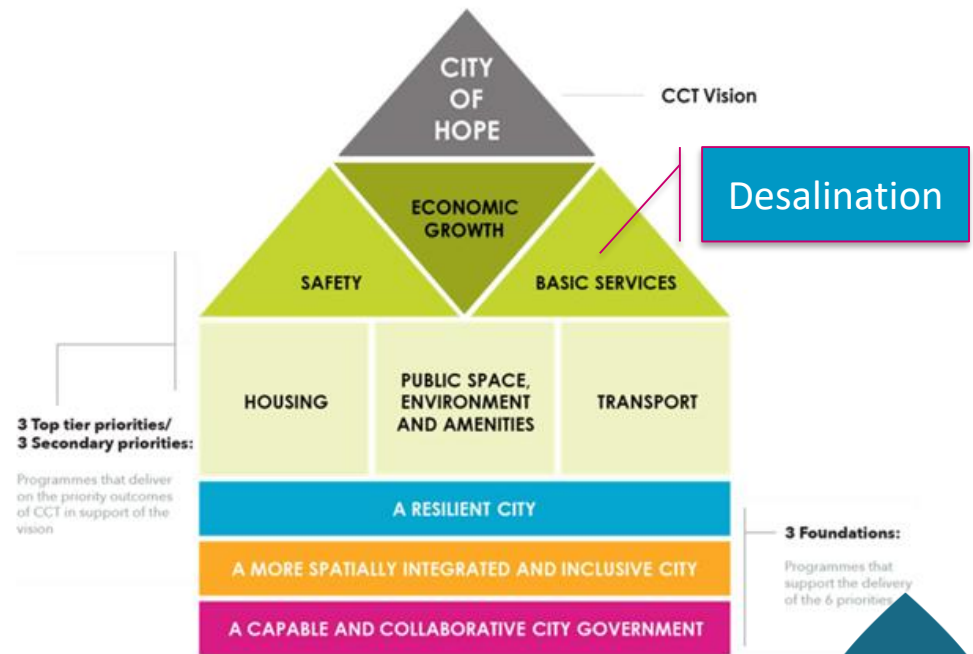
The City's strategic objectives are driven by:

Water Strategy (2019)

Commitment 3:

Sea water desalination forms part of the planned augmentation encompassed in the **Water Strategy: Commitment 3**, which states that the City will focus on new and diversifying sources of water at scale, including groundwater, water reuse and **desalination**, with the objective of successfully augmenting the existing surface water system thereby increasing resilience of the supply system.

Integrated Development Plan ('22-'27)



Stage 1: Needs Analysis – Alignment with the Water Strategy

The Stage 1 Needs Analysis Report, specified the intended phases in respect of the 'Committed Programme' and 'Adaptable Programme', as outlined in the Water Strategy, which guides the implementation timeframes to meet the required production volumes from desalination.

Required minimum production	Water Strategy Programme
50 - 70 Mℓ/day	Committed Programme
Future desalination plants will be pursued through the 'Adaptable Programme' as outlined in the Water Strategy	

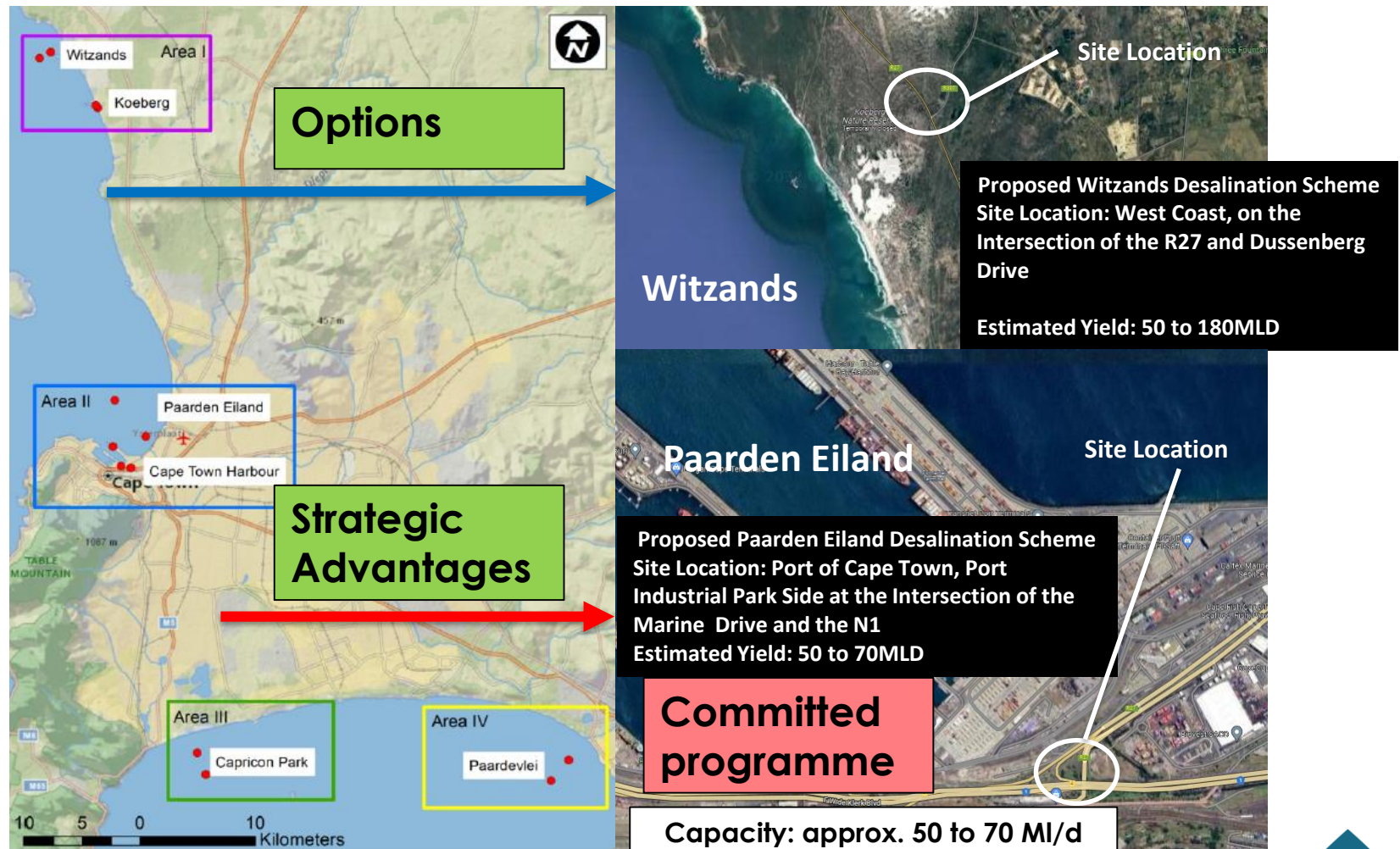
Output Specification:

- a) Adequate volume – a minimum of 50 Mℓ/day from desalination;
- b) Adequate water quality – compliance with the SANS 241:2015 code;
- c) Reliability of the service;
- d) Affordability of the service in line with the City budget; and
- e) Acceptance by Interested and Affected Parties.

3. Stage 2: Technical Solution Options Analysis

In the technical solution options analysis, the municipality identifies and evaluates the various technical options to meet its needs.

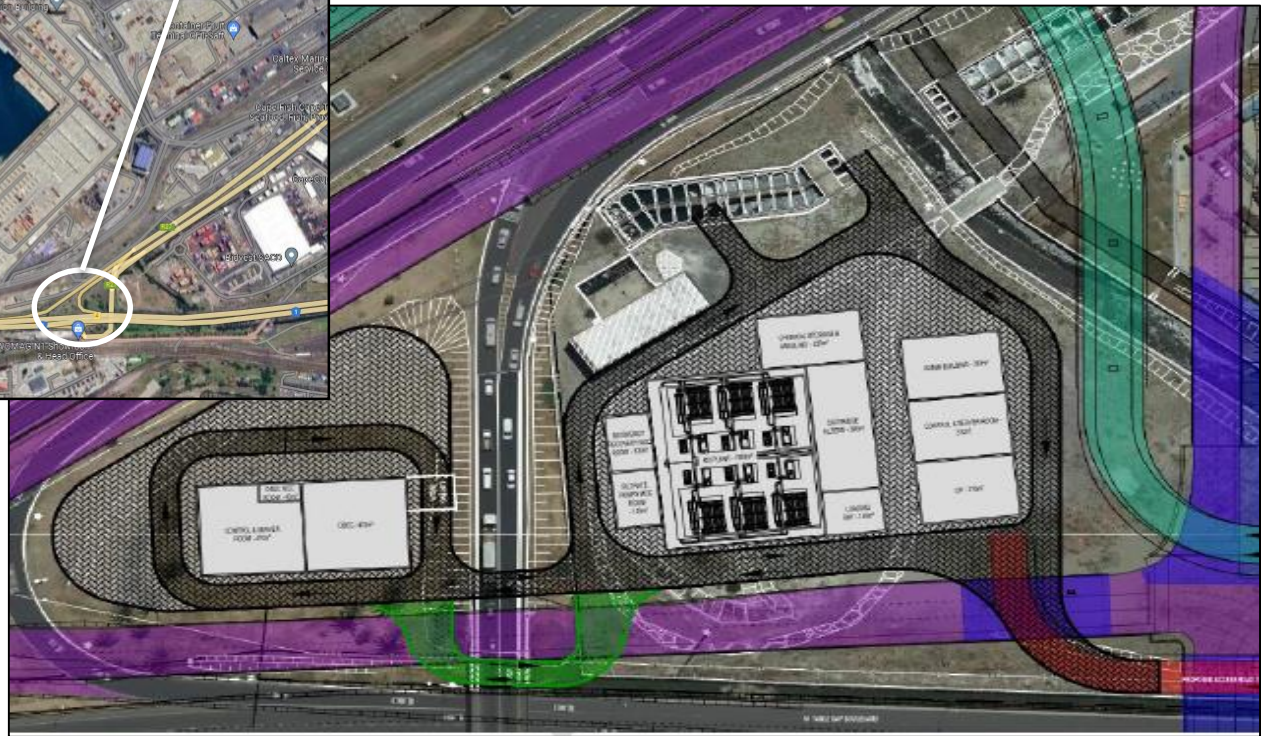
Stage 2: Technical Solution Options Analysis



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

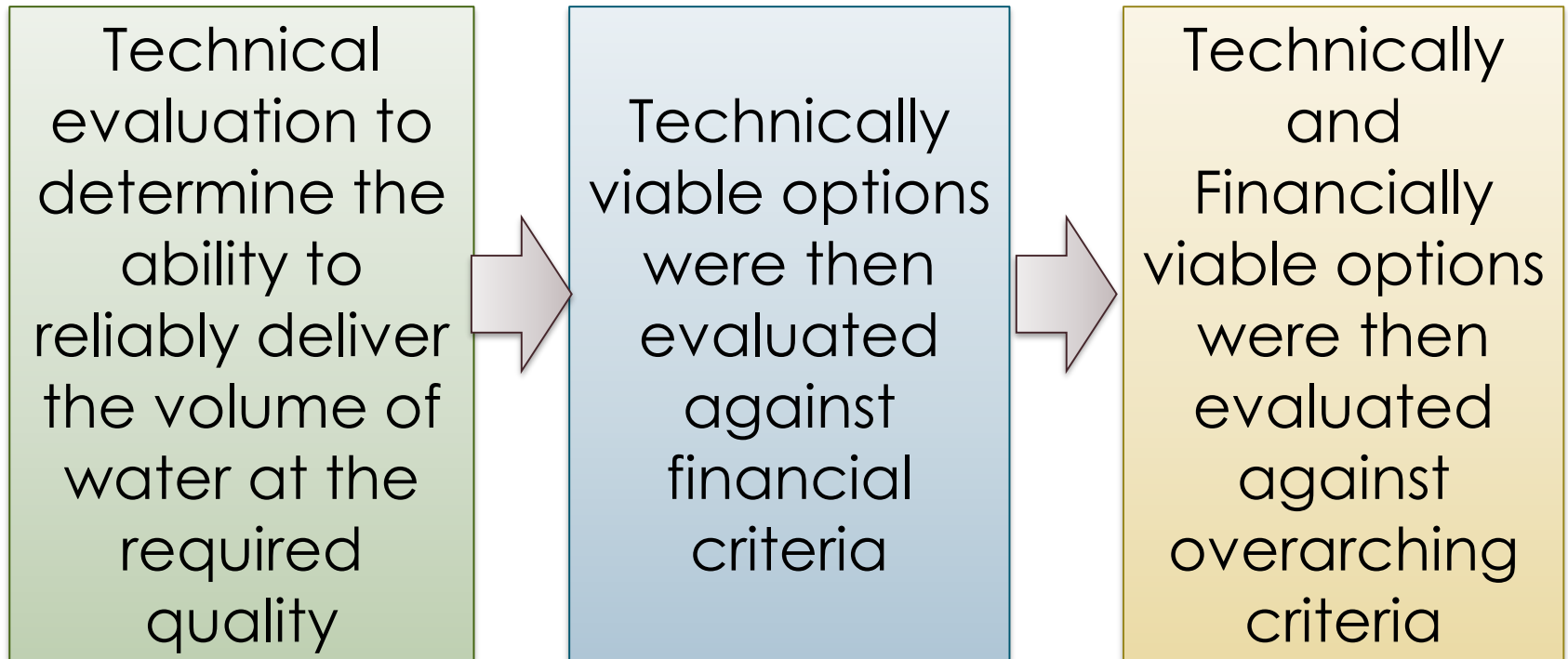


Paarden Eiland Site



Stage 2: Technical Solution Options Analysis

Methodology Summary

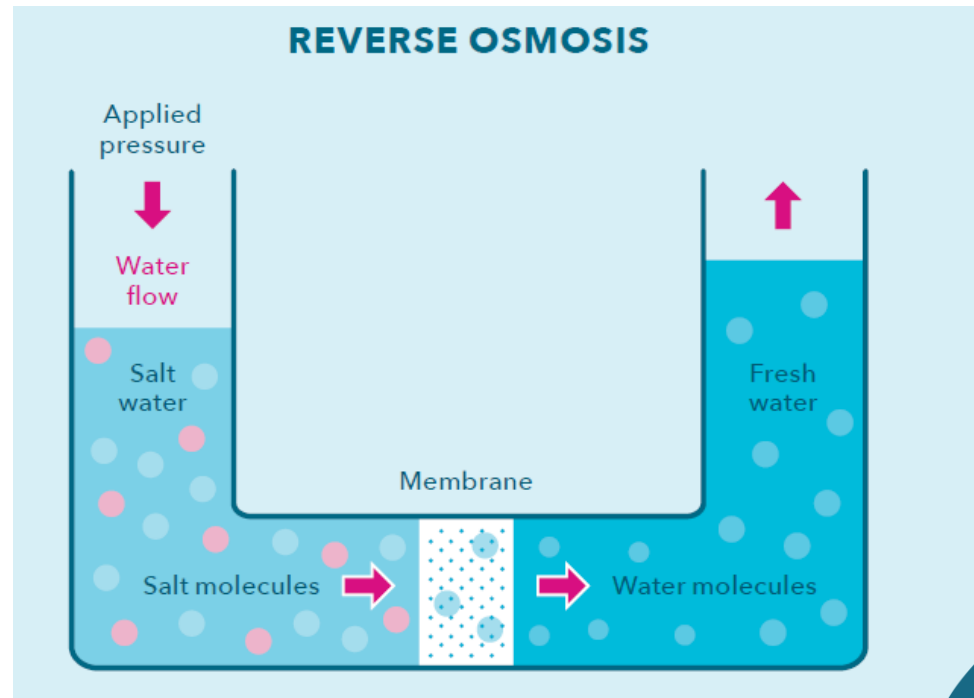


Stage 2: Technical Solution Options Analysis

Desalination Technology

The Sea Water Reverse Osmosis (SWRO) plant will use a Reverse Osmosis (RO) process, whereby seawater is pumped at high pressure through permeable membranes to produce clean water and brine outflow streams.

The process removes unwanted elements from the seawater and produces demineralised water which is then treated chemically to comply with the City's specifications.



Stage 2: Technical Solution Options Analysis

Desalination Technology

The RO unit processes are well established and proven.

Comprehensive raw water sampling informs envisaged abstraction / brine disposal locations

Pre-treatment and optimal unit processes and technologies are then made

Stage 2: Technical Site Solution Options Analysis

Paarden Eiland Site Options

Options	Technical Solution Options Description
Option 1	Gravity flow from the Elliot Basin via an existing culvert
Option 2	Pumped abstraction from Ben Schoeman Basin

Stage 2: Technical Solution Options Analysis

Paarden Eiland 6 Main Options

TNPA VESSEL
ANCHORAGE AREA

TNPA planned port
expansion (2052)

Outfall
(1 – 5)

Option 2

Pipe Route

Option 1

Paarden
Eiland Site



Stage 2: Technical Site Solution Options Analysis

Paarden Eiland Site Options

Options	Technical Solution Options Description
Option 3A & 3B	Offshore riser intake
Option 4A and 4B	Offshore caisson intake

Stage 2: Technical Solution Options Analysis

Paarden Eiland 6 Main Options



Stage 2: Technical Site Solution Options Analysis

Paarden Eiland Site Options

Options	Technical Solution Options Description
Option 5	Offshore riser intake

Stage 2: Technical Solution Options Analysis

Paarden Eiland 6 Main Options

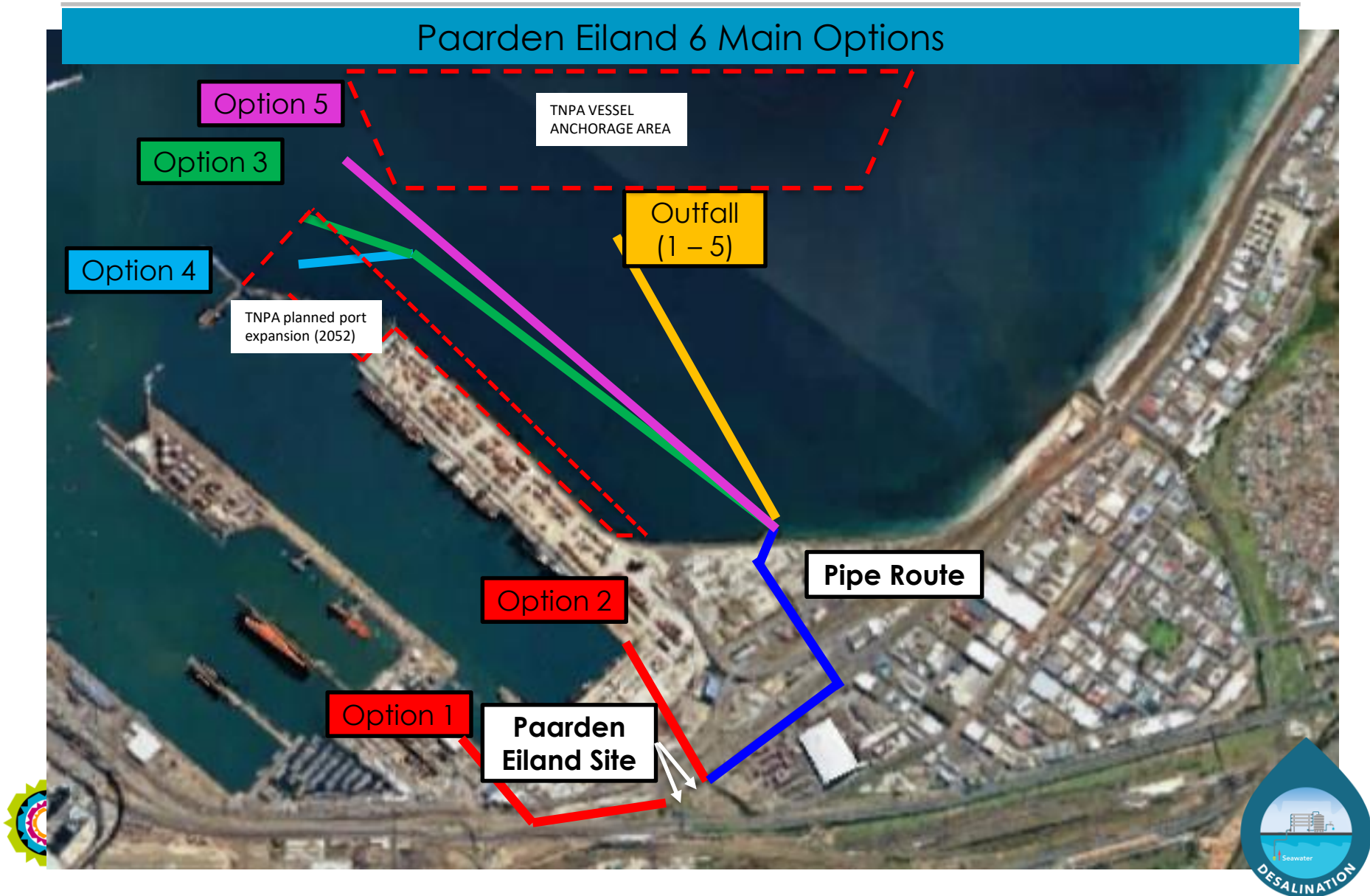


Stage 2: Technical Site Solution Options Analysis

Paarden Eiland Site Options

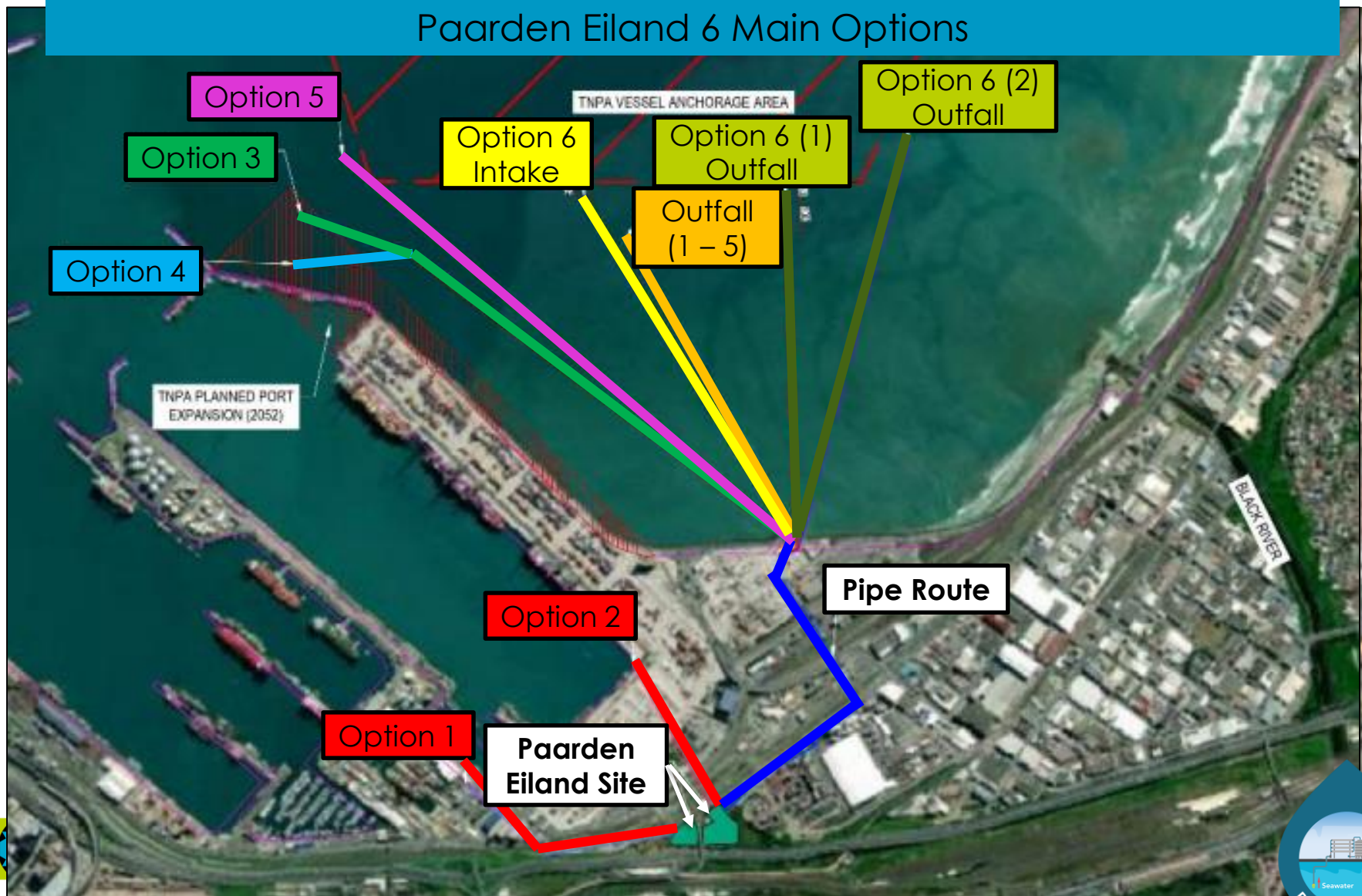
Options	Technical Solution Options Description
Option 1	Gravity flow from the Elliot Basin via an existing culvert
Option 2	Pumped abstraction from Ben Schoeman Basin
Option 3A & 3B	Offshore riser intake
Option 4A and 4B	Offshore caisson intake
Option 5	Offshore riser intake

Stage 2: Technical Solution Options Analysis



Stage 2: Technical Solution Options Analysis

Paarden Eiland 6 Main Options



Stage 2: Technical Solution Options Analysis

Paarden Eiland Recommended Option - Option 6



Stage 2: Technical Solution Options Analysis

Recommended Technical Solution Option and Implementation Phasing

Programmes	Proposed phasing of Desalination Plants	Production (Peak)
Committed programme	Paarden Eiland Option 6	70 Ml/day
Future desalination plants will be pursued through the 'Adaptable Programme' as outlined in the Water Strategy		

4. Stage 3: Service delivery option analysis

Evaluation of a number of service delivery options

Stage 3: Service delivery option analysis

Delivery Options considered

- **Internal options**

- Department or Administrative unit
- Internal Unit with a Business purpose

These options indicated a lack of capacity and capability with such a specialised project which is to be expected.

- **External options**

- Municipal Entity with a Service Partnership
- Partnership with another Municipality
- Licensed organ of state / Service Provider
- Community based organisation / non- Governmental organisation

The options above assumes similar risk positions as the full public options and or practical irrelevance

- Another entity or legally competent body (PPP)

This option move substantially towards the private side with substantial risk transfers and financing benefits

Stage 3: Service delivery option analysis

Institutional and Human Resources Assessment:

The desalination plant will require a **high level of expertise, as well as effective processes to ensure reliable water production**. The capacity and capability of staff will directly impact the standard of operation of the desalination plant.

Outcome:

- It is theoretically possible to achieve the required human resource capacity and training internally.
- However, there are many challenges that would need to be considered, which may render the likelihood of success low in accelerated implementation timelines.
- These challenges included the availability of scarce skills, the retention of skilled staff, the preference for centralised shared services, and the agility of existing staff and technical support staff to navigate through the required upskilling and efficiency curve.

Stage 3: Service delivery option analysis

The various internal mechanisms provided for in the MSA were assessed. A list of the key findings are provided in the Section 78(2) decision report.

Summary of the key findings:

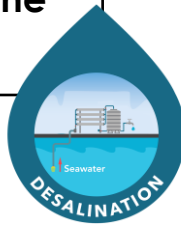
Topic	Key findings
Dedicated structure to operate the plant efficiently	Historically centralised pools of skills were adopted by the City as an operating mechanism, but that naturally comes with some inefficiencies. The desalination plant requires its own dedicated maintenance staff on a 24/7 basis.
Supply Chain Management challenges	There are a number of SCM and other administrative processes that are not sufficiently flexible to efficiently operate a desalination plant in the legislative context of a Municipality due to, inter alia, the novelty of the technological requirements.
Risk allocation	With an internal service delivery mechanism all of the risk remains with the City. A substantial amount of risk can be transferred to a private party through an external mechanism. The decentralisation of supply risk is by itself a contributor to higher assurance of service delivery.



Stage 3: Service delivery option analysis

Summary of the key findings:

Topic	Key findings
Integration Risk	Risk of integration between the construction and operation of the plant is the single most important top level risks in these projects. This can be better mitigated through an external mechanism.
International learnings and precedent	Most international desalination plants are not operated by public entities , due to the complexity of the process and the efficiency that can be achieved by the private sector. The WRC IAP presented a number of international case studies and almost all the plants that have been successfully implemented was through a long term external service delivery mechanism where the design, construction, operation and maintenance of the desalination plant was contracted through an external private party.
Project Novelty, Importance and technological scalability	The City will be the first in South Africa to embark upon a large scale permanent desalination plant. Therefore, it is important for the Water Strategy outlined 'Adaptable Programme' , as well as for others that may attempt similar projects in South Africa, that the first large scale desalination plant is successful.



Stage 3: Service delivery option analysis

Summary of conclusions:

- The general consensus is that the existing policies and aspects in respect of recruitment, etc. make **executing the Project through an internal mechanism challenging**.
- An **external mechanism can be structured to achieve a number of objectives in respect of the funding of the project and operating period permutations**, etc. However, it is recommended that the operating and maintenance period be set for a longer period.
- With an internal mechanism, the regular maintenance and sourcing of specialized and critical equipment will likely have long lead times given the procurement policies in the Public Sector under the MFMA. This will be detrimental to the operation of the desalination plant. **An external services provider will have more agility in this regard to ensure operational continuity.**
- Given that **substantial risk can be transferred to the private sector**, there is a significant benefit to have an **integrated project** covering the design, construction and operation of the desalination plant.

Stage 3: Service delivery option analysis

Advantages of an external mechanism:

- Significant transfer of risk.
- Better capacity and ability to operate and maintain the plant.
- Payment structure will promote efficient operation (promoting higher efficiency)
- Increased flexibility in respect of procurement.
- Ring-fenced operational costs.
- Market development for future technological solution scalability.

5. Stage 4: Delivery mechanism summary and interim recommendation

Stage 4: Delivery mechanism summary and interim recommendation

- Council made the following decision on 27 March 2024 based on the recommendations from the Service Delivery Options Analysis:

C 76/03/24 APPROVAL FOR A SECTION 78(2) DECISION IN TERMS OF THE MUNICIPAL SYSTEMS ACT, 32 OF 2000, FOR THE IMPLEMENTATION AND OPERATION OF THE CITY'S FIRST PERMANENT DESALINATION PLANT

RESOLVED that, in terms of Section 78(2) of the Municipal Systems Act (MSA), approval be granted to proceed with a detailed feasibility study (in compliance with Section 78(3) of the MSA) of alternative options for the implementation and operation of the City of Cape Town's first Permanent Desalination Plant.

6. Stage 5: Due Diligence

The due diligence stage aims to uncover any issues in the preferred technical solution and service delivery option that may significantly affect the proposed project.

Stage 5: Due Diligence

Step 1: The key objectives of the Due Diligence phase are to determine whether the City has the legal competence to undertake the Project as a PPP, by determining, amongst others:

- a) the nature of the municipal function to be transferred to the private party;
- b) whether the municipal function can be performed by the private sector party;
and
- c) the legal constraints in respect of the competence of the City.

Step 2: Another key objective of the Due Diligence is to determine whether the City has the requisite rights to the Project site, and relevant pipeline land route, to pass such rights to the private party to execute the project deliverables.

Step 3: The Due Diligence also considers the possibility of meeting the identified Broad-Based Black Economic Empowerment ("B-BBEE") targets stated in the Needs Analysis and the Technical Solution Options Analysis

No fatal flaws have been found to date during this process. Some items have been identified as key aspects to manage during the procurement phase.

7. Stage 6: Value Assessment

This is the pivotal stage of the feasibility study. It enables the municipality to determine whether an external option or the internal option is the best procurement choice for the project.

Stage 6: Value Assessment

Key objectives of a Value Assessment are:

- Establish a sound base for the public sector position (doing it ourselves)
- Determine what important risks can be transferred to the private sector and at what cost?
- Do we have a reasonable Value for Money after concluding this transaction?
- Can the Public Sector afford to do the transaction?

If these questions can be answered positively then a Public Private Partnership ie. an external mechanism transaction may be viable.

Stage 6: Value Assessment – Process

Value Assessment – Process Followed

Part 1: Determined the type of VFM assessment – Full assessment

Part 2 and 4: Construct the Financial Models

Determine the Project's Base Costs

**Part 2: Construct Base Public Sector
Comparator Financial Model**

**Part 4: Construct External Reference
Financial Model**

Risk assessment

Detailed Risk Assessment and Risk Allocation process

Part 3 and 5: Construct the risk-adjusted Financial Models

**Part 3: Risk Adjusted Public Sector
Comparator Financial Model**

**Part 5: Risk Adjusted External Reference
Financial Model**

Part 6: Qualitative considerations

Part 7: Sensitivity Analysis

Part 8: Affordability assessment

Part 9: Value for Money Test



Procurement Choice

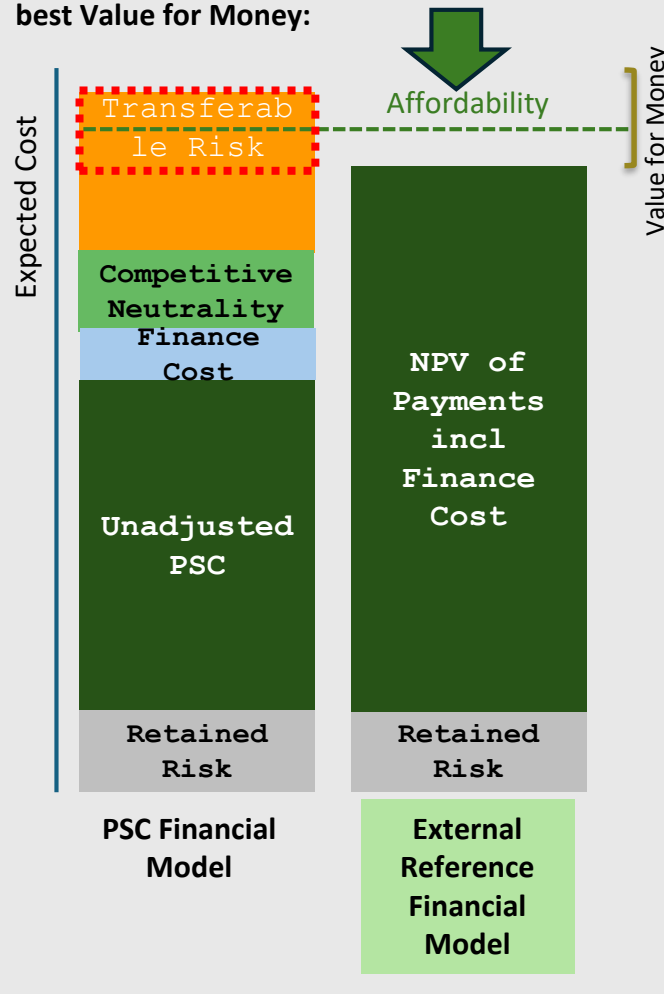


CITY OF CAPE TOWN
ISIXEKO SASAKA
STAD KAAPSTAD



Stage 6: Value Assessment – Intended Outcome

Preliminary Outcome Value Assessment –
External Service Delivery Mechanism offers
best Value for Money:



Affordability

Affordability is an important consideration in the Value Assessment phase – the Water Strategy already indicated that the Project would have an impact on water tariffs. If the City does nothing, Cape Town will continue to be fully exposed to the risks that resulted in the water crisis. The cost of doing nothing is much greater.



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD



8. Stage 7: Procurement Plan

In Progress

Stage 7: Procurement Plan

- A procurement plan demonstrates how the Municipality can undertake the procurement of the external option.
- The Procurement Plan is currently in progress and will include the following:
 - Key approvals from within and outside the CCT, governance processes which culminates into the Project timetable
 - Confirmation that sufficient funds in the municipality's budget are available to take the project to a commercial agreement and into contract implementation
 - A list of any potential challenges to the project and a discussion on how these will be addressed by the project team and adviser during the procurement phase
 - The best procurement practice and procedures suited to the project type and structure

9. Stage 8: Final feasibility study report and decision by Council

Way forward

Stage 8: Prepare and Submit the Feasibility Study to Council

The Feasibility Study Report will be compiled after the considering the Public and Labour comments on the Service Delivery Options Analysis.

The finalisation, and approval, of the Feasibility Study entails the following main steps:

Step 1	Prepare the feasibility study report for public comment and views and recommendations
Step 2	Receive comments, views and recommendations
Step 3	Submit the feasibility report to Council

10. Additional control measures

WRC – Independent Advisory Panel

- An independent advisory panel (IAP) of 12 international and local desalination experts, consisting of scientists, engineers, public health and social science practitioners, was established through the WRC to guide the City in making informed decisions regarding the establishment of a permanent seawater desalination plant.
- The IAP advised the City on different aspects of the project (technical, environmental, social, etc.) providing impartial guidance on scientific, socio-economic, and regulatory matters. It ensures best practices in science and engineering, fostering transparency, public health, and sustainable water management.
- The City is pursuing a long-term phase 2 of the Memorandum of Agreement with the Water Research Commission. This will ensure the Scheme development continues the journey with the IAP.

Government Technical Advisory Centre

Independent Multi Disciplinary Transaction Advisor

- Council granted approval to proceed with detailed feasibility studies of alternative options (external options) for the implementation and operation of the City's first Permanent Desalination Plant
- National Treasury: Government Technical Advisory Centre (GTAC) appointed a multi-disciplinary Transaction Advisor on behalf of the City to investigate the most appropriate approach to deliver the desalination project
- Feasibility Study currently in process.



National Treasury
REPUBLIC OF SOUTH AFRICA



EIA - Pre-Application Scoping Public Participation

- A Scoping and Environmental Impact Assessment (S&EIA) process has been initiated.
- A **pre-application scoping report** was available for review and comment from **13 November 2024** to **13 December 2024**. Comments received were responded to in a Comments and Responses Report which will be available for public review.
- The **formal scoping phase public engagement** will be run in the first quarter of 2025 to solicit further comments on the draft scoping report. The final scoping report, including comments received, will be submitted to the Department of Environmental Affairs and Development Planning (DEADP) for approval.
- Following approval of the scoping report, a **draft Environmental Impact Report**, including specialist assessments and an Environmental Management Program (EMPr) will be compiled.

EIA - Pre-Application Scoping Public Participation

- The EIR and supporting reports will be **made available for public review and comment**. Comments will be responded to in a Comments and Responses Report
- The final EIR, including comments received, will be submitted to the DEADP for decision making. I&APs will be notified of the DEADPs decision and have an **opportunity to appeal** decision by the DEADP.
- **Construction** of the proposed Paarden Eiland Desalination Plant **may not commence** until an Environmental Authorisation (EA) has been issued and the appeal period has lapsed.

Environmental & Social Challenges Considered

- Compatibility with Strategic Planning & Management Instruments
- Encroachment into Environmentally Sensitive Areas
- Potentially Significant Environmental & Social Risks / Impacts
- Potential Cumulative Impacts
- Regulatory Risks & Implications
- Suitable Environmental Management Requirements considered on the Way Forward if Option 6 is pursued for implementation



Water Safety Plan (WSP)

What is a Water Safety Plan

- A Water Safety Plan (WSP) is a comprehensive risk assessment and management strategy designed to safeguard the quality and safety of drinking water. From source to tap.

Key Elements of a Water Safety Plan

- **Treatment Process Assessment**
Identify potential treatment hazards and assess source water characteristics, including salinity, contaminants, and ecosystem interactions.
- **Risk Identification and Hazard Analysis**
Evaluate risks such as algal blooms, heavy metals, and microbial contamination across intake, and treatment stages.
- **Control Measures and Monitoring**
Designing measuring and monitoring controls for key risks
- **Management and Communication**
Develop a response plan for failures and contamination, and communicate outcomes to stakeholders and regulators.

11. Frequently asked questions



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

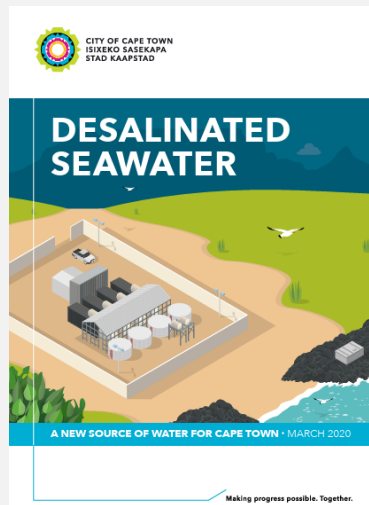


FAQ'S

1

Where can I find out more about desalination ?

Response



The City has prepared an information booklet. This can be found here:

[\(Link to Booklet\)](#)

[https://resource.capetown.gov.za/documentcentre/Documents/Graphics%20and%20educational%20material/Desalination Booklet English.pdf](https://resource.capetown.gov.za/documentcentre/Documents/Graphics%20and%20educational%20material/Desalination%20Booklet%20English.pdf)

FAQ'S

2

Have other, cheaper water sources been investigated?

Response

As documented in Cape Town's Water Strategy, the City is prioritising management interventions that reduce our demand (how much we use), clearing programmes for 'thirsty' alien invasive vegetation and have started diversifying our bulk water sources to include groundwater (with managed recharge of aquifers), desalinated sea water and water reuse.

The Water Strategy therefore considered a number of interventions to ensure the proposed bulk water sources secures our future water supply.

FAQ'S

3

Have increased in overall dam capacity been considered?

Response

The impact of climate change in our area includes less reliable rainfall, and less rainfall in future. Therefore, relying on surface water from rainfall alone is no longer a long term feasible strategy.

There is planning underway for a scheme to augment the Western Cape Water Supply. Apart from that surface water scheme, all the most feasible dam sites in close enough proximity to Cape Town have already been developed. The few remaining dam sites potentially have negative environmental and social impacts.

Increased overall dam capacity only contributes to increased assurance of water supply if the rainfall patterns are consistent and predictable. So, now's the time to consider alternative sources and invest in them to supplement the dam capacity.



FAQ'S

4

How much will the construction of the desalination plant cost?

Response

The construction cost estimate is approximately R5 billion (at June 2023 base date, excl. VAT)

[Cape Town to wrap up desalination plant feasibility study in 2025, first water possible in 2030](https://www.engineeringnews.co.za/article/cape-town-to-wrap-up-desalination-plant-feasibility-study-in-2025-first-water-possible-in-2030-2024-09-25)

<https://www.engineeringnews.co.za/article/cape-town-to-wrap-up-desalination-plant-feasibility-study-in-2025-first-water-possible-in-2030-2024-09-25>

FAQ'S

5

Can the City afford the project and what will the impact on tariffs be?

Response

Water is an international scarce resource with ever increasing levels of scarcity as populations grow and subsequently impact the climate.

The new supply schemes will have an impact on tariffs. However, they are a wise investment for our shared water future and will help ensure that we can keep the water flowing and avoid exorbitant restriction tariffs in times of drought.

The cost of doing nothing can be far greater to the City and its economy.

Project specific affordability and tariff related quantification will form part of the latter stages of the Feasibility Phase to inform the Council decision to proceed with the project.



FAQ'S

6

Water quality - will the plant be able to treat water from Table Bay to a safe drinking level?

Response

Detailed studies have, and are being undertaken on the feed water quality. This will inform the final design parameters of the desalination plant to ensure the continuous delivery of safe potable water.

The process design of the desalination plant is robust and international precedent shows that the technology can, with confidence, treat the raw water from the ocean.

FAQ'S

7

Will the water taste different than current drinking water?

Response

Please refer to the desalination booklet introduced in the first FAQ for more detail.

Desalination removes salts and minerals from water, making it safe to drink. Calcium is added back into the treated water to stabilise the water. Since some people are more sensitive to taste, they might experience a slight 'flatness' in the water. The water will also be blended with the current surface water supply.

More information on the taste difference can be obtained from the Desalination Booklet.

FAQ'S

8

Can the City implement a large desalination plant and why is the City considering an external mechanism?

Response

The findings from the Feasibility studies to date indicate that the City can implement a large desalination plant.

Service delivery options analysis found that an external mechanism could have advantages when compared to the internal mechanisms.

The final internal / external mechanism will be decided after all the feasibility study components (including financial modelling) has been completed to recommend the most suitable mechanism in our City's context.

FAQ'S

9

Which sources of pollution are being considered in the design of the water treatment plant to ensure feed in water quality is holistically considered?

Response

Currently, numerous specialist studies are underway to ensure the feed in water is treated, with confidence, to ensure safety standards can always be complied with in the end product. Typical sources of pollution considered by the project includes, inter alia:

1. River discharge into the ocean from Salt/Black River as well as the Milnerton lagoon/Diep River.
2. Stormwater flushing during storm events
3. Marine outfalls & harbour contaminants
4. Other anthropological sources

The treatment process and considerations leading to the intended design will be further detailed in the final feasibility study report, which will be distributed for public comment later in 2025. The final plant will be able to purify the water in the ocean, considering all anthropological parameters at play.



FAQ'S

10

Response

What happened to the temporary desalination plants that were built during the drought?

The temporary desalination plants were built in response to the drought. The intention was to operate the temporary plants for two years, after which they were decommissioned.

The City obtained valuable information and extracted lessons from these plants which is being incorporated into this project.

Typical lessons already incorporated into this project includes:

- Dissolved Air Flotation (DAF) process to treat algae blooms included in this project (Monwabisi & Strandfontein).
- Design parallel capability in processes to increase output consistency and limit downtime due to operational rigidity (Monwabisi & Strandfontein)
- Requirement for redundancy allowance in spatial design parameters (Monwabisi & Strandfontein)



FAQ'S

11

Response

Can the City ensure that its Preferential Procurement Framework is abided with through an External Mechanism/Private Partner?

Yes, the Municipal PPP Guidelines, as issued National Treasury's PPP Unit, sets comprehensive integration standards for Preferential Procurement and BBBEE. The final bid documents is also reviewed and approved by National Treasury before going to market to ensure alignment with national and local objectives. This can include local sourcing and supply considerations, Contract Participation Goal considerations and targeted ownership requirements within the Private Party Special Purpose Vehicle (SPV) in line with CCT Supply Chain Management Policies.

FAQ'S

12

Who in the Cape Town will drink desalinated water?

Response

The extent of the distribution for the desalinated water will be varying in nature and align with the seasonal needs of the wider infrastructure network. However, the Paarden Eiland plant will have significant distribution in the City Bowl under the initial operational periods. However, this water can at times be blended with the rest of the supply and be distributed throughout the Metro.

It should be noted, that in line with the Water Strategy, desalinated water as a bulk source, will expand over time as more plants are developed. Desalinated water will eventually have the capability to reach over a large portion of the footprint of the Metro.



1.1 MSA Section 78 Process overview and steps to date 'ctd

Indicative timeline overview of 2024 and 2025

S78(2) Council Approval

Council approved, on 27 Mar '24, that a detailed feasibility study be conducted, in line with S78(3) requirements, of alternative options for the implementation and operation of CCT 1st Permanent Desalination Plant.

This was informed by the following detailed reports generated in consultation with National Treasury

1. Needs Analysis
2. Technical Options Analysis
3. Service Delivery Options Analysis
4. Delivery Mechanism Summary and Interim Recommendation

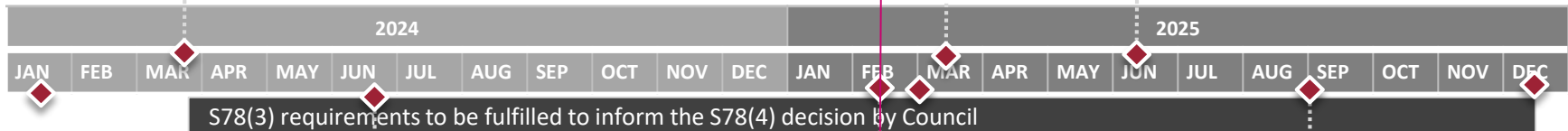
Procurement plan

This plan will include, inter alia;

1. Procurement timelines for the recommended procurement choice
2. Required governance processes to inform decision making
3. Approval requirements within and outside of the municipality
4. Appropriate quality assurance processes

Completion of feasibility study

The feasibility study report includes the findings of all the investigative reports which forms part of the S78 process



S78(1) Mayco/Council approval

Mayco/Council approved, on 16 Jan '24, that the assessment to identify the most suitable mechanism for the implementation and operation of CCT 1st Permanent Desalination Plant can be done in line with S78 requirements

WE ARE HERE, NOW

Due diligence investigation completed

Includes legal, site enablement, BBBEE and other socioeconomic considerations

Value assessment report

This report will summarize the findings related to inter alia;

1. Affordability and value for money
2. Value of risk transfer related to an external service delivery mechanism
3. Qualitative considerations
4. Recommend a procurement choice

S78(4) Council decision

In principle decision from Council to continue, or not continue, with the procurement of the recommended service delivery mechanism.

Note: Certain statutory and regulatory processes will also have their standalone, purpose specific Public Participation Process (EIA, LUMA requirements etc) in addition to of the S78 processes indicated here.

Public Participation

To solicit the views of the local community on the potential to provide a Municipal Service through an external mechanism

Public Participation

To solicit comments from the public on the findings and recommendations in the feasibility study report



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

12. Questions and comments

Thank you for taking the time to participate.

Contact us

For more information and general enquiries, contact:

Telephone:
0800 212 176

Email:
public.participations@capetown.gov.za



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Thank You

Making progress possible. Together.