



# Overstrand Local Municipality Bulk Water Supply: Desalination Project

## Milestone 2: Status Quo Assessment / Needs Analysis Report

Prepared for the Overstrand Local Municipality

Needs Analysis Final Report

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## Glossary of terms and acronyms

|                   |                                                                                                                                      |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| AfDB              | African Development Bank                                                                                                             |
| BA                | Basic Assessment                                                                                                                     |
| BoQ               | Bill of Quantities                                                                                                                   |
| Bulk water supply | The access to bulk water supply to enable the WSA to ensure delivery of water and sanitation services to the consumers in Overstrand |
| CCRS              | Climate Change Response Strategy                                                                                                     |
| CEF               | Capital Expenditure Framework                                                                                                        |
| CFO               | Chief Financial Officer                                                                                                              |
| CMP               | Contract Management Plan                                                                                                             |
| CoGTA             | National Department of Cooperative Governance and Traditional Affairs                                                                |
| CRR               | Capital Replacement Reserve                                                                                                          |
| DBFOM             | Design, Build, Finance, Operate and Maintain                                                                                         |
| DBSA              | Development Bank of Southern Africa                                                                                                  |
| DEA&DP            | Provincial Department of Environmental Affairs and Development Planning                                                              |
| DFFE              | National Department of Forestry, Fisheries and the Environment                                                                       |
| DFI               | Development Finance Institution                                                                                                      |
| DIS               | Directorate Infrastructure Services                                                                                                  |
| DLG               | Department of Local Government (Western Cape Government)                                                                             |
| DPWI              | Department of Public Works and Infrastructure                                                                                        |
| DWS               | National Department of Water and Sanitation                                                                                          |
| EA                | Environmental Authorisation                                                                                                          |
| FY                | Financial Year                                                                                                                       |
| GCF               | Green Climate Fund                                                                                                                   |
| GTAC              | Government Technical Advisory Centre                                                                                                 |
| HWC               | Heritage Western Cape                                                                                                                |
| I&AP              | Interested and Affected Parties                                                                                                      |
| IDC               | Industrial Development Corporation                                                                                                   |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IDP                       | Integrated Development Plan                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| IMATU                     | Independent Municipal Allied Trade Union                                                                                                                                                                                                                                                                                                                                                                                                                          |
| ISA                       | Infrastructure Agency South Africa                                                                                                                                                                                                                                                                                                                                                                                                                                |
| LLF                       | Local Labour Forum                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| LTFP                      | Long-Term Financial Plan                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| MFMA                      | Local Government: Municipal Finance Management Act, 56 of 2003                                                                                                                                                                                                                                                                                                                                                                                                    |
| MI                        | Megalitre                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| MLD                       | Megalitre per Day                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| MSA                       | Local Government: Municipal Systems Act, 32 of 2000                                                                                                                                                                                                                                                                                                                                                                                                               |
| MTEF                      | Medium Term Expenditure Framework                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| MTREF                     | Medium Term Revenue and Expenditure Framework                                                                                                                                                                                                                                                                                                                                                                                                                     |
| MW                        | Megawatt                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Municipal PPP Regulations | The Regulations published under Government Notice R309 in 2005, effective 1 April 2005                                                                                                                                                                                                                                                                                                                                                                            |
| Municipal PPP Guidelines  | Municipal Service Delivery and PPP Guidelines                                                                                                                                                                                                                                                                                                                                                                                                                     |
| MuSSA                     | Municipal Strategic Self-Assessment                                                                                                                                                                                                                                                                                                                                                                                                                               |
| NDP                       | National Development Plan                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| NT                        | National Treasury                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| NWA                       | National Water Act, 1998                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| NWRS                      | National Water Resource Strategy                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| NW&SMP                    | National Water and Sanitation Master Plan                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Overstrand                | Overstrand Local Municipality                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| PPP                       | Public-private Partnership                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Project                   | The Project comprises the augmentation of bulk water supply through the development of a seawater desalination facility, with an initial production capacity of approximately 5 MI/d and provision for expansion to 10 MI/d in the Hermanus New Harbour; linkage to existing seawater abstraction and discharge infrastructure and the construction of the necessary conveyance infrastructure to connect the facility to Overstrand's bulk water supply network. |
| PSC                       | Project Steering Committee                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|            |                                                                                                                                                                           |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PV         | Photovoltaic                                                                                                                                                              |
| RFP        | Request for Proposals                                                                                                                                                     |
| RFQ        | Request for Qualifications                                                                                                                                                |
| SALGA      | South African Local Government Association                                                                                                                                |
| SAMWU      | South African Municipal Workers Union                                                                                                                                     |
| SharePoint | SharePoint refers to a secure, centralised digital platform used for the management, storage and controlled sharing of project records, documentation and correspondence. |
| SCM        | Supply Chain Management                                                                                                                                                   |
| SWRO       | Seawater Reverse Osmosis                                                                                                                                                  |
| TA         | Transaction Advisor                                                                                                                                                       |
| VAT        | Value-added Tax                                                                                                                                                           |
| WCIF       | Western Cape Infrastructure Framework                                                                                                                                     |
| WCIP       | Western Cape Infrastructure Implementation Plan                                                                                                                           |
| WCPT       | Western Cape Provincial Treasury                                                                                                                                          |
| WCWDM      | Water Conservation & Water Demand Management                                                                                                                              |
| WCWRS      | Western Cape Water Resilience Strategy                                                                                                                                    |
| WPO        | Water Partnerships Office                                                                                                                                                 |
| WSA        | Water Services Authority                                                                                                                                                  |
| WSDP       | Water Services Development Plan                                                                                                                                           |
| WSP        | Water Services Provider                                                                                                                                                   |
| WTW        | Water Treatment Works                                                                                                                                                     |
| WWTW       | Wastewater Treatment Works                                                                                                                                                |
| ZAR        | South African Rand                                                                                                                                                        |

## Executive Summary

Overstrand Local Municipality (the Municipality) is situated in a water-scarce region experiencing sustained population growth and increasing pressure on its existing bulk water supply infrastructure. Water consumption in the Greater Hermanus area has grown by approximately 18% between 2017 and 2023, and long-term demand projections indicate that average annual daily demand will rise from approximately 14,711 kl/d in 2024 to more than 30,800 kl/d by 2049 based upon the 3% growth scenario. The municipality's existing source portfolio — comprising the De Bos Dam and the Gateway, Camphill and Volmoed wellfields — is approaching its sustainable yield, and without augmentation, projected demand will exceed reliable supply within the near term. The need for bulk water supply augmentation is urgent.

This report constitutes the Section 78(1) internal assessment required under the Local Government: Municipal Systems Act, 32 of 2000 (MSA), and represents the first step in a comprehensive feasibility and project preparation process. Its purpose is to confirm the nature and extent of the bulk water supply challenge, assess Overstrand's internal capacity to respond to it, and establish the evidential foundation for the feasibility study that follows.

### Strategic and Policy Alignment

The proposed desalination project is firmly grounded in national, provincial and local policy. The National Water Resource Strategy 3 (NWRS-3), published in 2023, explicitly identifies seawater desalination as a strategic intervention to augment potable water supply, and the National Water and Sanitation Master Plan (NW&SMP) assigns responsibility for implementing coastal desalination projects to municipalities. At a provincial level, the Western Cape Water Resilience Strategy recognises desalination as a critical component of the diversified supply mix and identifies it as an intervention capable of attracting climate finance and concessional funding from development finance institutions. At a municipal level, the proposed project is embedded in Overstrand's Integrated Development Plan (IDP), Water Services Development Plan (WSDP) and three-year Medium-Term Expenditure Framework (MTEF) and has featured in the municipality's strategic planning since 2004.

Overstrand has secured the support of the Water Partnership Office (WPO), a ring-fenced entity housed within the Development Bank of Southern Africa (DBSA) and accountable to the Department of Water and Sanitation. The WPO was established specifically to assist municipalities in preparing and structuring bankable water infrastructure projects for private sector participation, and offers Overstrand access to project preparation grant funding, specialist advisory support, and blended finance instruments incorporating development finance institutions and the Green Climate Fund (GCF).

### Preferred Technical Solution

A structured multi-option assessment evaluated four augmentation alternatives: seawater reverse osmosis (SWRO) desalination; a Remix and Reuse hybrid scheme; abstraction from the Palmiet River; and abstraction from the Theewaterskloof Dam. SWRO desalination was identified as the preferred solution on the basis of supply certainty, drought resilience, technical maturity, strategic alignment, regulatory manageability, costs and suitability for private sector delivery. The Palmiet River option is constrained to approximately five to seven months of effective abstraction per year and is not viable as a standalone source without major dam

storage infrastructure. The Theewaterskloof Dam option is most constrained during drought, when supplementary supply is most critical, and is subject to intergovernmental processes outside Overstrand's control. The Remix and Reuse option carries materially higher capital cost and process complexity and is better suited to a longer-term portfolio role.

A dedicated coastal screening study assessed all viable seawater abstraction points along the Walker Bay coastline, evaluating candidate locations against technical, environmental and infrastructure criteria. The Kleinrivier Lagoon was eliminated due to variable salinity and ecological sensitivity, and the Hawston coastline was found to require prohibitively costly marine infrastructure given its high-energy wave exposure. The central Hermanus New Harbour area emerged as the most technically feasible abstraction point, offering sheltered conditions, improved constructability and proximity to existing infrastructure, directly informing the preferred plant site.

The preferred site is located within the New Harbour precinct on land owned by the Department of Public Works and Infrastructure (DPWI), for which a long-term lease is being actively pursued. While this introduces a degree of governmental process risk, being actively managed through regular engagement with DPWI at regional and national level, two contingency sites have been identified — a privately owned parcel adjacent to the harbour (Site 2) and the Zwelihle/Hermanus Wastewater Treatment Works on municipal-owned land (Site 3) — ensuring the project is not solely dependent on a single site outcome. A critical strategic advantage of the preferred site is its proximity to the abalone farm's existing seawater abstraction and screening infrastructure, the utilisation of which eliminates the need for new marine intake works — identified as the single greatest technical risk and cost driver for any desalination project along the Walker Bay coastline. The proposed plant will have an initial capacity of 5 MI/d, scalable to 10 MI/d, with Phase 1 required by 2029 and Phase 2 by approximately 2035. Integration into the existing bulk water distribution network via a dedicated pumping station and rising main has been confirmed as feasible, and adequate electrical supply capacity for both phases is assured through the existing Still Street switching station and a planned new 66/11 kV substation scheduled for completion by end 2029.

### **Regulatory Framework**

The regulatory environment is enabling, comprehensive and multi-layered, spanning constitutional obligations, municipal systems and finance legislation, environmental and water law, heritage requirements and transformation policy. These frameworks collectively confirm Overstrand's authority and obligation to act and define the structured process the municipality must follow.

From a municipal governance perspective, the project is subject to Chapter 8 of the MSA and to Chapter 11 of the MFMA and the Municipal PPP Regulations. The current Section 78(1) assessment is the first prescribed step, to be followed by a feasibility study and a Council decision. Should a PPP route be pursued, full compliance with Section 120 of the MFMA and the Municipal PPP Regulations will be required.

On the environmental front, a Basic Assessment (BA) under NEMA is required, with Activity 16 of Listing Notice 1 confirmed as triggered. A General Discharge Authorisation (GDA) under NEM:ICMA is required for brine discharge, to be obtained through an update to the abalone farm's existing GDA. The treated water supply pipeline's traversal of a portion of the Fernkloof Nature Reserve engages NEM:PAA. Specialist studies — including botanical, freshwater ecology and marine impact assessments — form part of the environmental authorisation process, which is being managed by DEA&DP. Sections 34 and 38 of the National Heritage

Resources Act are triggered by the development footprint and building demolitions, with the relevant applications to Heritage Western Cape (HWC) already submitted and underway. Importantly, a water use licence under the National Water Act (NWA) is not required for desalination, and no legislative provision has been identified that precludes the proposed project or its delivery arrangement.

From a transformation perspective, the applicable B-BBEE framework, preferential procurement goals and relevant sector scorecard will be determined as part of the procurement strategy developed during the feasibility study. All key regulatory authorities have been engaged and established consultation processes are in place, providing a clear and navigable path forward.

### **Financial Assessment**

Overstrand has historically maintained a disciplined financial position, achieving clean audit outcomes and sound liquidity ratios. Notwithstanding this, the municipality faces structural financial pressures, principally from the imbalance between approved Eskom tariff increases and the ceiling on municipal electricity tariff pass-through, which constrains the operating surplus over the medium term.

The pre-feasibility capital cost estimate for a 10 Ml/d SWRO facility is approximately ZAR 545 million (excluding VAT), with an initial 5 Ml/d plant estimated at approximately ZAR 300 million or more.

This capital requirement materially exceeds Overstrand's on-balance-sheet financing capacity. The municipality's MFMA-compliant borrowing envelope of approximately ZAR 60 to 100 million per annum is already fully committed to its broader capital programme, and no headroom exists to absorb debt service obligations of this magnitude without breaching borrowing policy covenants and crowding out legally mandated investment in other essential service areas. It is likely that the project therefore be financed off-balance-sheet, with the private party raising and assuming project debt and the municipality's obligation structured as a performance-linked unitary payment within its operating expenditure envelope. The initial financial model indicates a tariff of ZAR 35/m<sup>3</sup> could be applicable from this specific source, dependant on funding mix. The affordability of this obligation relative to the municipality's water tariff revenue base will be a central focus of the feasibility study.

Three principal funding sources have been identified: blended finance instruments facilitated by the WPO combining concessional Development Finance Institution (DFI) debt with commercial debt and equity; Green Climate Fund (GCF) concessional finance for which desalination as a climate-resilient technology is well-positioned to qualify; and sub-commercial DFI debt from the DBSA, the Industrial Development Corporation (IDC) and the African Development Bank (AfDB). Applied in combination, these instruments are expected to reduce the effective cost of capital to within the municipality's affordability envelope.

### **Institutional Assessment**

Overstrand's bulk water services function is well-governed, with all critical posts in the Directorate: Infrastructure Services filled and a sound performance management framework in place. Since 2015, Veolia Services Southern Africa (Veolia) have operated and maintained the municipality's bulk water and wastewater infrastructure under a long-term contract, contributing to strong outcomes across the DWS Blue Drop, Green Drop and No Drop programmes. As a result, Overstrand's internal capacity is focused on infrastructure planning, water quality oversight and contract management — functions performed to a demonstrably high standard that provide a sound foundation for governing a long-term external arrangement.

However, the assessment identifies a structural capacity gap that is directly determinative of the Section 78(1) question. The municipality does not possess the specialist engineering disciplines required to design, procure or operate a SWRO desalination facility — encompassing reverse osmosis process engineering, marine works design, membrane management, energy recovery optimisation, brine handling and desalinated water quality compliance. None of these capabilities exist within the current staff complement, and none can be constituted through internal recruitment or training within the project's required delivery timeframe. An indicative staffing assessment confirms that, linked to its scalability, the facility would require between 21 and 26 specialist operational posts, representing scarce skills categories with limited market availability that a specialist private operator is better positioned to recruit, train and retain. Internal delivery is accordingly not feasible.

Overstrand's contract management capability is well-established, with the Veolia contract providing direct institutional precedent for managing a complex performance-based arrangement. A dedicated senior manager will need to be appointed to oversee the desalination contract — a proportionate and manageable enhancement. The municipality's commitment to the project is long-standing, with the desalination plant embedded in the WSDP, MTEF and directorate performance indicators. The project team is suitably constituted with multidisciplinary specialist capacity and a functioning Project Steering Committee, and the expected participation of the WPO and DBSA as co-sponsors further strengthening governance and financing capacity.

The stakeholder framework is comprehensive, with all key internal governance structures and external regulatory, funding and approval bodies engaged through established processes including a newly established monthly project alignment meeting with DPWI. Organised labour has been formally engaged prior to and through the Local Labour Forum and provided with the final draft of the Needs Analysis report. It has been confirmed and placed on record that the proposed plant is a greenfield development that does not affect existing employees or established posts, and that new employment opportunities are anticipated during both construction and operation. A written response was received from IMATU indicating it understands the need for the project and is satisfied that matters concerning organised labour were fully taken into account.

The institutional assessment confirms that Overstrand has the commitment, governance capability and contract management capacity to advance the project as a long-term externally managed infrastructure arrangement. The absence of internal specialist operational capacity is not a project constraint — it is a confirmation that external delivery through a suitably qualified private party is both necessary and appropriate.

### **Bulk Supply Options**

Assessment of internal options demonstrates that the key need to transfer significant technical, financial and operational risk is not met through an internal option. The option to access alternative funding mechanisms will require the Project to be structured in a particular way. The next step is to proceed to test the feasibility of procuring a public private partnership to meet the needs of the Municipality regarding the most feasible and effective way to augment its bulk supply needs within the required time frames. The risks regarding the third-party interfaces — in particular in regard to the site access and ownership and the access to existing

infrastructure to access sea water and discharge brine will need to be mitigated through engagement and sound contracting arrangements.

## Recommendations

Recommended that Overstrand Local Municipality:

1. Note and confirm—
  - The need to augment bulk supply in order to ensure service delivery;
  - The project scoping to address the need – namely a desalination project with an off-take arrangement and interface with third parties where environmentally sound and feasible;
  - The capacity constraint to fund the project in the Council’s current capital budget process;
  - The national and provincial policy imperatives to undertake supply side diversification as effectively and efficiently as possible including desalination;
  - That the project is a support activity and does not impact the existing structures of the water services delivery mechanism currently serving the community (an internal department mechanism);
  - The views received from organised labour and that there is no impact on existing employees in the municipal services delivery mechanism structure;
  - The project will have a positive economic impact in that it will create new jobs; new skills and will address the supply-side bulk capacity requirements.
2. Following assessment of the criteria in S78(1) of the Municipal Systems Act No. 32 of 2000 resolve—
  - in terms of S78(2) to continue to deliver water and sanitation services by way of an internal mechanism structured as an internal department; and
  - to explore the feasibility of implementing the augmentation of bulk supply by way of desalination; and
  - to authorise the Director / Chief Engineer: Infrastructure Services to:
    - Register the Municipality’s intention to explore the option of a public private partnership with National Treasury and the Water Partnerships Office; and
    - Nominate and authorise the Project Officer;
    - Continue to engage with DPWI regarding access to the site identified for the desalination project; and
    - Report back to Council with the Feasibility study in terms of S120(6) of the Local Government: Municipal Finance Management Act.

## 1 Introduction

### 1.1 *Background*

Overstrand Local Municipality is situated in a water scarce area, a classification that places significant stress on its available water sources and constrains the options for long-term supply augmentation. Like many towns in the Western Cape, Overstrand is experiencing the compounding effects of inward migration and sustained population growth, placing increasing pressure on resources that were not designed to accommodate current or projected demand levels.

In particular, water consumption within the Hermanus area of Overstrand's jurisdiction has exhibited a marked upward trend and the combination of rising water demand and the limited availability of additional surface and groundwater resources has necessitated the diversification of bulk water supply sources to ensure long-term water security for the Hermanus area.

Studies undertaken to assess feasible augmentation options evaluated a range of alternatives against criteria of reliability, robustness and long-term sustainability. Seawater desalination through reverse osmosis (SWRO) was identified as the most viable means of supplementing the existing bulk water supply mix. Desalination provides a sustainable drought-resistant solution and SWRO is a proven and widely applied technology, supported by well-established global expertise in the design, construction, operation, and maintenance of such facilities.

The proposed desalination plant forms part of Overstrand's portfolio of projects arising from its water master planning and has been incorporated into its strategic planning and medium-term budgeting processes annually approved by the Council. This assessment represents the first step in a comprehensive feasibility and project preparation process, aimed at ensuring sound technical, financial, legal, environmental and institutional design.

### 1.2 *Purpose of this Assessment*

This assessment represents the first step in a comprehensive feasibility and project preparation process, aimed at ensuring sound technical, financial, legal, environmental, and institutional design for the proposed desalination project. It is structured to fulfil the requirements of section 78(1) of the Municipal Systems Act (MSA), which requires the accounting officer to assess whether the proposed service can be provided more effectively through an internal mechanism before proceeding to evaluate alternative service delivery options.

The specific purpose of this assessment is to identify and confirm the bulk water supply challenges and constraints associated with the proposed desalination project, thereby providing clarity on the project scope and intended outputs, and establishing the evidential foundation for the feasibility study that follows.

### 1.3 *Approach and Methodology*

The proposed desalination project presents a significant expansion of Overstrand's bulk water system. As such, the development and implementation of the project trigger a range of legal compliance requirements, necessitating a structured approach and methodology to be followed by the team of transaction advisors appointed by Overstrand.

Aligned with the requirements of section 78(1) of the Local Government: Municipal Systems Act, 32 of 2000 (MSA), the key components of the status quo assessment and needs analysis include—

- A situational analysis of the bulk water supply and demand vs available sources;
- Assessment of the strategic and institutional alignment of the Project;
- Regulatory and compliance review;
- Budgetary and financial performance assessment;
- Municipal stakeholder consultations including various departments and organised labour to assess the impact of the Project on existing municipal staff, assets and liabilities;
- External stakeholder consultations regarding the Project including site availability, seawater supply and discharge options and interfacing with the water services provider (WSP) functions of Overstrand;
- Identification of constraints and opportunities;
- An analysis of the technical solution options and the bulk water supply contract options which will inform the development and evaluation of feasible options.

The status quo assessment and needs analysis were undertaken by a multi-disciplinary team of specialists covering the functional areas required for the Project. The methodology followed by the team included engagements with a range of internal and external stakeholders, including—

- executive and managerial staff from Overstrand's Directorate: Infrastructure Services;
- executive and managerial staff from Overstrand's Directorate: Corporate Services including human resources and employee relations;
- shop stewards of IMATU and SAMWU and the Local Labour Forum (LLF);
- the acting Chief Financial Officer (CFO) of Overstrand at the time;
- the divisional manager of Overstrand SCM;
- the divisional manager of property management in Overstrand;
- the principal legal advisor and manager contract management of Overstrand;
- the acting regional manager and chief town planner of the Western Cape branch of the Department of Public Works and Infrastructure (DPWI);
- the Chief Director: Municipal Performance Monitoring and Support in the Western Cape Department of Local Government (DLG) and several senior officials in this directorate; and
- head of the Water Partnerships Office (WPO).

A desktop study was done of documents and information provided by Overstrand. This report formally fulfils the requirements of a section 78(1) assessment in terms of the MSA.

## 2 Bulk Water Supply Situation

### 2.1 Bulk Water Supply Sources

The De Bos Dam is the primary source of water to the Greater Hermanus area, with a water use allocation of 2,800,000 m<sup>3</sup>/annum (an average of 7.67 ML/d) which was confirmed as the Existing Lawful Use by BOCMA.

This allocation is, however, inadequate to meet the current demand in isolation. Additional water is drawn from the Gateway wellfields located along the Main Road with a water use licence allocation of 1 600 000 m<sup>3</sup>/annum. This full licence allocation cannot be abstracted at present as three production boreholes were lost to date due to the extremely high iron content of groundwater in this wellfield. Overstrand Municipality has awarded a contract to drill an additional borehole to ensure the full water allocation can be abstracted.

The Camphill and Volmoed wellfields (together often referred to as the Hemel-and-Aarde wellfields), were allocated combined water rights in three incremental stages being 800 000-, 1 200 000- and 1 600 000 m<sup>3</sup>/annum. Currently the water right is on 1 200 000 m<sup>3</sup>/annum, and it is anticipated that further infrastructure development and approval by BOCMA will ensure that the full 1 600 000 m<sup>3</sup>/annum will apply and be abstracted from 2027 onwards. (Two additional production boreholes were drilled during 2025, one of which will be developed further). The Camphill wellfields are situated near Camphill School along the R320, approximately 1.5 to 3 km from the Preekstoel Water Treatment Works, while the Volmoed wellfields are located immediately below the De Bos Dam.

The town's growing demand is steadily approaching the sustainable yield of this combined source portfolio as indicated in the graph below (refer Figure 2 below on page 6) and the system now operates with limited reserve capacity.

## Hermanus Bulk Water Sources

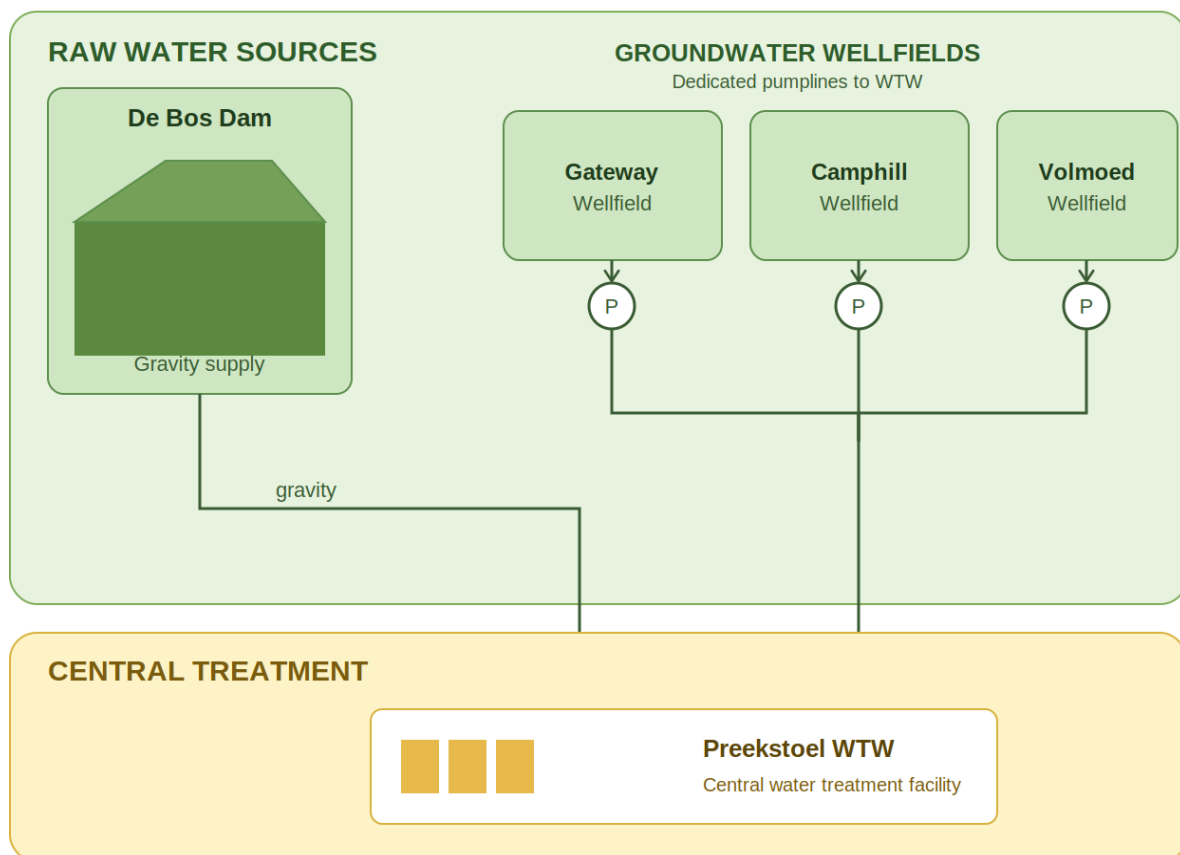


Figure 1: Bulk Water Sources - Greater Hermanus

Seasonal analysis of inflows to the Preekstoel WTW reveals strong dependence on rainfall-driven sources and increasing reliance on boreholes during dry months. Total WTW outflows show a clear upward trend, with peak monthly demands recorded in 2024 to 2026 representing the highest values in the dataset. The De Bos Dam exhibits a pronounced seasonal storage cycle, typically rebuilding to full supply capacity during late winter and spring before drawing down through summer and early autumn. While the dam has recovered well from a low of 36% in mid-2018, with multiple winters reaching or approaching full capacity between 2020 and 2025, the narrowing gap between total supply and system capacity is apparent and confirms growing vulnerability.

## 2.2 Demand Trends and Current Supply Pressure

Despite the implementation of a highly successful Water Conservation and Water Demand Management (WCWDM) programme since 2008, which has materially curtailed per-capita demand, overall raw water requirements have continued to grow at an average of 2.65% per annum over the past thirteen years. Water consumption within the Hermanus area has exhibited a marked upward trend of approximately 18% between 2017 and 2023, consistent with a population increase from approximately 95,482 to 116,550 over the same period (Stats SA Census 2022).

Measured annual water demand for the Greater Hermanus area over the past decade is set out in Table 1. Demand decreased modestly between 2017 and 2019 — reflecting the effect of drought-period conservation measures and restrictions — before resuming an upward trajectory from 2020, with the 2023 and 2024 figures representing the highest recorded values in the series.

Table 1: Measured Annual Water Demand - Greater Hermanus

| Year*                                                   | Measured raw water supplied (kl/year) | Measured raw water supplied (kl/d) |
|---------------------------------------------------------|---------------------------------------|------------------------------------|
| 2016                                                    | 4,765,620                             | 13,056                             |
| 2017                                                    | 4,182,703                             | 11,459                             |
| 2018                                                    | 4,141,553                             | 11,347                             |
| 2019                                                    | 4,128,705                             | 11,312                             |
| 2020                                                    | 4,242,199                             | 11,622                             |
| 2021                                                    | 4,265,761                             | 11,687                             |
| 2022                                                    | 4,267,244                             | 11,691                             |
| 2023                                                    | 4,776,898                             | 13,087                             |
| 2024                                                    | 5,369,338                             | 14,711                             |
| * Financial years (July to June of the following year). |                                       |                                    |

Demand growth has been compounded by avoidable system losses attributable to ageing pipeline infrastructure, excessive leakage and unmetered connections, which all contribute to an increase in non-revenue water. These factors reduce the effective yield of existing sources and reinforce the urgency of both demand-side management and supply augmentation. Mitigation measures are already in place to varying

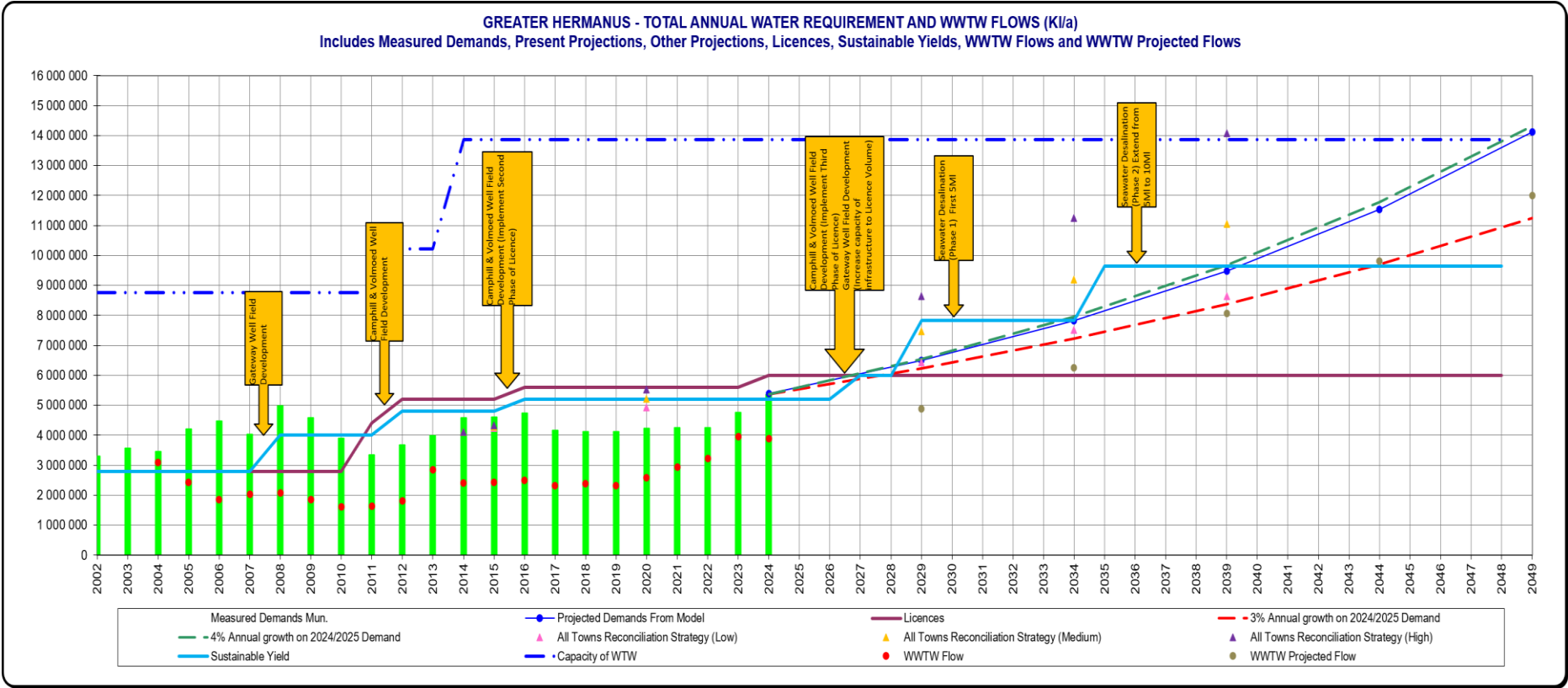
extents; however, any new water scheme must be implemented in conjunction with continued efforts to minimise non-intended uses and losses.

### 2.3 Future Demand and Augmentation Requirements

Long-term water demand projections for the Greater Hermanus area have been prepared using the municipality's Water Demand Model, accounting for continued population growth, land use expansion, and conservative water use efficiency assumptions. Two projections, at 3% and 4% respectively, are shown on the graph in Fig 2 below. For the purpose of this report the 3% growth scenario was used, and it correlates with the average historic growth, albeit that the growth over the past 3 years was significantly higher. The projections at 3% indicate that average annual daily demand will increase from approximately 14,711 kl/d in 2024 to more than 30,800 kl/d by 2049, with peak day demand projected to reach approximately 49,308 kl/d over the same period.

Table 2: Projected future water demand - Greater Hermanus

| Year | Average Annual Daily Demand (kl/d) | Average Peak Month Daily Demand (kl/d) | Peak Day Demand (kl/d) | Total Annual Demand (kl/year) |
|------|------------------------------------|----------------------------------------|------------------------|-------------------------------|
| 2024 | 14,711                             | 18 829                                 | 23 550                 | 5 369 338                     |
| 2029 | 17 054                             | 21 829                                 | 27 301                 | 6 224 534                     |
| 2034 | 19 770                             | 25 305                                 | 31 649                 | 7 215 941                     |
| 2039 | 22 919                             | 29 336                                 | 36 690                 | 8 365 254                     |
| 2044 | 26 569                             | 34 008                                 | 42 533                 | 9 697 622                     |
| 2049 | 30 801                             | 39 425                                 | 49 308                 | 11 242 201                    |



The graph depicts the historic water demand (Green “Manhattan” bars), licenced and capacity of the existing water resources including the De Bos dam and the current and near future development of boreholes and the proposed desalination plant capacity (blue line). The red dotted line indicates the expected increase in water demand at a rate of 3% per annum. The red line indicates the water licences and allocation for the boreholes and De Bos Dam. The blue dotted line represents the capacity of the Preekstoel WTW, indicating sufficient capacity also to deal with the high summer peak demands. To meet the projected demand the proposed further development of the boreholes is required during 2026, and the first 5MI/d of seawater desalination is required by 2029 and the second 5MI/day by 2035.

Figure 2: Total annual water requirement - Greater Hermanus

## 2.4 *Status Quo without an Augmentation Option*

Without augmentation, projected demand will exceed the reliable yield of all existing sources, including De Bos Dam and the available wellfields. Inception-level analysis indicates that an augmentation requirement of approximately 10 Ml/d is necessary to maintain supply security over the medium term, while providing time for longer-term system optimisation and demand management interventions.

Without a viable bulk water supply augmentation solution, no new developments can proceed, already planned developments face indefinite — and potentially permanent — delays, and the implementation of strict water restrictions, whether temporary or permanent, becomes increasingly likely.

## 2.5 *Seawater Reverse Osmosis Desalination*

On a pro-active note, the combination of rising demand, limited availability of additional surface and groundwater resources, and the imperative to diversify bulk water supply sources prompted a comprehensive investigation of feasible augmentation alternatives. Studies assessed a range of options against criteria of reliability, robustness, and long-term sustainability, evaluating seawater desalination through reverse osmosis (SWRO), water reuse, and surface water abstraction from the Palmiet River and Theewaterskloof Dam. These studies identified SWRO as the most viable means of supplementing the existing bulk water supply mix — the only option capable of providing a climate-independent, drought-resilient source within a near-term implementation horizon.

SWRO is a proven and widely applied technology, supported by well-established global expertise in the design, construction, operation, and maintenance of such facilities. A specialist investigation into potential site locations systematically assessed all viable coastal options against a consistent set of technical, environmental, and infrastructure-related criteria. This process identified a preferred site in Hermanus for the development of a desalination plant with an initial capacity of at least 5 Ml/d, designed to meet projected bulk water supply requirements by 2028 and scalable to 10 Ml/d over time. The preferred site is located in the central Hermanus New Harbour precinct, where the presence of the abalone farm's existing seawater abstraction and screening infrastructure presents a significant strategic advantage, eliminating the need for new marine intake works in the high-energy Walker Bay coastal environment.

The proposed desalination plant forms part of Overstrand's portfolio of projects arising from its water master planning and has been incorporated into its strategic planning and medium-term budgeting processes, including the Water Services Development Plan (WSDP), the three-year MTEF, and directorate performance indicators, all annually approved by Council. The project has featured in the municipality's strategic framework since 2004 and represents arguably the largest infrastructure initiative the municipality has undertaken.

### 3 Needs Analysis

#### 3.1 Strategic Alignment

This section examines the alignment of the proposed SWRO Project with applicable national, provincial, and local governance strategies, policies, and planning frameworks.

##### 3.1.1 National Policy and Strategic Framework

The National Development Plan 2030 (NDP) provides the overarching policy direction for the water sector, stating that by 2030 all South Africans should have access to affordable, reliable and safe water, as well as hygienic sanitation. In giving effect to this objective, the National Water Act, 1998 (NWA) mandates the Minister of the Department of Water and Sanitation (DWS) to develop a National Water Resource Strategy (NWRS) as the primary policy framework for the protection, use, development, conservation, management and control of South Africa's water resources.

The first edition of the National Water Resource Strategy (NWRS-1), published in 2004, recognised the potential role of seawater desalination as a supply option for coastal areas. This was followed by NWRS-2, published in 2013, which provided a comprehensive strategic direction for water resource management in line with the NWA and included, as a sub-component, a National Desalination Strategy. NWRS-2 further committed the Department of Water Affairs (now DWS) to cooperate with other organs of state and the private sector in supporting the development and application of desalination technologies.

The third edition, National Water Resource Strategy (NWRS-3), published in 2023, supersedes NWRS-2 and introduces a strengthened focus on climate resilience, diversification of water sources (including reuse, groundwater and desalination), institutional reform, and infrastructure investment. In this regard, NWRS-3 explicitly recognises the increasing viability of desalination, noting that advances in technology are reducing costs and improving competitiveness relative to traditional surface water schemes. It further identifies the implementation of seawater desalination as a strategic intervention to augment potable water supply.

The National Water and Sanitation Master Plan (NW&SMP), published in 2018 as the implementation framework for the National Water Resource Strategy 2 (NWRS-2), remains the primary instrument guiding sector-wide actions, programmes and investment planning to 2030 and beyond. It projects that, without intervention, the national water deficit will reach approximately 17% by 2030 — a shortfall of between 2,700 and 3,800 million cubic metres per year. Water availability is expected to deteriorate further as supply contracts and demand escalates due to population growth, urbanisation, inefficient use, degradation of wetlands, and the adverse impacts of climate change.

Following the approval of the National Water Resource Strategy 3 (NWRS-3), the strategic direction of the sector has evolved. The NW&SMP is accordingly now interpreted and applied in alignment with the priorities and interventions articulated in NWRS-3, which places increased emphasis on supply diversification, including desalination, as a necessary response to growing water scarcity.

The NW&SMP explicitly identifies desalination as part of the required supply-side response and assigns responsibility for implementing coastal desalination projects to municipalities. Overstrand's approach is directly responsive to this national policy position.

The Climate Change Response Strategy or Water & Sanitation Sector (CCRS), 2025, strengthens the strategic importance placed on desalination as part of the diversified water resource mix mentioning several coastal cities looking at it as an option.

### 3.1.2 Provincial Policy and Strategic Framework

At a provincial level, the Western Cape Provincial Strategic Plan 2025–2030 (PSP) provides the overarching political and strategic direction, identifying water security and resilience as a key priority, including through the advancement of desalination as part of the supply mix.

The Western Cape Infrastructure Framework 2050 (WCIF 2050) translates these priorities into a long-term infrastructure planning framework, within which water resilience is identified as a core sectoral focus. The Western Cape Water Resilience Strategy: *Future-proofing our water security 2025–2035*, developed as part of this framework, provides the detailed sectoral articulation of water-related challenges and interventions.

The Water Resilience Strategy is aligned with the strategic plans of the Department of Local Government (DLG), which emphasises resilient municipalities, disaster risk reduction and responsive governance, and the Department of Environmental Affairs and Development Planning (DEADP), which foregrounds environmental sustainability, climate adaptation and spatial resilience. Collectively, these frameworks recognise that water resilience is both an environmental imperative and a developmental priority.

Within this context, water augmentation is identified as a strategic focus area, with a target that all municipalities achieve diversified water supply sources by 2035. Desalination is explicitly recognised as a critical component of this diversified supply mix. In addition, the strategy identifies desalination as an intervention with potential to attract climate finance and concessional funding from development finance institutions, particularly in addressing infrastructure funding gaps.

The Western Cape Infrastructure Implementation Plan 2050 (WCIIP 2050) provides the operational roadmap for implementing the province's infrastructure pipeline, ensuring that long-term strategic objectives in sectors such as water and energy are translated into implementable projects.

### 3.1.3 Overstrand's Strategic Priorities

Overstrand Municipality's 2026/27 Integrated Development Plan (IDP) identifies the provision of a reliable, adequate and affordable water supply as a key enabler of economic growth and sustainable development within the municipal area. To support this objective, the IDP identifies several strategic water infrastructure initiatives, including significant planned investment in a seawater desalination plant that is expected to make a substantial contribution to meeting growing water demand in the Greater Hermanus area. The project also aligns with the Municipality's climate change response objectives by diversifying available water resources through desalination, while complementing its ongoing and successful water conservation and water demand management initiatives.

The Water Services Development Plan (WSDP), which forms part of the Municipality's strategic planning framework, informing both the IDP and annual budgeting processes, acknowledges the need for Overstrand to develop climate response strategies including Water Conservation and Water Demand Management (WCWDM) strategies, reduced levels of Non-Revenue Water (NRW) and water losses. It also acknowledges the importance of diversifying water resources and identifies the Greater Hermanus Seawater Desalination Scheme as a major water services infrastructure project to be implemented over the short to medium term.

#### 3.1.4 Project Alignment

Following from the above discussion, the proposed desalination project aligns with national policy objectives relating to water security, climate resilience and water supply diversification, as articulated in the National Water Resource Strategy 3 (NWRS-3), and is further supported by the implementation framework of the National Water and Sanitation Master Plan (NW&SMP).

At a provincial level, the project is consistent with the strategic priorities of the Provincial Spatial Plan (PSP), the long-term infrastructure planning objectives of the Western Cape Infrastructure Framework 2050 (WCIF 2050), and the sector-specific interventions identified in the Western Cape Water Resilience Strategy, which recognises desalination as an important mechanism for diversifying and strengthening regional water supply systems.

At a municipal level, the proposed project aligns with both the Overstrand Municipality's Integrated Development Plan (IDP) and its Water Services Development Plan (WSDP).

### 3.2 *Regulatory Analysis*

This section explores Overstrand's mandate to ensure water and sanitation services delivery and the authority to decide about bulk water supply augmentation, and the framework within which the decision-making process will unfold. The regulatory environment applicable to the desalination project is comprehensive and complex and changing while the project is unfolding. A project-specific legal due diligence process will be a core part of the feasibility study process and will include and expand on the content of this section.

#### 3.2.1 Project context

The desalination project is a bulk supply augmentation initiative aimed at ensuring that Overstrand has sufficient and secure access to water resources on the supply side to fulfil its municipal service delivery obligations on the demand side.

Overstrand, in its capacity as water services authority, is accountable under the Constitution of the Republic of South Africa Act No, 107 of 1996 (the Constitution) for ensuring service delivery as effectively and efficiently as possible and is required to plan proactively for the long-term security of bulk supply. As the decision-maker on service planning and delivery, the municipality has, through its ongoing planning processes, identified a growing need for increased bulk supply to meet rising water and sanitation demand within its area of jurisdiction. Various technical studies and technical options analyses have confirmed that diversifying and supplementing existing bulk supply through seawater desalination is the optimal response in the current context.

The need for bulk supply augmentation is urgent. The Municipality has confirmed that the Project is not funded in its current capital plan. Overstrand must therefore consider alternative financing mechanisms to meet the required augmentation timeline.

### 3.2.2 Water Services Authority

Constitutionally, local government has the executive authority in respect of and the right to administer water and sanitation services limited to potable water supply systems and domestic wastewater and sewage disposal systems<sup>1</sup>. It also has the right to exercise any power concerning a matter reasonably necessary for or incidental to the effective performance of its functions<sup>2</sup>.

Under the Water Services Act No. 108 of 1997 (Water Services Act), read together with the Section 84 Local Government: Municipal Structures Act No. 117 of 1998 (the Structures Act), Overstrand is the water services authority. As the water services authority Overstrand has the duty to all consumers or potential consumers in its area of jurisdiction to progressively ensure efficient, affordable, economical and accessible access to water services<sup>3</sup>.

The objects of local government include to ensure the provision of services to communities in a sustainable manner. Whilst local government has the right to govern, on its own initiative, the local government affairs of its community, it is subject to national legislation<sup>4</sup>.

### 3.2.3 Municipal decision-making process

The legislative and executive authority of a municipality is exercised by the Council of the municipality, and the Council takes all the decision of the municipality, subject to the system of delegation under Section 59 of the MSA<sup>5</sup>.

A municipality exercises its legislative and executive authority by developing and adopting policies, plans and strategies and programmes including setting targets for delivery implementing applicable national legislation and by-laws; providing services itself or appointing services providers and monitoring and regulating services.

Chapter 8 of the MSA regulates municipal decision-making in respect of municipal services. Section 76 establishes that a municipality may provide a service through either an internal or an external mechanism. Section 77 prescribes the circumstances in which a municipality must review its service delivery mechanism, including when a new activity is to be undertaken or when an existing municipal service is to be significantly upgraded, extended or improved<sup>6</sup>. Although the desalination project is a

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<sup>1</sup> Section 156(1)(a) read together with Part B of Schedule 4 of the Constitution.

<sup>2</sup> Section 156(5) of the Constitution.

<sup>3</sup> Section 11(1) of the Water Services Act.

<sup>4</sup> Section 151(3) of the Constitution.

<sup>5</sup> Section 11 ((1) of the MSA.

<sup>6</sup> Section 77(1)(a)(i) and (d) of the MSA.

supply-side support activity rather than a municipal service in its own right, the impact of the project on the existing internal service delivery mechanism should nonetheless be considered.

Because of the need to consider alternative financing structures and the opportunity to transfer significant technical, financial and operational risk, section 120 of the MFMA and the Municipal PPP Regulations (MFMA PPP Regulations, effective 1 April 2005) provide the detailed legal framework for any arrangement that constitutes a municipal PPP.

Overstrand should thus comply with Chapter 8 of the MSA, Chapter 11 of the MFMA and section 19 of the Water Services Act in its decision-making processes regarding the project. At this stage, the municipality needs to take an in-principle decision in terms of S78(2) of the MSA to decide whether it needs to change its internal service delivery mechanism to undertake the desalination project, or whether other options are feasible.

This internal assessment (Section 78(1)) is a first step in determining the most appropriate institutional arrangements for the implementation (financing and construction) and operation of the desalination project and it is specifically a process driven in compliance with the MSA and the MFMA as well as relevant regulations published in terms of these Acts.

### 3.2.4 Local Government: Municipal Systems Act, 2000

Chapters and sections in the MSA that may have an impact on the project have been outlined in the Section 78(1) report. These are summarised in Table 3.

*Table 3: Relevant chapters and sections of Municipal Systems Act*

| Reference                                                                          | Relevance to the project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chapter 4 as well as sections 21 and 21A                                           | Relates to the community consultation processes applicable in respect of a Section 78(3) feasibility study.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Chapter 5 (Integrated Development Planning) and Chapter 6 (Performance Management) | Contains various clauses that underscore the need to meet the basic needs of a community and leave the door open for possible private-sector involvement.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Chapter 8 (Municipal Service Rendering) Section 73                                 | Provides a general duty to give priority to the basic needs that community members should have access to, i.e. at least the minimum level of basic municipal services.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Chapter 8 Section 74                                                               | Prescribes that a council must adopt and implement a tariff policy on levying fees for municipal services. In keeping with Section 74(2), the policy must, amongst other things, reflect the principles of equity, fairness and affordability while facilitating the financial sustainability of the service and economic development. In Section 74(2)(d), it is specifically mentioned that the tariff must reflect the costs reasonably associated with rendering the service, while in Section 74(2)(h), reference is made to the obligation to encourage the economical, efficient and effective use of resources. |
| Chapter 8 Section 75                                                               | Directs a municipal council to enact a by-law to give effect to the implementation and enforcement of the tariff policy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Chapter 8 Section 76                                                               | Distinguishes between two possible mechanisms for municipal service provision, namely an internal mechanism, which includes various internal arrangements within the municipal administration, and an external mechanism, which includes various possibilities for partnering with private parties. Some of these possibilities could lead to a PPP (various forms of                                                                                                                                                                                                                                                   |

| Reference            | Relevance to the project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | municipal entities) or alternatively another municipality or national or provincial organ of state or a community-based organisation, non-governmental organisation or PPP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Chapter 8 Section 77 | Spells out when municipalities must review and decide on mechanisms to provide municipal services, i.e. the 'mandatory triggers' that could, amongst other things, be inadequate service delivery, new services, significant upgrading or improvement of services.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Chapter 8 Section 78 | <p>Deals with the criteria and processes to be followed in order to reach decisions regarding suitable service provision mechanisms for municipal services, including a Section 78(1) internal assessment looking at the internal human and financial resources; a Section 78(2) decision to either keep to an internal mechanism or explore a preferable private party mechanism; a Section 78(3) feasibility study to delve deeper into the suitability of the private party mechanism; and a Section 78(4) Council decision weighing the recommendations of the Section 78(3) feasibility study and deciding on whether to use an internal or private party mechanism, in the process considering Section 73(2) of the MSA to achieve the best outcome. Section 73(2) requires that municipal services must be:</p> <p>Equitable and accessible</p> <p>Provided in a manner that makes prudent, economical, efficient and effective use of available resources and improves quality standards over time</p> <p>Financially sustainable</p> <p>Environmentally sustainable</p> <p>Regularly reviewed with a view to upgrading, extension and improvement</p> <p>Section 78(5) reminds the municipality that it must take into account other applicable legislation relating to the appointment of a service provider. The obligation is to do proper legal due diligence as part of a Section 78(3) feasibility study to ensure that relevant legislation is identified and complied with. For instance, in the case of municipal entities, it will be Section 84 of the MFMA.</p> |
| Chapter 8 Section 79 | Refers to the commitment of financial and human resources by the municipality if an internal mechanism is decided on.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Chapter 8 Section 80 | <p>Section 80(2) binds a municipality to establish a programme for community consultation and information dissemination regarding the appointment of a private party service provider and the contents of a service delivery agreement (SDA), if concluded.</p> <p>Section 80(3) stipulates that, before an SDA with another municipality is concluded, the municipality must also do a feasibility study to assess the impact of the arrangement.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Chapter 8 Section 81 | <p>Section 81(2) refers to the municipality's responsibilities if concluding an arrangement with a private party, including those responsibilities that may be assigned to the private service provider. In essence, an SDA is comprehensive and multi-faceted, and its execution should be supported by stringent contract monitoring.</p> <p>Section 81(4) refers to the process to be followed if an existing private party service arrangement must be amended. (Regulation 9 of the Municipal PPP Regulations also applies.)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Chapter 8 Section 83 | Section 83 sets out the process of competitive bidding, including a reference to the SCM process in Chapter 11 of the MFMA, to be complied with as well.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Reference                                          | Relevance to the project                                                                                                                                                                                                  |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | Section 83(1)(d) also requires a municipality to be accountable to the local community for progress in selecting a private service provider and the reasons for any decision in this regard.                              |
| Chapter 8 Section 84                               | Details the negotiation and agreement with a prospective service provider.                                                                                                                                                |
| Chapter 8 Section 96                               | Dictates a credit control and debt collection policy.                                                                                                                                                                     |
| Chapter Section 98                                 | Requires the municipality to adopt by-laws to give effect to its credit control and debt collection policy, including its enforcement. These policies and by-laws are aimed at ensuring financially sustainable services. |
| Chapter 8A (Municipal Entities) Section 86B to 93L | Deals with municipal entities (MEs), which are one of the external mechanisms mandated in Section 76(b)                                                                                                                   |

### 3.2.5 Local Government: Municipal Finance Management Act and Regulations

The MFMA regulates municipal fiscal management, ensuring efficient handling of revenue, expenditure, assets, and liabilities. For the Desalination project, key stipulations relevant to procuring private resources include:

- Part 1 of Chapter 11 of the MFMA, governing the procurement of goods and services, the SCM Regulations, 2005, and Overstrand 's SCM Policy
- Part 2 of Chapter 11 of the MFMA, governing the content and approval of a PPP feasibility study
- Section 33 of the MFMA, governing long-term contracts with future budgetary implications

#### *MFMA PPP Regulations and Municipal Service Delivery and PPP Guidelines*

A PPP is defined by three criteria in the Municipal PPP Regulations of 2005: the nature of service provision, risk transfer, and compensation method. The aim is value for money, affordability and appropriate technical, operational and financial risk transfer to a private party. The Municipal Service Delivery and PPP Guidelines (Municipal PPP Guidelines) from National Treasury (NT) expand on the MSA, MFMA, SCM, and PPP Regulations by providing detailed modules for all phases of a PPP project, including inception, feasibility, procurement, and contract management. These guidelines support but do not replace existing legislation. Recent amendments to the PPP Regulations, effective during project implementation, require the Overstrand to consult with NT if it decides to abandon a PPP procurement process after obtaining Council approval.

#### *Municipal Asset Transfer Regulations*

The Municipal Asset Transfer Regulations (MATR) of 2008 often guide transactions involving municipal capital assets with the private sector.

Chapter 4 addresses the granting of rights to use, control or manage municipal assets, not involving transfer or disposal. However, if these rights are part of a PPP project; instead, Section 120 of the MFMA and the PPP Regulations govern the arrangement. Thus, the MATR are not suitable for the Desalination project as a PPP but may be relevant for the engagement with DPWI regarding securing access to the site through lease or ownership transfer.

*Integration of the MSA and the MFMA for municipal service PPPs*

There are overlaps in processes and content between the MSA, MFMA, and related regulations regarding feasibility studies for municipal services (like water, sanitation, electricity, and solid waste), especially when considering PPPs. These overlaps do not apply to municipal support activities. Ensuring affordability, value for money, and risk transfer requires robust contract, performance, and risk management. The MFMA supports the MSA by embedding these requirements into the project cycle and municipal management.

*Performance management*

Section 41 of the MSA mandates municipalities to monitor the performance of all external service providers. Section 46 of the MSA requires municipalities to prepare an annual performance report for each external service provider, included in the municipality's annual report to the Auditor-General as per Section 121(3) of the MFMA. Additionally, Section 72 of the MFMA stipulates that municipalities must submit a mid-year budget and performance assessment by 25 January each year, which could include an early review of service providers.

*Contract management*

Section 116 of the MFMA mandates municipalities to manage and monitor contracts effectively. This includes enforcing the contract, monitoring performance monthly, and establishing capacity for day-to-day oversight with regular Council reports. Long-term contracts also require three-year reviews. Module 6 of the Municipal PPP Guidelines provides specific guidance on managing PPP agreements.

*Risk management*

All risks related to external service provision contracts must be identified and communicated to the municipality's internal audit unit, as per Section 165 of the MFMA. This unit should then integrate the contract risk profile into its audit plan. Additionally, Section 164 restricts municipalities from engaging in commercial activities outside their constitutional or legislative powers, while Section 163 prohibits incurring liabilities or risks in foreign currencies.

**3.2.6 Environmental legislation**

A desalination project will involve activities that trigger regulatory authorisations as stipulated in various Acts and regulations and by-laws.

The National Environmental Management Act, 107 of 1998 (NEMA), based on the Constitution, governs environmental issues. The Environmental Impact Assessment (EIA) Regulations under NEMA require environmental authorisation (EA) for activities listed in the Listing Notices.

The legislation applicable to the proposed new Hermanus Desalination Plant and associated infrastructure includes:

- The National Environmental Management Act (NEMA), 1998 (Act 107 of 1998)
- Environmental Impact Assessment Regulations, 2014 (as amended)
  - Activity 16 of Listing Notice 1 is triggered

- Additional listed activities related to the construction of the pipeline might also be triggered; however, the applicability of the listed activities will be confirmed once the alignment of the pipelines have been finalised.
- The National Environmental Management: Integrated Coastal Management Act (NEM:ICMA), 2008 (Act 24 of 2008)
- The desalination process generates concentrated brine effluent that will be discharged into the marine environment in addition to effluent already being released from the abalone farm's facility. Approval through a General Discharge Authorisation (GDA) is required, as previously confirmed by the Department of Forestry, Fisheries and the Environment (DFFE).
- The National Environmental Management: Protected Areas Act (NEM:PAA), 2003 (Act 57 of 2003).
  - The proposed pipeline from the new Hermanus desalination plant will extend approximately 20 metres into the Fernkloof Nature Reserve in order to connect to the existing bulk pipeline near Hermanus Reservoirs 1 & 2.

Environmental Authorisation, permits and approvals related to the proposed new Desalination Plant and associated infrastructure includes:

- An Environmental Authorisation (EA) to be granted by the Department of Environmental Affairs and Development Planning (DEA&DP)
- As it has been proposed for combined discharge with the adjacent abalone farm facility, the Project will require a General Discharge Authorisation (GDA) in terms of Section 69 of NEM:ICMA. The abalone farm currently holds a valid GDA which will be updated to include the brine waste discharge from the proposed new Hermanus desalination plant.

Specialist studies forming part of the EA process are likely to include a botanical assessment and a freshwater ecology assessment. Furthermore, a Marine Impact Assessment is required to evaluate the effects of the intake and brine discharge systems on marine habitats, biodiversity and water quality, likely supported by specialist marine ecological investigations and hydrodynamic/brine dispersion modelling.

### 3.2.7 Water legislation

#### *National Water Act*

The National Water Act, 36 of 1998 (NWA) regulates water resource management. A desalination project does not require to apply for a water use license.

#### *Water Services Act (WSA)*

The Water Services Act, 108 of 1997 (WSA) mandates municipalities to provide water and sanitation services according to national standards. Desalination projects are not dealt with specifically. There is an amendment Bill published for comment which proposed to introduce a licensing system for municipal service delivery mechanisms. As a support function, the desalination project will not be required to be licensed and will be operated under Overstrand's licensed mechanism – currently structured as an internal mechanism.

*The South African National Water Resources Infrastructure Agency SOC Limited Act*

The South African National Water Resources Infrastructure Agency SOC Limited Act (Act 34 of 2024) establishes a state-owned company to independently develop, operate, and maintain national bulk water infrastructure. It is unlikely to impact the desalination project directly but could affect future water infrastructure regulations.

### 3.2.8 Heritage legislation

The National Heritage Resources Act, 25 of 1999 (NHRA) is the principal act governing heritage matters in South Africa requiring authorisation for developments affecting heritage resources.

Applicable Heritage legislation for the proposed desalination plant and associated pipeline infrastructure includes:

- Section 38(1) of The National Heritage Resources Act (NHRA), 1999 (Act 25 of 1999).
  - The proposed pipeline associated with the desalination plant will exceed 300m in length.
  - The proposed development site for the desalination plant will exceed 5 000m<sup>2</sup> in extent.
  - The complete development proposal, including the desalination plant and pipeline, will stretch over three or more erven.
  - The proposal therefore triggers the relevant categories set out in Section 38(1)(a), (c)(i) and (ii) of the National Heritage Resources Act (NHRA).
- Section 34 of The National Heritage Resources Act (NHRA), 1999 (Act 25 of 1999).

Buildings on the site will be demolished, some of which are older than 60 years. Therefore, an application for a Demolition Permit in terms of Section 34 of the NHRA has been submitted to Heritage Western Cape (HWC).

The heritage approvals to be obtained would include:

- Positive Record of Decision (RoD) from HWC in terms of Section 38 of the NHRA.
- Demolition Permit from HWC in terms of Section 34 of the NHRA.

### 3.2.9 Other relevant legislation

There are other regulatory measures that will impact on the Desalination project. Details concerning construction law such as the Construction Industry Development Board (CIDB) Act, 38 of 2000 and the CIDB Regulations and Standards are not covered here as these are adequately packaged in the standardised construction tenders.

The Occupational Health and Safety Act, 85 of 1993 as amended (OHSA) and its Regulations apply in various instances to the operation and maintenance (O&M) of the proposed desalination project given it concerns work where hazardous substances as well as plant and machinery are used. In tender documents, attention is always paid to covering all the aspects of the OHSA and its regulations.

Labour legislation will come into play only once the proposed desalination project becomes operational and will become an issue if the O&M of the proposed desalination project is outsourced and thus forms part of performance measurement.

Wayleaves, i.e. the right to work in road reserves, are regulated by the South African National Roads Agency and the National Roads Act, 7 of 1998 contains Section 48, which contains strict requirements for the installation of services on national roads. However, the project does not seem to concern a national road, but the infrastructure will cross the provincial road probably requiring drilling / trenchless methods.

#### 3.2.10 Municipal by-laws and policies

Overstrand policies in regard to water and sanitation services delivery and infrastructure development will continue to apply. The Supply Chain Management Policy and the Preferential Procurement Policy will be applied in the development of the contracting and procurement strategy in the feasibility study.

Spatial development and planning will need to be considered further to ensure that the desalination project is incorporated in the Overstrand Spatial Development Framework, the Integrated Development Plan and the Water Services Development Plan, and that actual building work is undertaken in terms building plan approvals and bulk services contributions.

#### 3.2.11 Conclusion

The regulatory framework governing the desalination project is multi-layered, spanning constitutional obligations, municipal systems and finance legislation, environmental and water law, heritage requirements, and transformation policy. Taken together, these frameworks confirm both Overstrand's authority and its obligation to act. They also guide the process the Municipality must follow — from the current Section 78(1) internal assessment through to a feasibility study, Council decision, and, if a PPP route is pursued, full compliance with section 120 of the MFMA and the Municipal PPP Regulations and guided by the Municipal PPP Guidelines. The feasibility study will include a comprehensive legal due diligence that maps all applicable requirements to the specific project structure adopted, identifies the authorisations and approvals required, and ensures that the procurement and contracting strategy is legally sound and defensible. The Project aligns with the national, provincial and local policy imperatives. The approach to bulk supply augmentation and private sector participation in alternative funding models is supported in the existing regulatory framework.

### 3.3 *Financial Analysis*

The financial analysis draws on Overstrand's audited financial statements, the Capital Expenditure Framework and Long-Term Financial Plan (CEF/LTFP) commissioned in 2023, and the indicative financial model developed during project preparation.

The objective of this section is to assess whether the municipality has the financial capacity to fund the proposed desalination project on-balance-sheet and, if not, to identify the appropriate off-balance-sheet funding pathway.

The assessment is undertaken in the context of the Local Government: Municipal Finance Management Act, 56 of 2003 (MFMA) and National Treasury's PPP framework.

### 3.3.1 Financial Performance

Overstrand Municipality has historically maintained a financially disciplined operating position, achieved clean audit outcomes and generating operating surpluses from Financial Year (FY) 2018 through FY 2022.

The 2023 CEF/LTFP records an operating surplus of R136 million in FY 2020, declining to R26 million in FY 2021 and recovering to R44 million in FY 2022, before a projected deficit of R6 million in the FY 2023 adjustment budget initiated a volatile cycle across the medium-term revenue and expenditure framework (MTREF).

The primary driver of this deterioration is the structural imbalance between National Electricity Regulator of South Africa (NERSA) approved Eskom tariff increases (18.49% for FY 2023/24) and the ceiling on municipal electricity tariff increases (15.10%), which compresses the municipality's electricity service charge margin. Over the LTFP forecast horizon, operating surpluses are projected to recover to R105 million in FY 2027 before declining to approximately R29 million by FY 2033, reflecting sustained pressure of above-inflation input cost escalation against a constrained revenue base.

The municipality's liquidity position is sound. The LTFP projects a current ratio rising from 2.21:1 in FY 2027 to 2.94:1 in FY 2033, supported by a policy minimum of three months' cash cover of working capital that is met throughout the planning horizon.

The Capital Replacement Reserve (CRR) is cash-backed and is growing, driven by cash-funded depreciation transfers. External borrowings, which have historically represented approximately 50% of total liabilities, are projected to decline in proportional terms to approximately 29% of total liabilities by FY 2033 as the municipality manages its annual drawdown at a constant nominal level of approximately R60 million per annum following repayment of a bullet loan in FY 2026.

The MFMA Borrowings Policy of 31 May 2022 governs the municipality's borrowing parameters, including debt service cover ratios.

Revenue from property rates, services charges, and government grants constitutes the municipality's primary income base. Overstrand has recognised the risk of declining conditional grant allocations from national government and is actively repositioning its capital funding strategy to reduce grant dependency over time by growing the balance supplemented by affordable levels of external debt.

Water and sanitation service charges represent a structurally important revenue stream that will be directly affected by the tariff implications of the proposed desalination project, making the affordability analysis of any off-balance-sheet unitary payment central to the municipality's fiscal planning going forward.

### 3.3.2 Budget Analysis

Overstrand's **total annual capital budget** across all service areas has historically been in the range of ZAR 200 million to ZAR 300 million per annum. The 2023 CEF/LTFP provides a 10-year capital expenditure programme for the period FY 2023/24 to FY 2032/33 that encompasses water, sanitation, electricity, roads, stormwater, refuse removal, and housing infrastructure across all functional areas of the municipality.

The CEF identifies the seawater desalination plant as a priority capital investment, projecting a 20% increase in water provision in FY 2027 upon commissioning of Phase 1 and a further 20% increase in FY 2030 upon completion of Phase 2. However, the capital investment required for the desalination facility dwarfs any individual project historically undertaken within the municipality's own-funded capital programme.

The CEF/LTFP models annual borrowings at a constant nominal level of approximately R60 to 100 million per annum over the forecast period — a level calibrated to maintain MFMA-compliant debt service cover ratios while supporting capital expenditure at an optimal level. This annual borrowing envelope is already fully committed to the municipality's broader capital programme covering electricity distribution, sanitation network upgrades, and other infrastructure.

There is no headroom within the existing MFMA borrowing envelope to absorb the debt service requirements of a ZAR 300 million to ZAR 545 million desalination facility. Even modest additional borrowing at this scale would breach the covenant thresholds established in the municipality's Borrowings Policy.

The capital expenditure affordability envelope, as defined by the LTFP, is therefore the binding constraint on the municipality's ability to fund large infrastructure projects from its own balance sheet. The CEF notes explicitly that available capital finance consistently falls short of total infrastructure demand, necessitating rigorous prioritisation to determine which projects are affordable and when they can be implemented.

In this context, indications are that the desalination project cannot be accommodated within the municipality's on-balance-sheet affordability envelope without crowding out essential investment in roads, sanitation, electricity distribution, and housing infrastructure — expenditure categories that also carry legal service delivery obligations. The conclusion is that the municipality does not have the capital funds available to finance this project from its own balance sheet, and the capital must therefore be raised off-balance-sheet through a private financing mechanism.

### 3.3.3 Project Budget

The pre-feasibility study by Zutari estimates the total capital cost of a 10 MI/d SWRO facility at ZAR 545,241,000 (excluding VAT).

This figure is consistent with the SWRO financial model developed during project preparation, which uses the same CAPEX base across a 25-year concession with a 3-year construction period commencing at financial close in 2027.

An initial 5 MI/d plant to meet the 2029 supply target would represent a capital outlay of approximately ZAR 300 million or more, reflecting that economies of scale in SWRO plant construction mean the initial phase does not halve proportionally in cost.

Under the SWRO, 10MI/d scenario financial model, CAPEX drawdown is structured across the three-year construction period in the ratio of 20%:50%:30%, representing ZAR 109 million in Construction Year 1, ZAR 273 million in Construction Year 2, and ZAR 164 million in Construction Year 3.

Operating costs are dominated by electricity, maintenance, insurance and chemicals. At an electricity tariff escalation rate of 8% per annum, electricity costs alone are projected to more than quintuple over the 25-year concession period.

The critical conclusion of the project budget analysis is the confirmation that the ZAR 545 million capital requirement materially exceeds what the municipality can absorb on its own balance sheet. For context, this sum represents between one and three times the municipality's entire annual capital budget across all service areas (dependant if road capital expenditures are included or not). On-balance-sheet financing would require committing the full capital envelope of the municipality exclusively to a single project for multiple consecutive years, with no residual capacity for electricity, sanitation, etc.

### 3.3.4 Alternative Funding Sources

Given the municipality's inability to fund the desalination project from its own capital resources, the financial analysis identifies off-balance-sheet financing as the only viable pathway to project delivery.

Off-balance-sheet financing means that the private party — rather than the municipality — raises and assumes the project debt, with the municipality's obligation limited to a contractually defined unitary payment linked to service delivery performance over the concession period.

The Western Cape Province's water resilience strategy explicitly identifies desalination as an intervention with potential to attract climate finance and concessional funding from development finance institutions, particularly in addressing infrastructure funding gaps of this nature.

Three principal off-balance-sheet funding sources have been identified as available and appropriate for this project.

- First, the Water Partnerships Office (WPO) — established by DWS, the Development Bank of Southern Africa (DBSA), and South African Local Government Association (SALGA) specifically to support municipalities in structuring Design, Build, Finance, Operate and Maintain (DBFOM) water infrastructure projects — has confirmed its willingness to provide technical and financial advisory support to Overstrand. The WPO is able to facilitate access to blended finance instruments that combine concessional Development Finance Institution (DFI) debt with commercial debt and equity, reducing the effective cost of capital and consequently the unitary payment.
- Second, the Green Climate Fund (GCF) and related climate finance mechanisms offer concessional loan and grant finance for water security infrastructure in developing economies. Desalination, as a climate-resilient and drought-independent supply technology, is well-positioned to access this category of concessional finance, particularly under a blended structure orchestrated through the WPO.
- Third, the DBSA's municipal infrastructure financing window, the Industrial Development Corporation's (IDC) green infrastructure mandate, and the African Development Bank's (AfDB) South Africa pipeline represent additional DFI debt sources at sub-commercial interest rates that would reduce the cost of the senior debt tranche and compress the unitary payment to within the municipality's affordability envelope.

The affordability of the unitary payment to the municipality is directly linked to the blended cost of capital achieved by the private consortium. The municipality's existing water tariff revenue base must be assessed against this payment obligation during the full feasibility study to determine the extent to which the tariff increase required to service the unitary payment is affordable to end consumers. Keeping in mind that the water from this plant will only constitute a portion of the total water in the area.

### 3.3.5 Conclusion

In summary, the financial analysis confirms at least three interconnected conclusions:

- First, Overstrand does not have the capital funds to finance the proposed desalination project on-balance-sheet without causing unacceptable harm to its fiscal sustainability and its ability to fund other legally mandated infrastructure obligations.
- Second, off-balance-sheet financing through a DBFOM private party arrangement under the MFMA and the Municipal PPP Regulations may provide a financially viable delivery mechanism.
- Third, the affordability of the resulting unitary payment should be manageable within the municipality's operating expenditure envelope, particularly when blended finance instruments from the WPO, DBSA, and Green Climate Fund are applied to reduce the cost of private capital whilst considering that this is only a portion of the total water in the area.

## 3.4 Institutional Analysis

The preparation and development of a long-term infrastructural project such as the proposed desalination plant requires institutional commitment, capacity, continuity of key role-players and stakeholder acknowledgement and involvement where required. Furthermore, each phase of the project's preparation and development requires specific expertise and capacity. This section consolidates the assessment of Overstrand's human resources capacity and organisational capability, the municipality's institutional commitment to the project, the composition and continuity of the project team, and the identification of internal and external project stakeholders.

### 3.4.1 Human Resources Assessment

The human resources assessment seeks to determine whether Overstrand has the institutional capacity, expertise and experience to manage, operate and maintain the proposed desalination plant through an internal mechanism.

The assessment focused on the Directorate: Infrastructure Services, which carries primary responsibility for bulk water services. All critical posts within the directorate are filled. The Chief Engineer: Infrastructure Services holds delegated authority to fulfil the Water Services Authority (WSA) role, and the Principal Engineer of the Division: Civil Infrastructure Planning is responsible for the Water Services Development Plan (WSDP) and the management and monitoring of bulk water services contracts, including the long-term Water and Wastewater Bulk Works Contract with Veolia Services Southern Africa (Pty) Ltd. The relevant organisational structure is depicted in Figure 3: Relevant Overstrand organisational structureFigure 3.

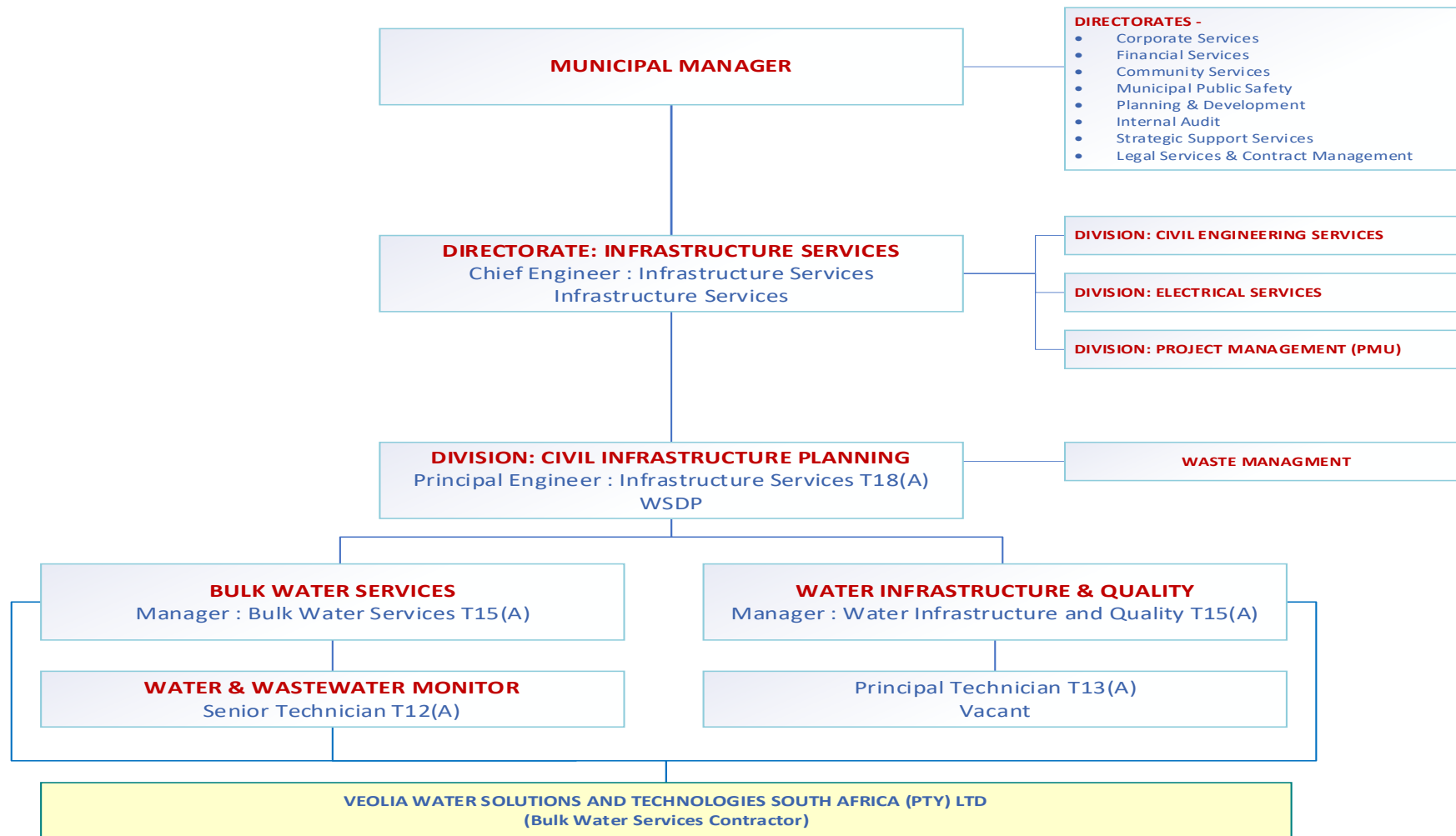


Figure 3: Relevant Overstrand organisational structure

Since 2015, Veolia has operated and maintained Overstrand's water and wastewater treatment plants, pump stations, reservoirs, bulk pipelines and associated assets under this contract. As a consequence, the municipality's specialised operational and maintenance expertise in bulk water and wastewater treatment is structurally located within the Veolia contract rather than within the municipality's own establishment. Overstrand's internal capacity is correspondingly focused on infrastructure planning, water quality oversight, and contract management and monitoring — functions that the municipality performs to a demonstrably high standard.

This institutional arrangement has delivered strong outcomes. Supported by Veolia, Overstrand has achieved excellent results across the Department of Water and Sanitation's Blue Drop, Green Drop and No Drop programmes, underpinned by a comprehensive performance management framework aligned with applicable legislative requirements, regulatory standards and municipal performance management processes. The Municipal Strategic Self-Assessment (MuSSA) rates management skill levels at 92.0%, reflecting strong competence in oversight, planning and decision-making.

#### 3.4.2 Specialist Engineering Capacity Gap

Notwithstanding these strengths, the assessment identifies a structural gap that is directly relevant to the Section 78(1) question. The municipality does not maintain an internal operational workforce dedicated to the operation and maintenance of bulk water treatment infrastructure — this function has been externalised to Veolia since 2015.

Critically, Overstrand's Division of Civil Infrastructure Planning does not possess the specialist engineering capacity required to design, procure, or operate a seawater reverse osmosis (SWRO) desalination plant. The disciplines required for such a facility are highly specialised and niche in nature, and none are currently present in the municipality's staff complement or operational systems. These include:

- Reverse osmosis (RO) process engineering and system design
- Marine works design, including seawater intake and outfall structures
- Membrane management, including selection, performance monitoring and replacement protocols
- Energy recovery optimisation for high-pressure pump systems
- Brine handling, concentrate management and marine discharge compliance
- Water quality compliance monitoring specific to desalinated water treatment and remineralisation

These are not capabilities that can be developed rapidly through internal training or recruitment within a reasonable timeframe, nor do they form part of the municipality's existing organisational structure or service delivery mandate. A desalination facility will accordingly require specialised operational, maintenance and technical competencies that lie entirely outside Overstrand's current establishment.

#### 3.4.3 Indicative Staffing Requirements

An indicative staffing complement for desalination facilities with capacities of 5 MI/day and 10 MI/day is set out in the tables below.

Table 4: Indicative staffing plan for 5MLD desalination plant

| Job Function                                                            | No. | Relevant Qualifications                                        | Availability of Skill in the Market                                                                      |
|-------------------------------------------------------------------------|-----|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Plant Manager                                                           | 1   | Relevant B-degree / BTech / Honours in Water / Engineering     | Management skills are available, but candidates with SWRO or bulk water treatment experience are limited |
| Shift Supervisors (Principal Process Controller – Reg. 3630 equivalent) | 4   | Grade 12 + Process Controller Classification (Class V typical) | Limited pool of suitably classified and experienced candidates                                           |
| Senior Process Controller                                               | 4   | Grade 12 + Process Controller Classification (Class III - IV)  | Moderate availability; experience in desalination is limited                                             |
| Process Controller                                                      | 4   | Grade 12 + Process Controller Classification (Class II–III)    | Moderate availability but requires significant on-the-job training                                       |
| Mechanical Technician                                                   | 1   | Qualified Red Seal Artisan (Mechanical Fitter / Millwright)    | Limited pool with RO/high-pressure pump experience                                                       |
| Electrical / Instrumentation Technician                                 | 1   | Qualified Red Seal Electrician / Instrumentation Technician    | Limited pool, especially with SCADA/RO integration experience                                            |
| Laboratory Technician / Water Quality Technician                        | 1   | National Diploma in Chemistry / Water Care / Microbiology      | Moderate availability; desalination-specific experience limited                                          |
| General Labourers (Chemical handling / cleaning)                        | 2   | Basic literacy                                                 | Readily available                                                                                        |
| Administrative / Stores Assistant                                       | 1   | Grade 12 / Office Admin qualification                          | Readily available                                                                                        |
| Drivers / Logistics Support                                             | 1   | Code 8 / 10 with PDP                                           | Readily available                                                                                        |
| Cleaners                                                                | 1   | Basic literacy                                                 | Readily available                                                                                        |
| Total                                                                   | 21  |                                                                |                                                                                                          |

Table 5: Indicative staffing plan for 10ML/d desalination plant

| Job Function                                                            | No. | Relevant Qualifications                                     | Availability of Skill in the Market                                             |
|-------------------------------------------------------------------------|-----|-------------------------------------------------------------|---------------------------------------------------------------------------------|
| Plant Manager                                                           | 1   | B-degree / BTech / Honours in Engineering / Water Treatment | Available but candidates with SWRO + municipal bulk water experience are scarce |
| Shift Supervisors (Principal Process Controller – Reg. 3630 equivalent) | 4   | Grade 12 + Class V Process Controller                       | Limited availability; desalination experience rare                              |
| Senior Process Controller                                               | 4   | Grade 12 + Class III - IV Process Controller                | Moderate availability; requires training in SWRO systems                        |
| Process Controller                                                      | 4   | Grade 12 + Class II–III Process Controller                  | Moderate availability                                                           |
| Process Operator                                                        | 4   | Grade 12                                                    | Readily available but requires structured plant training                        |

| Job Function                                         | No.       | Relevant Qualifications                                  | Availability of Skill in the Market                         |
|------------------------------------------------------|-----------|----------------------------------------------------------|-------------------------------------------------------------|
| Mechanical Technician                                | 1         | Red Seal Millwright / Mechanical Fitter                  | Limited pool with RO / high-pressure system exposure        |
| Electrical & Instrumentation Technician              | 1         | Red Seal Electrician / Instrumentation Technician        | Limited availability, particularly SCADA-integrated systems |
| Laboratory / Water Quality Technician                | 1         | National Diploma (Chemistry / Microbiology / Water Care) | Moderate availability; desalination experience limited      |
| General Labourers (Chemical handling / housekeeping) | 2         | Basic literacy                                           | Readily available                                           |
| Stores / Chemical Handling Assistant                 | 1         | Grade 12                                                 | Readily available                                           |
| Administrative Assistant                             | 1         | Grade 12 / Office Admin qualification                    | Readily available                                           |
| Drivers / Logistics Support                          | 1         | Code 8/10 + PDP                                          | Readily available                                           |
| Cleaners                                             | 1         | Basic literacy                                           | Readily available                                           |
| <b>Total</b>                                         | <b>26</b> |                                                          |                                                             |

The municipality similarly does not implement large multidisciplinary infrastructure projects through internal resources. Such projects are delivered through the competitive appointment of professional service providers and contractors, with Overstrand's role confined to project planning, procurement, oversight and contract management. The proposed desalination plant would require the same approach.

#### 3.4.4 Contract Management Capacity

Overstrand's contract management capability is well-established and demonstrably effective, as evidenced by the successful long-term administration of the Veolia bulk water and wastewater contract. This provides a sound institutional foundation for managing and monitoring a long-term contractual arrangement with a suitably qualified external party. However, to adequately oversee an external desalination contract, Overstrand will need to appoint a dedicated senior manager, reporting to the Manager: Bulk Water Services, responsible for contract monitoring and management.

#### 3.4.5 Overstrand Commitment

The proposed desalination project is arguably the largest infrastructure project that Overstrand has embarked on and has formed part of its strategic and master planning since 2004. The Municipality's Water Services Development Plan (WSDP) identifies the proposed plant as a primary future water resource development project aimed at enhancing long-term water security. The project is also included in the Municipality's three-year MTEF and its implementation forms part of directorate and divisional performance indicators.

#### 3.4.6 Project Team Capacity and Continuity

The project team comprises the project sponsor and a multidisciplinary team of specialists covering the functional areas required for a project of this nature, as depicted in Figure 4. All team members

are represented on the Project Steering Committee (PSC), which meets monthly. As the project progresses, minor adjustments to the team composition may be required, including the appointment of additional specialists such as a coastal engineer, surveyor and environmental specialists. The Water Partnerships Office (WPO), operating under the Development Bank of Southern Africa (DBSA), is also expected to join the project as a co-sponsor.

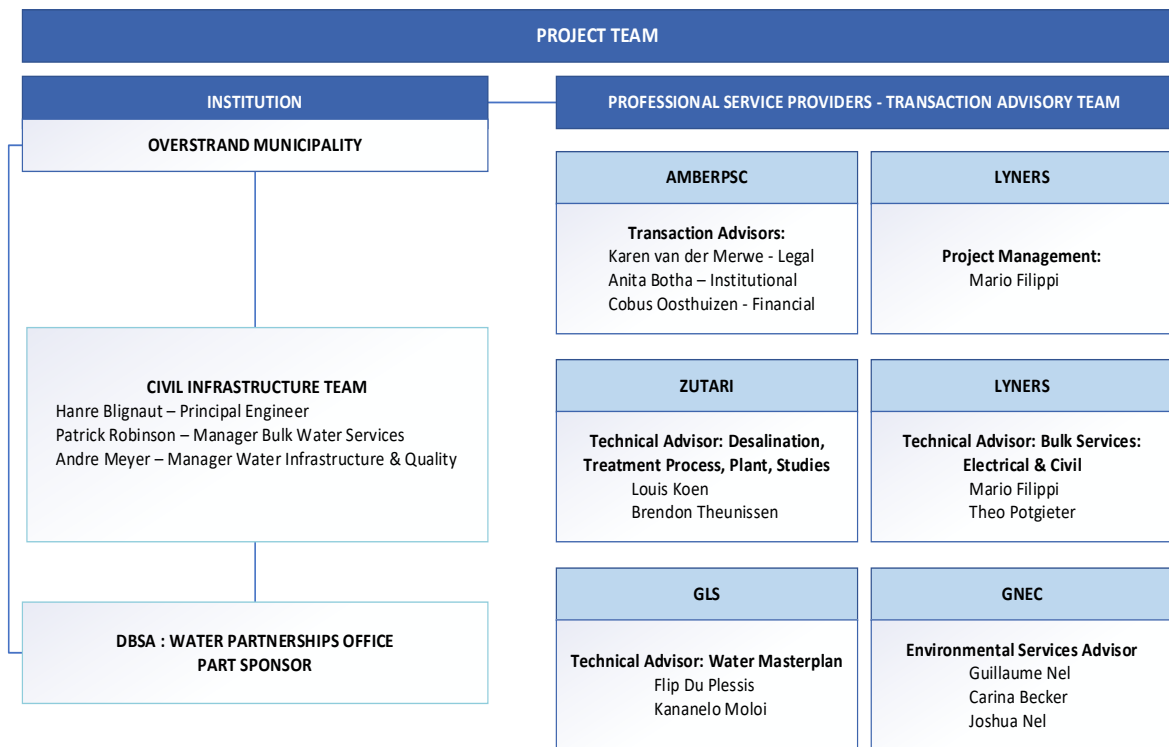


Figure 4: Project team structure

The project team has the full support of the Chief Engineer: Infrastructure Services and the Municipal Manager and the capacity to manage the continuity of the proposed project through its various phases to implementation.

#### 3.4.7 Project Stakeholders

The internal and external project stakeholders are identified below. These stakeholder groupings may evolve as the project progresses through its various stages.

Table 6: Internal project stakeholders

|   | Stakeholder                                                                                             | Involvement                                                                                                                      | Project stages                        |
|---|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| 1 | Overstrand Directorate Infrastructure Services (DIS) including:<br>Civil Engineering Planning (primary) | Project Owner – information, consultation, approval.<br>Ensure labour and community consulted and relevant stakeholders engaged. | All phases and facets of the Project. |

|   | Stakeholder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Involvement                                                                                                                                                                                                                 | Project stages                                                               |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
|   | Civil Engineering Services (as required)<br>Electrical Operations & Maintenance (as required)<br>Project Management (PMU), as required                                                                                                                                                                                                                                                                                                                                                               | Undertake and oversee the final approval of deliverables.<br>Ensure regulatory approvals obtained.                                                                                                                          |                                                                              |
| 2 | Overstrand's other directorates and divisions:<br>Office of the MM specifically the Division: Legal services and Contract management and Strategic Support Services<br>Directorate: Corporate Services specifically the Division: Human Resources<br>Directorate: Financial Services specifically the CFO and SCM<br>Directorate: Planning and Development specifically the Divisions of Town & Spatial Planning; Environmental Management & Conservation, Building Control and Property Management. | Provide support to DIS through information; engagements with TA as required; assistance with regulatory compliance processes in terms of the MSA and MFMA; comments, reviews, sign-off in respect of documents as required. | Needs analysis, feasibility study, procurement, and contracting as required. |
| 3 | Local Labour Forum (LLF)                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Organised labour consultations as legally prescribed.                                                                                                                                                                       | Needs analysis, feasibility study.                                           |
| 4 | Community of Overstrand                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Consultation as legally prescribed including in respect of a contract concluded ito section 33 of the MFMA.                                                                                                                 | Feasibility study, contracting.                                              |
| 5 | Overstrand W&S Portfolio Committee                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Oversight, monitoring of the Project in terms of MSA and MFMA legislative processes and contracting ito MFMA section 33.                                                                                                    | Needs analysis, feasibility study, contracting.                              |
| 6 | Overstrand Mayco                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Oversight, monitoring of the Project in terms of MSA and MFMA legislative processes including contracting ito MFMA section 33.                                                                                              | Needs analysis, feasibility study, contracting.                              |
| 7 | Overstrand Council                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Approval of completed project processes and reports as per the MSA, MFMA and related legislative requirements and approval of a contract concluded ito section 33 of the MFMA.                                              | Needs analysis, feasibility study, contracting.                              |

Table 7: External project stakeholders

|   | Stakeholder                                                                             | Involvement                                                                                                              | Project stages                                 |
|---|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| 1 | DPWI<br>(Department of Public Works and Infrastructure – national and regional offices) | Access to site, demolition approval, lease agreement.<br>Participant in regular project alignment consultation meetings. | Needs analysis, feasibility study, contracting |

|    | Stakeholder                                                                         | Involvement                                                                                                                                    | Project stages                                                  |
|----|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| 2  | ISA<br>(Infrastructure Agency South Africa)                                         | Project enablement (red tape reduction in the Presidency)                                                                                      | Feasibility Study                                               |
| 3  | GTAC (within ISA)                                                                   | Advisory to and oversight of project processes through monthly project meetings.                                                               | Feasibility study, procurement, contracting.                    |
| 4  | Water Partnerships Office (WPO) / Development Bank of Southern Africa (DBSA)        | Part funder and assistance with documentation.                                                                                                 | Feasibility study, procurement, contracting.                    |
| 5  | NT<br>(National Treasury)                                                           | Regulatory role                                                                                                                                |                                                                 |
| 6  | WCPT<br>(Western Cape Provincial Treasury)                                          | Advisory to and oversight of project processes through monthly project meetings. Provision of views and recommendations as legally prescribed. | Feasibility study, procurement, contracting.                    |
| 7  | CoGTA<br>(National Department of Cooperative Governance and Traditional Affairs)    | Provision of views and recommendations as legally prescribed.                                                                                  | Feasibility study and contracting.                              |
| 8  | DLG<br>(Department of Local Government – Western Cape)                              | Supporting Overstrand. Participant in regular project alignment consultation meetings.                                                         | Needs analysis, feasibility study, contracting                  |
| 9  | DWS<br>(National Department of Water and Sanitation)                                | Regulatory approvals and/or authorisations if required.<br>Views and recommendations as legally prescribed.                                    | Feasibility study, contracting, operations.                     |
| 10 | DFFE<br>(National Department of Forestry, Fisheries and the Environment)            | Regulatory approvals and/or authorisations as required to manage environmental aspects of the Project.                                         | Feasibility study – site establishment and further as required. |
| 11 | DEA&DP<br>(Provincial Department of Environmental Affairs and Development Planning) | Regulatory approvals and/or authorisations as required to manage environmental aspects of the Project.                                         | Feasibility study – site establishment and further as required. |
| 12 | HWC<br>(Heritage Western Cape)                                                      | Authority responsible for compliance with heritage legislation.                                                                                | Feasibility study – site establishment.                         |
| 13 | Existing infrastructure owner and operator (abalone farm)                           | Seawater access, abstraction and discharge process                                                                                             | Needs analysis, Feasibility study and contracting               |
| 14 | DBSA / DFIs                                                                         | Project finance; concessional debt; equity (under DBFOM)                                                                                       | Project finance; concessional debt; equity (under DBFOM)        |

### 3.4.8 Consultations

#### *Project Steering Committee (PSC)*

The core project team, consisting of senior management from Overstrand's Civil Infrastructure Planning Division and the Transaction Advisory team, is represented on a Project Steering Committee (PSC) that meets monthly. Registration of the project with the Government Technical Advisory Centre (GTAC) of National Treasury will result in the assigned National Treasury official, together with a designated official from Western Cape Provincial Treasury, becoming members of the PSC. Should the project require engagement with additional professional service providers during its development, PSC membership may be extended on a temporary basis to include such parties.

#### *Project Alignment Consultation*

Site certainty remains a significant project risk, as the preferred location for the proposed desalination plant is situated within Hermanus New Harbour and requires a long-term lease from the Department of Public Works and Infrastructure (DPWI). Engagements with DPWI have resulted in the establishment of a monthly project alignment meeting between senior officials of Overstrand Municipality, the Western Cape regional office of DPWI and the Western Cape Department of Local Government.

#### *Overstrand Community*

Throughout the project, the community of Overstrand will be consulted as part of the environmental authorisation processes and in accordance with applicable municipal legislation. In particular, section 33 of the MFMA requires that community comments be invited and considered should the Municipality contemplate entering into a desalination-related contract that has future budgetary implications.

#### *Organised Labour*

Organised labour is an important stakeholder in circumstances involving service expansion, upgrading or improvement. Section 78(1)(a)(v) of the MSA requires a municipality to obtain the views of organised labour when assessing its internal capacity to manage, operate and maintain an expanded, upgraded or improved municipal service.

In fulfilment of this requirement, Overstrand Municipality met with organised labour, represented by shop stewards of the South African Municipal Workers' Union (SAMWU) and the Independent Municipal and Allied Trade Union (IMATU), on 12-06-2026 at Preekstoel Water Treatment Works. The unions were afforded two weeks to submit further comments with a written response received from IMATU in anticipation of the matter serving at a Special Local Labour Forum (LLF) held on 29 June 2026.

During these engagements, organised labour was briefed on the nature and purpose of the proposed desalination plant and the section 78 process being undertaken. The following was confirmed and placed on record:

- The proposed desalination plant is a greenfield infrastructure development that does not involve any existing municipal employees, established posts or current operational facilities;

- No existing employees will be displaced, retrenched or transferred as a result of the proposed plant;
- No existing posts will be abolished or materially altered;
- No restructuring of the current organisational establishment is required or contemplated; and
- The proposed arrangement is expected to create new employment opportunities during both the construction and operational phases of the facility.

Subsequent to the LLF and upon receipt of the final draft of this report, IMATU responded in writing confirming that it understands the need for the project and is satisfied that matters concerning organised labour were fully taken into account. Specifically, IMATU noted that the human resource capacity requirements (Par 3.4.1 and 3.4.3), the financial analysis (Par 3.3), and the formal staff impact undertakings (Par 3.4.8 – refer points above) were adequately addressed in the report. On that basis, IMATU raised no objections to the intended process, while reserving its right to further input as the process evolves.

Both engagements were formally minuted by the Employee Relations branch within the Human Resources Division of Overstrand. The minutes of these engagements will form part of a stakeholder engagement report to be compiled during the subsequent Feasibility Study phase.

#### *Water Partnerships Office*

Water Partnership Office (WPO) to facilitate private sector investment in municipal water infrastructure. The WPO is a ring-fenced entity housed within the Development Bank of Southern Africa (DBSA) and accountable to the Department of Water and Sanitation (DWS). It was established specifically to address a gap identified in the NW&SMP: while municipalities are constitutionally responsible for water supply augmentation, many lack the technical and financial capacity to prepare and execute bankable infrastructure projects.

The WPO's mandate is to develop standardised programmes and assist municipalities in preparing and structuring bankable projects for private sector participation. Its primary objective is to create enabling conditions for private sector involvement in the provision of municipal water services.

The WPO's programme explicitly includes seawater desalination as a target intervention, alongside water reuse, management contracts and non-revenue water reduction. To support municipalities, the WPO offers project preparation assistance, bankable feasibility studies, blended finance structuring incorporating development finance institutions (DFIs) and commercial lenders, and access to Green Climate Fund financing for climate-resilient water infrastructure. The underlying rationale is that government cannot fund all necessary infrastructure projects alone. Rather than acting as the sole financier, the focus is on deploying public funds strategically to fill funding gaps while maximising investment from the private sector and DFIs.

For Overstrand, engagement with the WPO offers three concrete benefits: access to project preparation grant funding that reduces the municipality's upfront transaction cost exposure; specialist technical and financial advisory support to structure the DBFOM arrangement correctly; and a credible, government-endorsed process that will strengthen the municipality's position in engagements with project stakeholders.

### 3.4.9 Conclusion

Having regard to the full scope of the institutional analysis, the following conclusions are drawn:

- Overstrand possesses the institutional foundation and demonstrated experience necessary to manage a long-term external desalination contract, provided that a dedicated senior manager is appointed under the Manager: Bulk Water Services to assume responsibility for its ongoing monitoring and administration.
- The operational and technical expertise required to implement and run a desalination facility does not currently reside within the municipality's staff complement or operational systems and cannot be constituted through internal capacity development within a reasonable timeframe. Internal delivery of the proposed desalination plant as a standalone operational function is accordingly not feasible.
- Overstrand's institutional commitment to the project is well-established. The proposed desalination plant has featured in the municipality's strategic and master planning since 2004, is included in the WSDP as a primary water resource development initiative, is provided for in the three-year MTEF, and forms part of directorate and divisional performance indicators. This commitment provides the institutional continuity necessary for a project of this scale and complexity.
- The project team is suitably constituted, with the required multidisciplinary specialist capacity in place and a functioning Project Steering Committee providing governance oversight. The team has the support of senior municipal leadership and the capacity to manage the project through its various phases to implementation. The expected participation of the WPO/DBSA as co-sponsor will further strengthen project governance and financing capacity.
- The stakeholder framework is comprehensive and appropriately structured. Internal governance structures — including Council, Mayco, the W&S Portfolio Committee, and relevant directorates — are to be engaged across all material project stages. Key external regulatory, funding and approval bodies have been identified and are participants in established consultation processes, including a monthly project alignment meeting.
- The consultation processes required by applicable legislation have been initiated and are being conducted in good faith. Community consultation processes aligned with the MFMA have been identified and will be implemented. Organised labour has been engaged through the prescribed channels, with both SAMWU and IMATU formally briefed and the matter presented to the Local Labour Forum. It has been confirmed and placed on record that the proposed plant is a greenfield development that does not affect existing employees, established posts or current operational arrangements, and that new employment opportunities are anticipated.

Taken together, these findings confirm that Overstrand Municipality has the institutional commitment, governance capability and project management capacity to advance the proposed desalination plant as a long-term externally managed infrastructure arrangement and is well-positioned to fulfil its Water Services Authority role throughout the project lifecycle.

## 4 Technical Solution Options Analysis

### 4.1 Introduction

Population growth and sustained urban expansion have placed increasing pressure on Overstrand Municipality's existing water infrastructure, much of which was originally designed to serve a significantly smaller population. The system now operates under growing strain, with limited redundancy and reduced operational flexibility. This section sets out the structured assessment of water supply augmentation options undertaken to identify a technically and strategically sound solution to the municipality's long-term water security challenge.

In response to these pressures, Overstrand undertook a proactive multi-option investigation, evaluating a portfolio of augmentation schemes capable of delivering a reliable, resilient, and climate-independent potable water supply. The augmentation alternatives assessed comprise:

- Seawater Reverse Osmosis (SWRO) Desalination — a drought-resilient, climate-independent source of potable water, offering high supply certainty at comparatively higher capital and operational cost;
- Remix and Reuse — a hybrid scheme combining SWRO desalination with advanced wastewater reclamation (direct or indirect potable reuse), aimed at optimising resource utilisation and moderating the costs and environmental impacts of a standalone desalination plant;
- Theewaterskloof Dam Abstraction — utilisation of the Western Cape Water Supply System (WCWSS) through a bulk water transfer scheme from the region's primary storage dam; and
- Palmiet River Abstraction — surface water abstraction from the Palmiet River, conveyed via bulk pipeline to the De Bos Dam for treatment at the Preekstoel Water Treatment Works.

The assessment was conducted in two principal phases: a comprehensive pre-feasibility comparison of all four augmentation options undertaken by Zutari; and a site screening investigation undertaken by GLS Consulting to identify a viable location for seawater desalination. The findings of both studies, and the preferred solution to which they lead, are set out below.

### 4.2 Pre-feasibility Comparative Assessment of Augmentation Options

#### 4.2.1 Scope and Methodology

Zutari was appointed to undertake a comprehensive comparative assessment of the four augmentation options. The objective was to evaluate each alternative on a consistent and objective basis against key criteria including technical feasibility, assurance of supply, lifecycle cost, environmental and regulatory considerations, implementation timelines, and operational complexity. This multi-criteria approach ensured that decision-making was informed by a holistic understanding of each scheme's performance, resilience, and long-term sustainability.

#### 4.2.2 Seawater Reverse Osmosis Desalination

Seawater desalination is an established technology used globally to augment potable water supply in coastal regions with limited freshwater resources. It is particularly prevalent in areas with low rainfall or unreliable hydrology and is increasingly being adopted by coastal municipalities facing growing

water-security challenges. Hermanus, as a coastal town with constrained surface-water yield and growing demand, is well positioned to consider seawater desalination as a resilient augmentation option. The feasibility of such a system, however, depends on a combination of technical, environmental and economic factors, as well as the availability of suitable intake and discharge infrastructure.

The key cost drivers for desalination relate to intake and outfall works, pre-treatment and energy consumption. For many small and medium-scale plants, intake and outfall systems can represent up to 30 percent of total project costs, making the availability of existing marine infrastructure highly advantageous. In this regard, the proposed tie-in to the abalone farm's existing seawater abstraction and screening infrastructure — as described in Section 5.5 — represents a material cost and risk reduction relative to the development of new marine works.

Zutari confirmed, through benchmarking against comparable SWRO plants, that the preferred New Harbour site area is adequate to accommodate a 10 MI/d SWRO facility including all required process units, supporting infrastructure, and operational facilities. A lease application was subsequently submitted by the Municipality to DPWI to secure the property for this purpose. The location of the site is presented in the following figure.

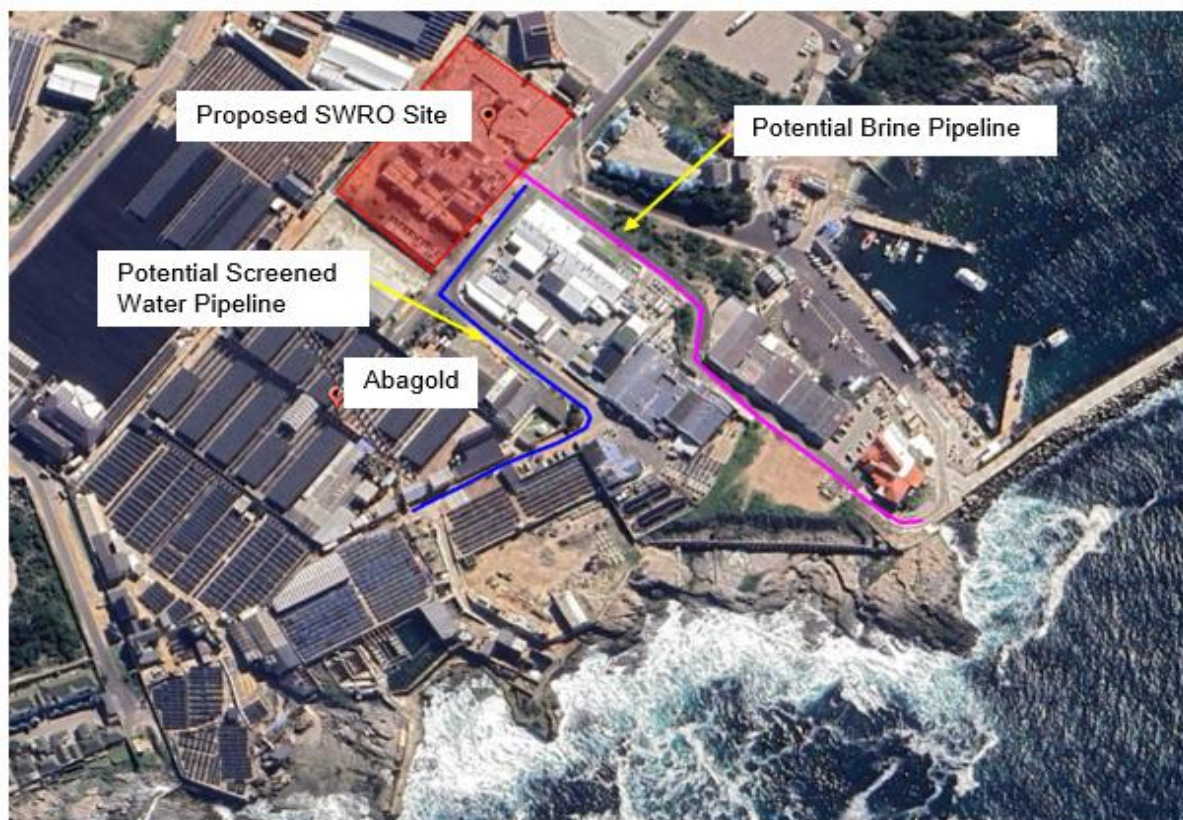


Figure 5: Proposed Project site

The capital cost for a 10 MI/d plant was estimated at approximately ZAR 545,241,000 (excluding VAT), equating to approximately ZAR 54,524,100 per MI/d of treated water capacity. The operating cost was estimated at approximately ZAR 21.89 per cubic metre of treated water. These estimates are based

on the current level of design development and are subject to refinement in subsequent project phases.

#### 4.2.3 Remix & Reuse

The Remix option is a hybrid scheme combining 5 MI/d of desalinated water with 5 MI/d of advanced treated effluent, offering improved drought robustness and operational flexibility through supply source diversification. The blended approach can reduce reliance on standalone desalination and may moderate exposure to the energy intensity of full SWRO supply.

The scheme is, however, associated with higher capital costs and substantially greater process complexity, requiring the parallel implementation and integration of two advanced treatment trains. The potable reuse component demands advanced treatment processes, robust monitoring and control systems, and a multi-barrier treatment philosophy. The Hermanus Wastewater Treatment Works (WWTW) is currently capable of supplying approximately 6.09 MI/d of treated effluent as feed source. The facility, however, would require refurbishment and upgrading to consistently achieve the influent quality required for potable reuse. A preliminary capital allowance of approximately R50 million has been included for WWTW upgrades, though this is an order-of-magnitude estimate subject to considerable uncertainty pending detailed condition and process assessments.

Potable reuse schemes are also subject to more stringent regulatory and permitting requirements than conventional water supply projects, requiring extensive validation and risk management frameworks. Public acceptance and stakeholder engagement represent additional material considerations. The capital cost of a 10 MI/d Remix plant is estimated at ZAR 820,832,000 (excluding VAT), or approximately ZAR 82,083,200 per MI/d, with operational costs estimated at ZAR 18–63 per cubic metre.

Remix and re-use is still partially dependant on surface water (for the re-use portion) and the diversification of supply is thus not to the full extent that desalination would be. Moreover, re-use can only work if the surface water and boreholes supply sufficient water which is problematic during periods of prolonged droughts. Thus, re-use is more the optimal use of existing resources than a new resource.

#### 4.2.4 Palmiet River Abstraction

The Palmiet River abstraction option entails abstracting approximately 10 MI/d from the Palmiet River and conveying raw water via a high-lift pump station and approximately 26.5 km bulk rising main to the De Bos Dam for treatment at the Preekstoel Water Treatment Works. The route traverses road reserves, agricultural land, river crossings, and environmentally sensitive zones. The Botrivier crossing, requiring approximately 510 m of pipeline, represents a major infrastructure challenge.

Analysis of Palmiet River flow data for 2020 to September 2025 reveals a strongly rainfall-driven system with pronounced seasonal variability. Base flows during dry periods range between approximately 0.25 and 1.0 m<sup>3</sup>/s, with extended periods below 0.3 m<sup>3</sup>/s. The required environmental release of approximately 1 m<sup>3</sup>/s equates to or exceeds the natural base flow during summer months, meaning that little to no surplus water is available for abstraction without compromising

environmental flow obligations. Effective abstraction is accordingly limited to approximately five to seven months per year, rendering the scheme unsuitable as a standalone drought-resilient source.

The only viable means of developing the Palmiet River as a sustainable year-round source would be the construction of a storage dam within the catchment — an intervention that would introduce lengthy approval processes, significant additional capital investment, and implementation timeframes entirely incompatible with the municipality's near-term supply requirements. Capital cost is estimated at ZAR 432,725,381 (excluding VAT), or approximately ZAR 21,014,766 per ML, with operational costs of approximately ZAR 14.46 per cubic metre including treatment.

#### 4.2.5 Theewaterskloof Dam Abstraction

The Theewaterskloof Dam abstraction option involves a bulk water transfer scheme to convey treated or raw water from the Western Cape Water Supply System (WCWSS) to Overstrand. While engineering feasibility is not in question — the dam has the necessary infrastructure and elevation to support abstraction and conveyance — the critical challenge lies in integrating an additional offtake into an already heavily committed bulk water system without compromising supply security to existing users.

The scheme would require, at minimum, a new abstraction structure, pump stations, a long-distance bulk conveyance pipeline (likely extending tens of kilometres), balancing reservoirs, electrical supply infrastructure, and integration into existing distribution systems. Operating costs would be driven primarily by energy consumption for long-distance pumping. Any increase in abstraction would trigger a detailed regulatory and environmental assessment process, including review of existing water use authorisations under the National Water Act, EIA requirements for conveyance infrastructure, ecological flow assessments, and stakeholder engagement with agricultural and municipal users dependent on the WCWSS. Given the strategic importance of the system and the complexity of intergovernmental approval processes, implementation timelines are likely to be extended and uncertain.

#### 4.2.6 Evaluation of the Bulk Water Supply Augmentation Options

Table 8 contains a detailed comparative evaluation of the bulk water supply augmentation options discussed above. Since the procurement choice for SWRO as the preferred technical solution could include the contracting of a private party to design, build, finance, operate and maintain the proposed desalination plant, it is appropriate to also include in the assessment of these options, the evaluation criteria contained in the Municipal PPP Guidelines. These include financial impacts, funding and affordability, risk, BEE and socio-economic aspects, delivery arrangements, technical analysis, site issues, legislation and regulations, human resources, qualitative factors, other early considerations pertaining to the suitability of externalisation options - including scale, output specifications, opportunities for risk transfer and market capability and appetite. A more detailed assessment of the financial, institutional and delivery dimensions of the preferred solution is set out in Sections 4.3, 4.4 and 6 respectively, and the findings of this comparative evaluation should be read in conjunction with those sections.

Table 8: Consolidated evaluation of bulk water supply augmentation options

| Criterion              | SWRO Desalination                                                                                                                                                         | Remix & Reuse                                                                                                                                 | Palmiet River                                                                                                                                                          | Theewaterskloof Dam                                                                                                                                                                      |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply and Resilience  |                                                                                                                                                                           |                                                                                                                                               |                                                                                                                                                                        |                                                                                                                                                                                          |
| Supply assurance       | High — climate independent                                                                                                                                                | High — dual source                                                                                                                            | Low-Moderate — seasonal; effective abstraction limited to 5–7 months/yr                                                                                                | Moderate — subject to WCWSS allocation constraints                                                                                                                                       |
| Drought resilience     | Very high                                                                                                                                                                 | High-moderate                                                                                                                                 | Low — unsuitable as standalone drought-resilient source                                                                                                                | Moderate — constrained by system commitments; least available when most needed                                                                                                           |
| Cost (Indicative)      |                                                                                                                                                                           |                                                                                                                                               |                                                                                                                                                                        |                                                                                                                                                                                          |
| Capital cost (10 Ml/d) | ZAR 545m (excl. VAT)                                                                                                                                                      | ZAR 821m (excl. VAT)                                                                                                                          | ZAR 433m (excl. cost of storage dam); Botrivier crossing including complex engineering works is excluded)                                                              | ZAR 687m (excl. VAT); High — site-specific; long-distance pipeline is dominant cost driver                                                                                               |
| Operating cost         | ZAR 21.89/m <sup>3</sup>                                                                                                                                                  | ZAR 18 - 63/m <sup>3</sup>                                                                                                                    | ZAR 14.46/m <sup>3</sup> (incl. treatment at Preekstoel WTW)                                                                                                           | High energy cost for long-distance pumping; ongoing maintenance of linear infrastructure                                                                                                 |
| Strategic and Planning |                                                                                                                                                                           |                                                                                                                                               |                                                                                                                                                                        |                                                                                                                                                                                          |
| Strategic alignment    | Primary strategic project in WSDP since 2004; in MTEF and performance indicators. Directly addresses documented near-term supply gap with a climate-independent solution. | No direct precedent in current WSDP as a standalone scheme. Longer-term diversification role; not positioned as an immediate supply response. | Briefly mentioned in WSDP, no current strategic plan designation. Significant new planning and authorisation required before IDP or WSDP alignment can be established. | Briefly mentioned in WSDP, not in MTEF. Dependent on WCWSS allocation decisions outside Overstrand's control; intergovernmental coordination required before alignment can be confirmed. |

| Criterion                              | SWRO Desalination                                                                                                                                                                                                                                                     | Remix & Reuse                                                                                                                                                                                   | Palmiet River                                                                                                                                                                                                     | Theewaterskloof Dam                                                                                                                                                                                                     |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Strategic fit                          | Primary — meets immediate and long-term need                                                                                                                                                                                                                          | Long-term portfolio diversification                                                                                                                                                             | Long-term only, contingent on major dam storage infrastructure                                                                                                                                                    | High-reliability, high-cost supplementary source                                                                                                                                                                        |
| Implementation timeline                | Predictable and achievable within near-term planning horizon                                                                                                                                                                                                          | Extended — dual-train procurement and WWTW upgrade                                                                                                                                              | Very extended — dam storage is a prerequisite                                                                                                                                                                     | Very extended — intergovernmental process; not within Overstrand's control                                                                                                                                              |
| Risk                                   |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                 |                                                                                                                                                                                                                   |                                                                                                                                                                                                                         |
| Implementation complexity              | Moderate — established technology; preferred site confirmed                                                                                                                                                                                                           | High — dual treatment trains; potable reuse regulatory requirements                                                                                                                             | Very high — servitudes, river crossing, environmental authorisation, dam storage required                                                                                                                         | Very high — intergovernmental, regulatory, long pipeline across multiple jurisdictions                                                                                                                                  |
| Permitting / regulatory risk           | Moderate — manageable; Abalone farm infrastructure reduces coastal works exposure. DEA&DP requires a marine impact assessment.                                                                                                                                        | High — potable reuse regulatory framework more demanding                                                                                                                                        | Very high — environmental flow constraints, agricultural servitudes, EIA across sensitive terrain                                                                                                                 | Very high — WCWSS allocation, NWA authorisation, multi-jurisdictional EIA                                                                                                                                               |
| Construction and technical risk        | SWRO is mature global technology. Principal risks are site tenure (DPWI lease) and feedwater access (Abalone farm). The latter infrastructure eliminates marine intake risk — the dominant coastal risk. Risks well-suited to transfer to a specialist private party. | Dual-train construction and integration elevate complexity. WWTW upgrade scope uncertain. Potable reuse less standardised at municipal scale in South Africa; validation requirements add risk. | Long pipeline (26.5 km) through sensitive terrain with major Botrivier crossing. Servitude acquisition from private landowners is a material uncertainty. Hydrological risk is not mitigable without dam storage. | Long-distance bulk conveyance pipeline is the dominant risk item. WCWSS system integration requires modelling and intergovernmental coordination. Risk of capacity shortfall during drought when supply is most needed. |
| Technical                              |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                 |                                                                                                                                                                                                                   |                                                                                                                                                                                                                         |
| Technical maturity and appropriateness | SWRO proven at scale globally and in South Africa.                                                                                                                                                                                                                    | SWRO component mature; potable reuse less                                                                                                                                                       | Conventional civil and pump infrastructure —                                                                                                                                                                      | Bulk water transfer from large dam is technically established.                                                                                                                                                          |

| Criterion                     | SWRO Desalination                                                                                                                                                                                                                                                          | Remix & Reuse                                                                                                                                                         | Palmiet River                                                                                                                                                                                                                                                 | Theewaterskloof Dam                                                                                                                                                                       |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               | Technology supply chain well-established. Abalone farm feedwater configuration eliminates key site-specific intake risk. Site benchmarked and confirmed adequate for 10 Ml/d.                                                                                              | standardised in South African municipal context. Multi-barrier treatment and validation requirements are more demanding. WWTW influent quality requires confirmation. | straightforward in isolation. Key uncertainty is hydrological: year-round yield not reliably achievable without dam storage. No proven path to reliable supply under current conditions.                                                                      | Primary uncertainty is systemic — WCWSS yield allocation, drought operating rules, competing commitments. Technology risk is low; system access risk is high.                             |
| Site issues                   | 9,000 m <sup>2</sup> site identified; DPWI ownership requires long-term lease (active engagement via monthly alignment meetings). NEMA EA, heritage (HWC), zoning, and geotechnical investigation required. Site resolution is the single most material outstanding issue. | Same plant site issues as SWRO, plus WWTW upgrade (existing municipal site — lower risk) and intermediate infrastructure between WWTW and plant.                      | No fixed plant site — issues distributed along 26.5 km pipeline corridor. Multiple private landowner servitudes required. Botrivier crossing requires separate site-specific permitting. No single-site resolution achievable.                                | No site within Overstrand's jurisdiction. Abstraction point and pipeline route span multiple jurisdictions; site and servitude issues outside municipality's planning mandate.            |
| Regulatory and Legislative    |                                                                                                                                                                                                                                                                            |                                                                                                                                                                       |                                                                                                                                                                                                                                                               |                                                                                                                                                                                           |
| Key legislative requirements  | GDA (abstraction and brine discharge); NEMA EA; NEM:PAA; NEM:ICMA; National Heritage Resources Act; harbour and coastal legislation (DPWI); MSA s78(3); MFMA s33 / PPP Regulations. No identified provision precludes the solution.                                        | Same as SWRO plus more stringent potable reuse framework (DWS Water Reclamation Guidelines). Longer authorisation path; public acceptance process may be required.    | NWA authorisation for river abstraction (environmental flows likely to be a regulatory hurdle); NEMA EIA across sensitive terrain and multiple landholdings; multiple provincial and national department approvals. Highest regulatory burden of all options. | NWA authorisation for additional WCWSS abstraction; NEMA EIA across multiple jurisdictions; WCWSS operating agreement. Intergovernmental complexity is the dominant regulatory challenge. |
| Human Resources and Community |                                                                                                                                                                                                                                                                            |                                                                                                                                                                       |                                                                                                                                                                                                                                                               |                                                                                                                                                                                           |
| Human resources               | 21–26 operational posts including specialists; not                                                                                                                                                                                                                         | Higher staffing complement (two treatment trains); similar                                                                                                            | Minimal permanent operational staffing. No                                                                                                                                                                                                                    | Operational staffing primarily within WCWSS (DWS/existing                                                                                                                                 |

| Criterion                | SWRO Desalination                                                                                                                                                                                                                                                                                                              | Remix & Reuse                                                                                                                                                                                                                    | Palmiet River                                                                                                                                                                                                                         | Theewaterskloof Dam                                                                                                                                                                                               |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | internalisable within municipality. Greenfield — no displacement. Staff employed by private operator; local employment and skills transfer promoted through procurement framework.                                                                                                                                             | scarcity of specialist skills, particularly for potable reuse operations. Same internal delivery constraint.                                                                                                                     | specialist HR constraint operationally; significant reliance on hydrological and environmental consultants during development.                                                                                                        | operators); minimal incremental Overstrand HR impact. Specialist expertise required for planning and design only.                                                                                                 |
| BEE and socioeconomic    | 21–26 permanent posts and significant construction employment. No worker displacement. Local procurement and skills transfer through PPP procurement framework.                                                                                                                                                                | Higher post count (dual trains); similar BEE and local content opportunities. Potable reuse operational complexity may limit local skills availability.                                                                          | Construction-phase employment along pipeline route. Limited operational posts. Servitude negotiations carry community tension risk; agricultural displacement possible.                                                               | Limited direct local employment — operational infrastructure remote from Hermanus. Pipeline construction employment primarily along route, not in target community.                                               |
| Qualitative factors      | Highest supply certainty — climate independent. Direct community resilience benefits. Economic enablement for tourism and investment. Avoidance of new marine works (Abalone farm) reduces environmental footprint. Aligned with National Water and Sanitation Master Plan (2018). Technology and skills transfer opportunity. | Supply diversification reduces single-source dependency. Supports circular economy principles. Public acceptance of potable reuse requires active management. Reduced wastewater discharge to ocean is an environmental benefit. | Lower unit capital cost in principle; offset by seasonal unreliability and ecological constraints. Agricultural community impacts are a social risk. Offers no drought resilience — fails precisely when augmentation is most needed. | Access to large high-quality reservoir; no new source-side treatment. However, most constrained during drought — when additional supply is most critical. System pressure from existing users limits reliability. |
| Delivery and Procurement |                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                       |                                                                                                                                                                                                                   |
| Delivery arrangements    | Internal delivery not feasible (specialist engineering and capital constraints confirmed).                                                                                                                                                                                                                                     | Same internal delivery constraint. Dual-train model increases interface complexity                                                                                                                                               | Civil infrastructure models are better suited to conventional contractor procurement. Long-                                                                                                                                           | Requires bulk water supply agreement with DWS or WCWSS operators — not a                                                                                                                                          |

| Criterion                                 | SWRO Desalination                                                                                                                                                                                                                                                          | Remix & Reuse                                                                                                                                                                                                               | Palmiet River                                                                                                                                                                   | Theewaterskloof Dam                                                                                                                                                                            |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                           | External DFBOT model clearly suited. Integrates with bulk water distribution through defined interface not involving third parties. Municipality retains WSA role through established contract management capability and suitable enhancement thereof.                     | — desalination and reuse trains may require separate or integrated operator arrangements. WWTW upgrade delivery mechanism requires separate assessment.                                                                     | term uncertainty complicates performance-based arrangements. Hydrological dependency limits PPP-style output specification.                                                     | plant-level arrangement. Subject to intergovernmental negotiation; not within Overstrand's unilateral procurement mandate.                                                                     |
| Suitability for external service delivery | Scale, output measurability, genuine risk transfer, and market appetite all present. Strong PPP candidate. Established global and South African SWRO PPP market. Abalone farm's configuration enhances commercial attractiveness by materially reducing marine works risk. | Potentially suitable for external delivery but higher complexity and cost reduce value-for-money potential relative to SWRO alone. Market appetite for integrated desalination-reuse PPPs less established in South Africa. | Better suited to conventional contractor procurement than PPP. Long-term performance measurement is difficult given hydrological variability. PPP structure is not well-suited. | Not a PPP-suitable option. Delivery depends on intergovernmental bulk water agreement rather than a plant-level output contract. No discrete operational asset owned or managed by Overstrand. |

### 4.3 *Desalination Abstraction Point Options*

#### 4.3.1 Approach and Methodology

GLS Consulting undertook a structured, pre-feasibility-level site identification and evaluation study to assess all viable coastal locations for seawater desalination within the Walker Bay region. The study recognised at the outset that site selection in this coastal environment is inherently complex, given the high-energy wave regime, significant environmental sensitivities, and the need to integrate with existing bulk water and electrical infrastructure. A phased screening process was followed to ensure a defensible and well-informed outcome.

The screening process comprised:

Desktop identification of candidate sites along the coastline based on proximity to Hermanus and existing infrastructure corridors;

Preliminary screening to eliminate sites with fatal flaws, including environmental exclusion zones, inaccessibility, and extreme coastal exposure;

Technical evaluation of shortlisted sites against seawater intake feasibility (wave climate, bathymetry, sediment dynamics), brine discharge considerations, constructability, proximity to bulk water infrastructure, and electrical supply availability; and

Qualitative risk assessment, considering both capital and operational implications.

Through this process, three principal site areas were identified for further consideration: the Kleinrivier Lagoon, the central Hermanus area (New Harbour and Schulphoek), and Hawston.

#### 4.3.2 Kleinrivier Lagoon

The Kleinrivier Lagoon, located to the east of Hermanus, was initially considered for a small-scale facility of approximately 5 ML/d. While accessible and proximate to existing infrastructure, the site presents fundamental process and environmental constraints that render it unsuitable.

The lagoon is an estuarine system characterised by highly variable salinity, driven by the interaction between tidal inflows and freshwater contributions from the Kleinrivier. This variability introduces significant challenges for desalination process design, including membrane selection and performance stability, pre-treatment requirements, and operational control. The lagoon and surrounding areas are also ecologically sensitive, supporting important habitats. Any abstraction or discharge activities would likely trigger stringent regulatory requirements and risk material ecological disturbance through changes in salinity gradients and impacts on aquatic biota. Land ownership constraints and potential social impacts further limit development feasibility.

The Kleinrivier Lagoon was accordingly identified as having fatal flaws and was eliminated from further consideration.

#### 4.3.3 Hawston

The Hawston site was assessed for a modular facility with an initial capacity of approximately 5 ML/d, expandable to approximately 20 ML/d. From a bulk supply integration standpoint, the site is well positioned; however, its feasibility is fundamentally constrained by the prevailing coastal conditions.

The Hawston coastline, particularly in the vicinity of Harry's Bay, is exposed to high-energy wave conditions associated with south-westerly storm events, characterised by a wide and energetic breaker zone and high sediment transport. These conditions present substantial challenges for seawater intake design and operation, including structural exposure to extreme wave loading, elevated sediment ingress and abrasion, increased maintenance risk, and limited accessibility for construction and ongoing operations. No naturally protected intake location meeting acceptable design criteria was identified. Development of a viable intake would accordingly require significant marine infrastructure, materially increase capital and operational costs and introducing elevated technical risk. The site would also require new electrical supply infrastructure.

While Hawston remains attractive from a bulk supply integration perspective, the seawater abstraction constraints render it a technically complex and potentially cost-prohibitive option.

#### 4.3.4 Central Hermanus – New Harbour and Schulphoek

The central Hermanus area, encompassing the New Harbour and Schulphoek coastline, was assessed for a larger-scale facility with an indicative capacity of approximately 20 Ml/d. The area benefits from proximity to existing municipal infrastructure, established service corridors, and wastewater treatment facilities.

##### *Schulphoek Coastline*

The Schulphoek coastline is exposed directly to open ocean conditions exhibiting high wave energy, rocky shoreline conditions, and difficult access for construction and maintenance — characteristics broadly similar to those at Hawston. The site does not meet preferred criteria for seawater abstraction and would require significant protective works, resulting in elevated cost and risk.

##### *New Harbour*

The New Harbour presents a materially more favourable abstraction point by virtue of its sheltered conditions and significantly reduced exposure to wave action. The harbour environment offers more stable hydraulic conditions, improved accessibility for construction and maintenance, and reduced structural loading on intake infrastructure. Relevant considerations include the potential for water quality impacts associated with harbour activities and integration with existing harbour operations. Limited electrical supply capacity at the central site would also necessitate substation and associated infrastructure upgrades.

Notwithstanding these constraints, the New Harbour option is assessed as the most technically feasible abstraction point identified during the evaluation, and the central Hermanus site is confirmed as the preferred location for desalination development, subject to further detailed investigation and mitigation of the identified risks.

#### 4.3.5 Key Coastal Constraint

A critical finding of the site assessment is that the high-energy wave regime of the Walker Bay coastline is a dominant controlling factor in the feasibility of any desalination development in the Hermanus area. The scarcity of naturally sheltered intake locations means that the design and implementation of the seawater intake system represent the principal technical risk and cost driver

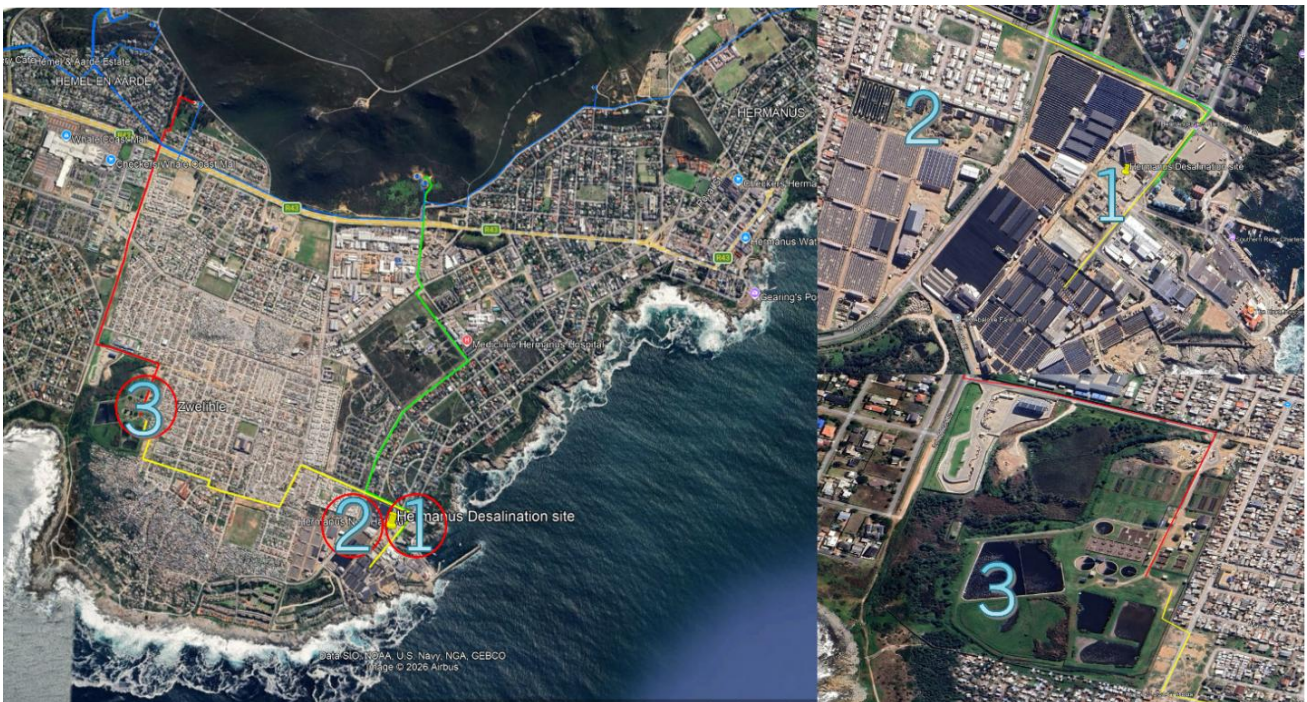
for any desalination scheme in the region. This finding has direct implications for the preferred development approach.

#### 4.4 Desalination Site Options

With the New Harbour area identified as the most suitable location for seawater abstraction, Overstrand Municipality identified and evaluated three potentially feasible sites for the establishment of the proposed Seawater Reverse Osmosis (SWRO) desalination plant. These sites are illustrated in Figure 6 below.

Figure 6: Potential Project site options

The three sites were assessed against a range of criteria including land ownership and acquisition complexity, proximity to existing seawater abstraction infrastructure, site security, capital and operational cost implications, statutory process requirements, and strategic long-term fit. Each site presents a unique combination of advantages and disadvantages, as discussed in the subsections that follow.



On balance, Site 1 – located on DPWI-owned land adjacent to the New Harbour – has been identified as the preferred option for further investigation and development, subject to the successful conclusion of a long-term lease arrangement with the Department of Public Works and Infrastructure (DPWI). While this site carries the greatest institutional and process risks of the three, its operational and strategic advantages are considered to outweigh these risks at this stage of the project. Sites 2 and 3 are retained as viable alternatives should Site 1 prove unachievable.

##### 4.4.1 Site 1: New Harbour (DPWI Land)

Site 1 is located on approximately 9,000 m<sup>2</sup> of land adjacent to the abalone processing facility within the New Harbour precinct. The land is currently owned by the Department of Public Works and Infrastructure (DPWI). The existing structures on the site are dilapidated and would need to be demolished prior to development, requiring a heritage assessment as part of the process.

Despite the demolition requirements, the site's location directly adjacent to the abalone farm's existing seawater abstraction and screening infrastructure represents a significant operational advantage, enabling cost-effective tie-in to existing intake and brine disposal systems. The site is considered highly favourable in terms of proximity to planned electrical infrastructure, site security (by virtue of being within the controlled harbour environment), and future scalability to a capacity of approximately 20 MI/day. A potential future transfer of the harbour to Overstrand Municipality will also improve the long-term strategic outlook for this site.

The primary risk associated with Site 1 is the complexity of securing a long-term lease agreement with DPWI. This process falls largely outside the Municipality's control and introduces significant programme and political risk. The requirement for DPWI cooperation on statutory approvals – including the need for a power of attorney for certain applications – further compounds this risk. These risks are acknowledged and must be actively managed.

Advantages include:

- National Minister expected to support use for water security purposes;
- Low rental cost possible; avoids high initial land purchase costs; outright land purchase is also possible;
- In close proximity to the abalone farm infrastructure (tie-in and disposal points);
- Better security and controlled harbour access; secure abalone farm neighbour;
- Harbour could perhaps in future be transferred to Overstrand Municipality;
- Future abstraction from within the harbour remains a possibility;
- A Basic Assessment rather than a full Environmental Impact Assessment (EIA) appears to be required;
- The site is zoned as an "authority" zone; no rezoning or consent use application required – only a courtesy plan;
- In close proximity to the planned electrical substation;
- Sufficiently large site (~9,000 m<sup>2</sup>); ample capacity to expand to ~20 MI/day.

Disadvantages include:

- Demolition of dilapidated buildings required; heritage application is required;
- Potentially difficult process to secure a long-term lease; Overstrand not in control of this process;
- Lease agreement negotiations could significantly delay the project;
- Power of attorney may be required for various statutory applications, which could be difficult to obtain timeously;
- Political risks associated with DPWI ownership and government processes.

#### 4.4.2 Site 2: Private Land Adjacent to the New Harbour

Site 2 consists of a parcel of privately owned land situated adjacent to the New Harbour, currently owned by the abalone farming operation. The site is in relatively close proximity to the abalone farm infrastructure, providing reasonable access to the existing seawater abstraction and brine disposal systems, though at a slightly greater distance than Site 1.

The key advantage of Site 2 lies in land ownership, i.e., dealing with a private seller provides Overstrand Municipality with a greater degree of control over the acquisition process compared to the institutional complexities of negotiating with a national government department. However, this comes with a significant upfront capital cost for land purchase, as well as the statutory requirements associated with municipal acquisition of private land, including formal procurement and legal processes. Subdivision and rezoning of the property would also be required before the site could be developed.

Site 2 is considered a viable alternative to Site 1 in the event that the DPWI lease arrangement cannot be concluded within acceptable timeframes or on acceptable terms.

Advantages include:

- Dealing with a potentially willing private seller; more control over the purchase process;
- Still in close proximity to abalone farm infrastructure (tie-in and disposal points);
- Acceptable security in the area; situated next to abalone farm;
- Future abstraction from within the harbour remains a possibility;
- An environmental impact assessment (EIA) may not be required;
- In close proximity to the planned electrical substation;
- Sufficiently large site; ample capacity to expand to ~20 Ml/day.

Disadvantages include:

- Subdivision and rezoning of the land will be required;
- High initial land purchase costs;
- Legal process requirements for Overstrand Municipality to purchase private land;
- Earthworks and site preparation required;
- Slightly less secure than Site 1, though still acceptable;
- Slightly longer seawater supply pipeline and brine disposal pipeline compared to Site 1.

#### 4.4.3 Site 3: Zwelihle / Hermanus WWTW

Site 3 is located at or adjacent to the existing Zwelihle / Hermanus Wastewater Treatment Works (WWTW), on land owned by Overstrand Municipality. From a land ownership perspective, this site presents the least complexity, as no land acquisition or lease negotiations are required.

However, Site 3 is located at a considerably greater distance from the New Harbour and the abalone farm seawater abstraction infrastructure than either of the other two sites. A seawater supply pipeline of more than 2 km in length would be required to convey raw seawater to the plant, resulting in materially higher capital costs for pipeline construction as well as increased operational pumping energy costs and associated ongoing maintenance requirements. These cost penalties represent a significant disadvantage relative to Sites 1 and 2.

The site also presents security challenges, and brine disposal via the existing sea outfall sewer – while potentially feasible – would require a dedicated disposal permit. A limited amount of demolition of existing sludge drying beds would be required to prepare the site. Notwithstanding these challenges, Site 3 retains some long-term strategic interest due to the potential future integration of the desalination facility with treated effluent re-use initiatives.

Site 3 is considered the least preferred option and would only be pursued if both Sites 1 and 2 are demonstrated to be unachievable.

Advantages include:

- No land agreements required; land is owned by Overstrand Municipality;
- Long-term potential to integrate with treated effluent re-use;
- Future abstraction from within the harbour remains a possibility;
- Environmental Authorisation (EA) may not be required;
- No rezoning application required;
- Bulk electricity supply to Schulphoek substation (in close proximity) is planned regardless;
- Sufficiently large site;
- Potential use of existing sea outfall sewer for brine disposal.

Disadvantages include:

- Some demolition of existing sludge drying beds required;
- Not in close proximity to abalone farm infrastructure; seawater pipeline to WWTW would exceed 2 km, resulting in additional capital costs, pumping costs and higher O&M costs;
- Difficult site to secure adequately;
- A disposal permit will be required if the existing sea outfall sewer is used for brine disposal;
- Comparative Assessment of Site Options.
- Land may be required for future expansion of the WWTW.

#### 4.4.4 Site Selection Comparison and Recommendation

Table 9 below provides a structured comparison of the three site options across the key assessment criteria. The comparison is intended to provide a transparent basis for site selection and to facilitate future decision-making should the preferred site become unavailable.

*Table 9: Comparative analysis of Project site options*

| Criterion                | Site 1 New Harbour (DPWI Land)                                           | Site 2 Private Land (Adjacent to Harbour)               | Site 3 Zwelihle / WWTW Site        | Notes                                     |
|--------------------------|--------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------|-------------------------------------------|
| Land Ownership / Control | DPWI – long-term lease required. Subdivision and purchase also possible. | Private – purchasable; or lease possible                | OM-owned – no acquisition required | Site 3 least complex; Site 1 most complex |
| Land Acquisition Process | Complex; largely outside OM control                                      | Formal purchase/procurement process; legal requirements | No acquisition required            | Site 1 carries highest process risk       |
| Initial Land Cost        | Low (rental/lease); outright purchase also possible                      | High (purchase price)                                   | None                               | Site 2 highest upfront cost               |

| Criterion                           | Site 1 New Harbour (DPWI Land)                                                        | Site 2 Private Land (Adjacent to Harbour)              | Site 3 Zwelihle / WWTW Site                             | Notes                                      |
|-------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|--------------------------------------------|
| Programme Risk                      | High – DPWI lease negotiations may cause significant delays                           | Moderate – procurement and rezoning processes required | Low                                                     | Site 1 poses greatest programme risk       |
| Political / Institutional Risk      | High – DPWI dependency; national government exposure                                  | Low                                                    | Low                                                     | Site 1 unique risk; Sites 2 & 3 comparable |
| Power of Attorney Requirement       | Potentially required for statutory applications; may be difficult to obtain timeously | Not required                                           | Not required                                            | Site 1 risk only                           |
| Proximity to abalone Infrastructure | Directly adjacent – optimal tie-in and disposal                                       | Close – slightly greater distance than Site 1          | Distant – pipeline >2 km required                       | Critical cost and operational driver       |
| Capital Cost Implication            | Low to moderate (demolition; heritage process)                                        | Moderate to high (land purchase; earthworks; rezoning) | High (long pipeline; additional pumping infrastructure) | Site 3 highest overall capex               |
| O&M Cost Implication                | Low                                                                                   | Low to moderate                                        | Higher (additional pumping energy and maintenance)      | Site 3 materially higher O&M               |
| Site Security                       | High – controlled harbour environment                                                 | Acceptable – adjacent to abalone farm                  | Challenging – difficult to secure adequately            | Site 1 most secure                         |
| Site Size / Future Expansion        | ~9,000 m <sup>2</sup> – suitable for expansion to ~20 MI/day                          | Suitable for expansion to ~20 MI/day                   | Sufficiently large                                      | All sites adequate for future capacity     |
| Environmental Authorisation         | Basic Assessment likely required (not full EIA)                                       | EA may be required                                     | Environmental Authorisation (EA) may not be required    | Site 1 has greatest regulatory clarity     |
| Rezoning / Land Use                 | No rezoning required; zoned 'authority' – courtesy plan only                          | Subdivision and rezoning required                      | No rezoning required                                    | Site 2 carries additional statutory burden |
| Demolition Requirements             | Yes – dilapidated buildings; heritage                                                 | Require earthworks and site preparation                | Limited – existing sludge drying beds                   | All sites require some preparation         |

| Criterion                       | Site 1 New Harbour (DPWI Land)                 | Site 2 Private Land (Adjacent to Harbour)   | Site 3 Zwelihle / WWTW Site                                           | Notes                          |
|---------------------------------|------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------|--------------------------------|
|                                 | application required                           |                                             |                                                                       |                                |
| Heritage Process                | Required                                       | Not anticipated                             | Not anticipated                                                       | Site 1 only                    |
| Electrical Infrastructure       | Near to planned substation                     | Near to planned substation                  | Schulphoek substation supply planned regardless                       | All sites adequately served    |
| Brine Disposal                  | Via abalone farm tie-in – optimal              | Via abalone farm tie-in – acceptable        | Potential use of existing sea outfall sewer; disposal permit required | Sites 1 & 2 preferable         |
| Future Abstraction from Harbour | Possible                                       | Possible                                    | Possible                                                              | All sites equal in this regard |
| Long-term Strategic Fit         | High – potential OM harbour transfer; scalable | Good                                        | Moderate – future treated effluent re-use integration possible        |                                |
| Overall Assessment              | Preferred – subject to DPWI lease confirmation | Viable contingency if Site 1 not achievable | Last resort only – materially higher cost profile                     |                                |

Based on the comparative assessment presented in Table 9, Site 1 – the DPWI-owned land adjacent to the abalone farm within the New Harbour precinct – is currently pursued as the preferred site for the establishment of the proposed SWRO desalination plant.

It is, however, critically acknowledged that Site 1 carries significant institutional and programme risk. The site is owned by DPWI, and the Municipality does not control the timeline or outcome of lease negotiations. However, regular engagement with the regional branch of DPWI has been initiated.

The Municipality should in parallel maintain Site 2 as a viable contingency option, ensuring that preliminary investigations of the Site 2 land parcel are kept sufficiently current to allow rapid transition if required.

#### 4.5 Strategic Opportunity: Leveraging Existing Seawater Infrastructure

With Site 1 – adjacent to the abalone facility within the New Harbour precinct – identified as the preferred location for the proposed desalination plant (refer Section 4.4), Overstrand Municipality initiated discussions with the abalone farm to explore the potential use of screened seawater from the abalone facility as feedwater for the proposed SWRO plant.

The abalone farm has made substantial capital investment in marine infrastructure to support its farming operations, including robust seawater abstraction systems, intake works, and screening

facilities designed to reliably handle large volumes of seawater under variable marine conditions. The operation functions on a once-through basis, whereby seawater is abstracted, subjected to coarse and fine screening, distributed to abalone tanks, and returned to the ocean after use without significant alteration to salinity.

The abalone farm has indicated that spare capacity exists within its abstraction and pre-treatment systems. This creates a strategic opportunity for the municipality to access pre-screened seawater without developing new marine intake infrastructure — typically the most complex, costly, and environmentally sensitive component of a coastal desalination project.

The significance of this opportunity can be understood directly in the context of the constraints identified during the site screening and site selection process:

- The central Hermanus area satisfies the primary siting criteria established during the assessment — comparative shelter from extreme wave conditions and improved accessibility — and the abalone facility is located within this favoured zone;
- The utilisation of the abalone farm's existing intake and screening infrastructure effectively eliminates the need for new marine works, directly addressing what was identified as the single greatest technical risk and capital cost driver along the Walker Bay coastline;
- The use of pre-screened seawater from an established industrial operation introduces potential benefits in feedwater quality consistency, operational reliability, and ease of implementation; and
- The reduced requirement for new coastal works diminishes the environmental footprint of the project and may simplify aspects of the permitting and environmental authorisation process.

The proposed collaboration with the abalone facility is therefore assessed as a highly pragmatic and strategically aligned development opportunity, directly addressing the key constraints of the site selection process and representing a significant optimisation of the preferred central Hermanus option. Even if further technical studies indicate some engineering works are required to make use of existing infrastructure, such would be minor in consideration of the possible infrastructure gains.

It is noted that the realisation of this opportunity is contingent on the successful conclusion of a lease arrangement with DPWI for Site 1, as discussed in Section 5.4. Should Site 1 not prove achievable, the proximity advantage to the abalone infrastructure would be reduced — though not entirely lost — in the case of Site 2 and largely foregone in the case of Site 3. The abalone infrastructure tie-in is therefore an additional consideration that reinforces the priority given to securing Site 1.

#### *4.6 Integration with Bulk Water Supply Infrastructure*

GLS consulting engineers were appointed for the water master plan update for Overstrand Municipality, and a study was conducted to investigate the optimal integration of the desalinated water into the bulk water supply system for the Greater Hermanus area. Projected future summer and winter water demands were considered. The proposed infrastructure upgrades are indicated in Figure 7 below.

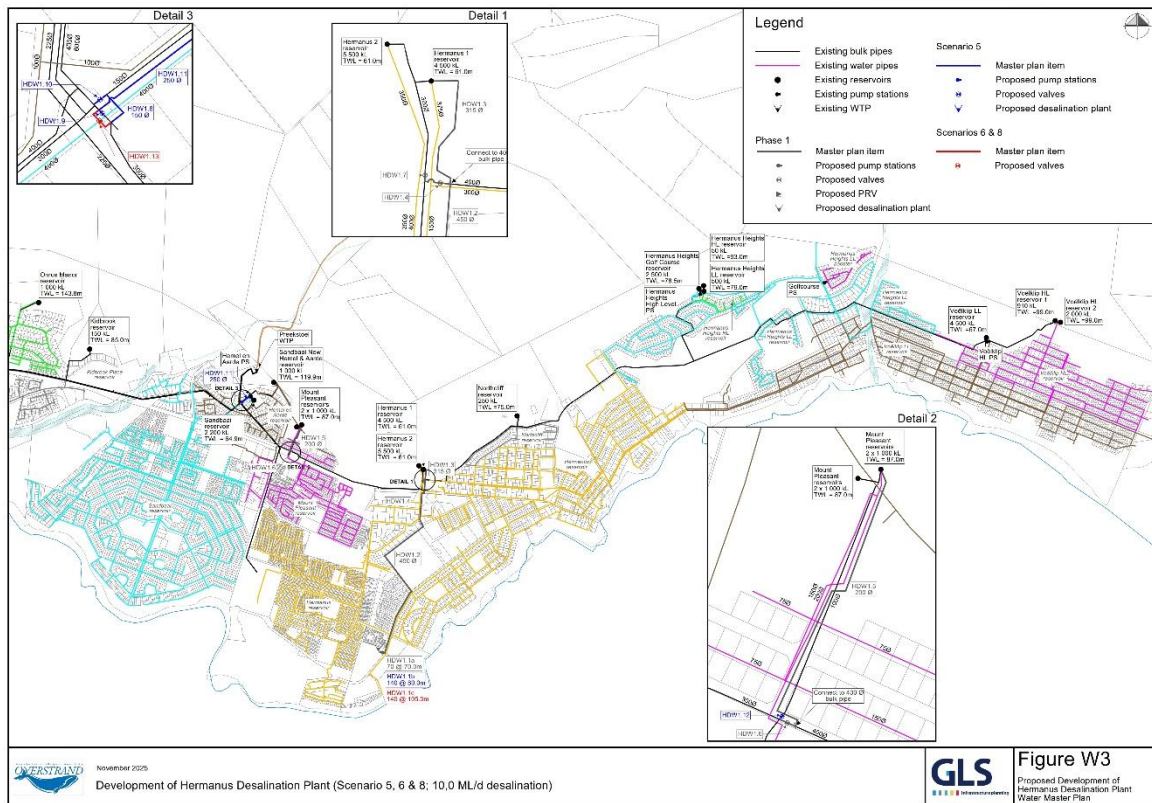


Figure 7: Proposed infrastructure upgrades

Eight scenarios were considered, and it was concluded that integration will be implemented in two phases corresponding to the phased capacity expansion of the desalination plant. In both phases, water will be pumped into the Hermanus bulk supply pipeline, which during summer could be augmented with water from the Preekstoel WTW.

Phase 1 infrastructure will comprise:

- A pumping station at the desalination plant with a capacity of 70 l/s (designed for pumping over 20 hours per day);
- A 450 mm diameter rising main of approximately 2.1 km in length, connected to the existing Hermanus 400 mm diameter bulk supply pipeline; and
- An additional 315 mm diameter pipeline linking the rising main to the Hermanus 1 reservoir.

This infrastructure will enable distribution of desalinated water to the Northcliff, Hermanus Heights Lower Level (LL), Hermanus Heights LL booster, Hermanus Heights Higher Level (HL), Voëlklip LL, Voëlklip HL and a portion of the Hermanus 1 & 2 reservoir distribution zones.

For Phase 2 (10 MI/day), the pumping station capacity will be increased to 140 l/s and additional pipeline sections and valves will be installed to extend distribution to the Mount Pleasant area and to supply the Coastal pipeline.

A key feature of the integration design is that the desalination plant operates as a standalone supply source that links directly into the existing bulk distribution system without third-party involvement or reliance. This is illustrated in Figure 8 below.

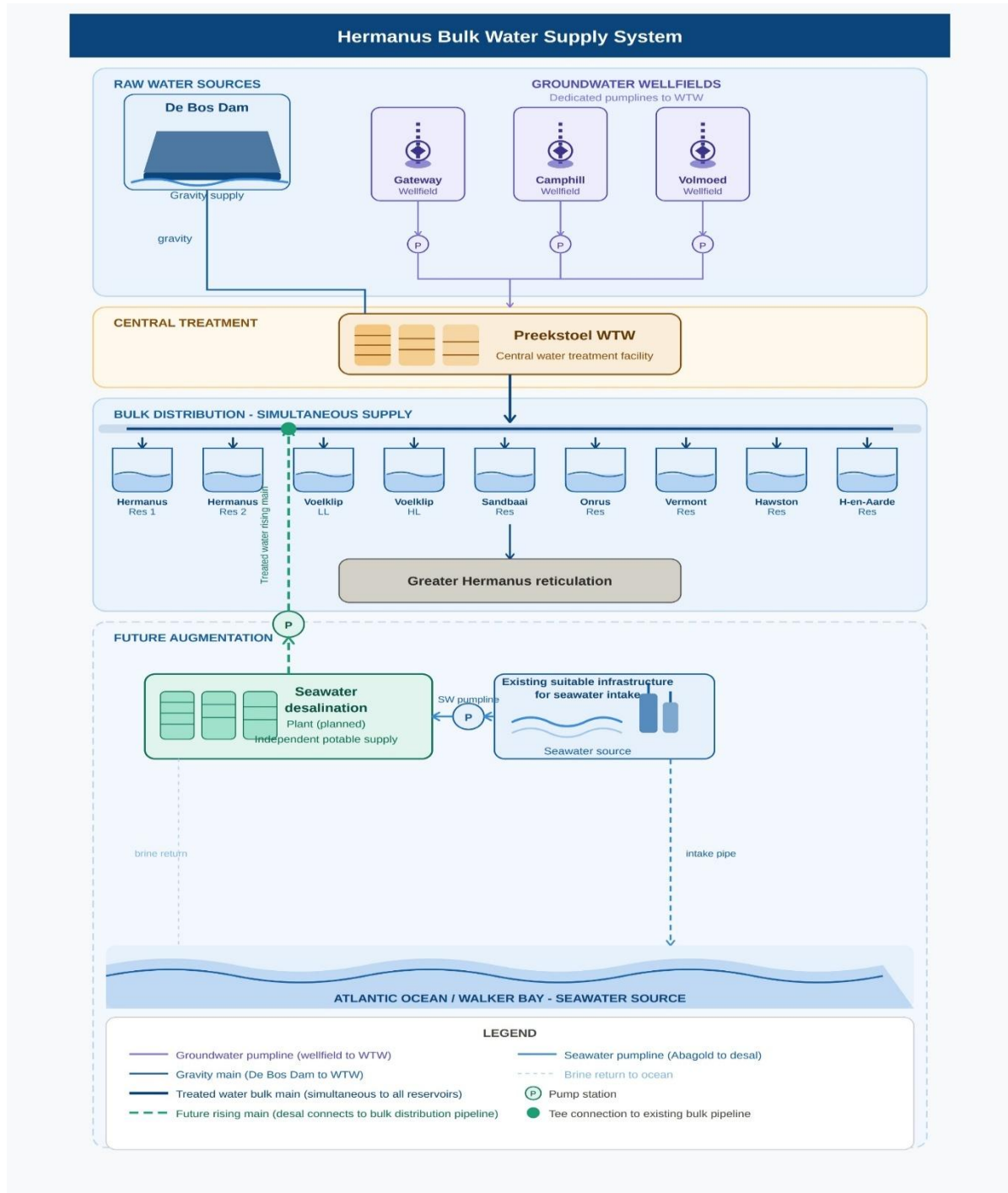


Figure 8: Desalination water pipeline link-in to bulk water distribution system

#### 4.7 Integration with Electricity Supply Infrastructure

The main electricity supply to Hermanus is sourced from the Eskom 66/11 kV Hermanus substation on the northern side of town. Two intake points exist, both supplied from this substation: the Walker Bay 66 kV intake point and the Hermanus Substation 11 kV intake point, which divide the Hermanus supply area into Western and Eastern supply zones respectively.

The Walker Bay substation steps down the 66 kV supply to 11 kV distribution voltage, which is then conveyed to the New Industrial 11 kV switching station — the main 11 kV distribution station in the Western supply area. From there, power is distributed at 11 kV to several downstream switching stations, including the Still Street 11 kV switching station. The New Harbour area, where the desalination plant is planned, falls within this western supply area and is fed directly from the Still Street switching station via 11 kV cable ring networks.

The firm transfer capacity of the Still Street 11 kV switching station is 10.5 MVA, with a current maximum load of just over 9 MVA. This confirms that adequate capacity exists to supply Phase 1 of the desalination plant, which requires approximately 750 kVA for the initial 5 MI/d installation.

To provide the additional capacity required for Phase 2 (10 MI/d, requiring approximately 1.5 MVA in total), a new 66/11 kV indoor substation is planned at the existing Still Street switching station site. All designs for the substation have been completed, with the tender and construction process to follow. Planned completion is end 2029.

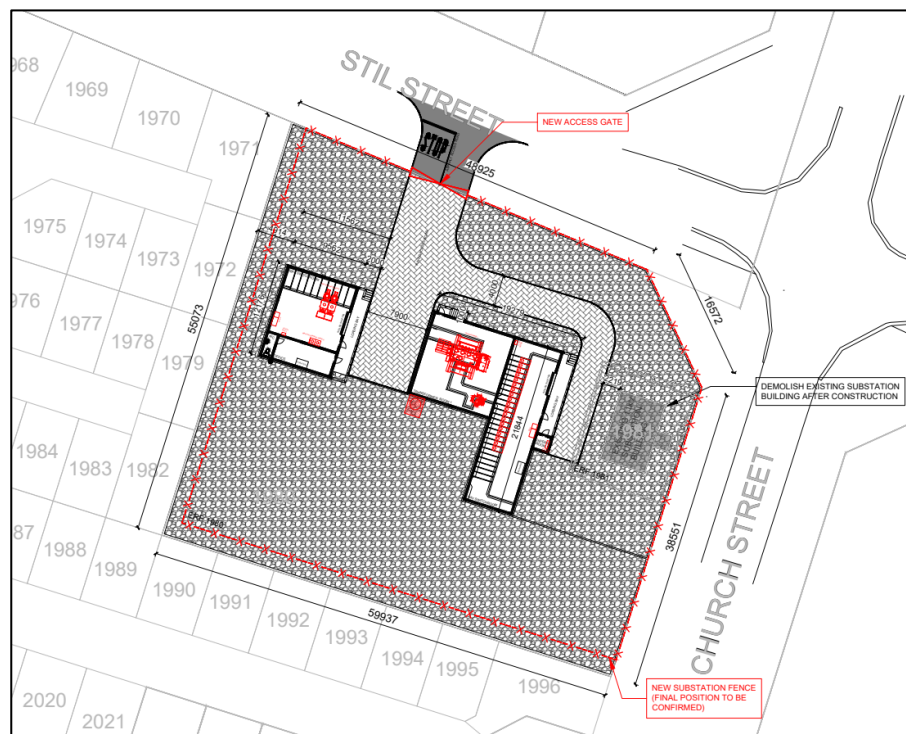


Figure 9: Electricity infrastructure - current and planned

The new substation will increase supply capacity initially to 20 MVA, with a long-term design capacity of 40 MVA, and will include the following key components:

- One new 66 kV feeder bay at the Eskom 66 kV substation;
- New 66 kV cables from the Eskom supply point to the substation site;
- A substation building (indoor type) with all internal and external accessories;
- Two 20 MVA 66/11 kV transformers;
- 66 kV and 11 kV switchgear and protection; and

- 11 kV feeders to the networks surrounding the new substation, including strengthening of the 11 kV cables serving the New Harbour area.

Once the new substation and associated 11 kV cable upgrades are completed (planned for end 2029), adequate electrical capacity will be available to supply the full 1.5 MVA required for the 10 ML/d desalination plant. The phased nature of the desalination plant implementation is therefore well-aligned with the planned electrical infrastructure upgrade programme.

#### 4.8 *Conclusion and Preferred Technical Solution*

The consolidated assessment across all applicable evaluation criteria confirms that seawater reverse osmosis desalination, implemented at the central Hermanus New Harbour site in conjunction with the abalone farm's existing seawater abstraction and screening infrastructure, is the preferred technical solution for augmenting Overstrand Municipality's potable water supply.

The following principal findings support this conclusion:

- **Supply certainty and drought resilience.** SWRO desalination is the only option assessed that provides a climate-independent, drought-resilient source of potable water supply. The Palmiet River option is constrained to approximately five to seven months of effective abstraction per year under current conditions and cannot be considered a reliable standalone source without major dam storage infrastructure. The Theewaterskloof Dam option is most constrained during drought — precisely when supplementary supply is most critical. The Remix (desalinated) portion of this option shares the supply certainty of SWRO, but the re-use part is still dependant on the surface water and borehole supply. Furthermore, this option is at materially higher cost and complexity.
- **Strategic alignment and planning standing.** SWRO desalination is the only option with an established position in the municipality's WSDP, MTEF and performance management framework. The other three options would each require significant new planning, authorisation and intergovernmental groundwork before they could be positioned as near-term supply interventions.
- **Technical maturity and site configuration.** SWRO is a globally proven technology with a well-established supply chain. The preferred site has been identified, surveyed and benchmarked as adequate for a 10 ML/d facility. Critically, the abalone farm's existing seawater intake and screening infrastructure eliminates what the site assessment identified as the single greatest technical risk and cost driver for any desalination project along the high-energy Walker Bay coastline. No comparable risk-reduction advantage exists for any of the alternative options.
- **Risk profile and transferability.** The principal project risks — site tenure (DPWI lease) and feedwater access (abalone facility arrangement) — have been identified and are actively being managed. Technical and construction risks are inherent to SWRO but are well understood and well-suited to transfer to a specialist private party. The Palmiet River option carries unmitigable hydrological risk; the Theewaterskloof Dam option carries systemic access risk; the Remix and Reuse option adds process complexity and a less-certain potable reuse validation path.
- **Financial and funding considerations.** While SWRO carries a higher unit operating cost than surface water alternatives, it is the only option capable of delivering assured supply within the

required timeframe. The estimated capital cost of approximately ZAR 545 million (10 MI/d) exceeds the municipality's on-balance-sheet financing capacity, confirming that an external financing and delivery arrangement is both necessary and appropriate. The project's scale, output measurability and risk transfer potential position it as a strong candidate for PPP procurement.

- **Implementation feasibility and timeline.** SWRO desalination can be implemented within a predictable and near-term delivery horizon, subject to design, procurement and construction execution. The Palmiet River option cannot be advanced as a reliable source without a storage dam — a multi-year prerequisite. The Theewaterskloof Dam option is subject to intergovernmental approval processes outside Overstrand's control. The Remix and Reuse option requires a dual-train procurement and WWTW upgrade, extending the implementation timeline materially.
- **Regulatory pathway.** All options require regulatory authorisation; however, SWRO presents the most manageable permitting path for the municipality. Engagement with all relevant authorities — DPWI, DWS, DFFE, DEA&DP, and HWC — has been initiated, and no legislative provision has been identified that precludes the proposed solution or its delivery arrangement. The Palmiet River option carries the highest regulatory burden of all four alternatives.
- **Delivery and procurement suitability.** SWRO is the only option clearly suited to a PPP delivery model, satisfying the National Treasury's criteria of scale, measurable output specification, genuine risk transfer opportunity, and demonstrated market appetite. The Theewaterskloof Dam option is not a PPP-suitable arrangement; the Palmiet River option is better suited to conventional contractor procurement; and the Remix and Reuse option presents greater procurement complexity with less certain value-for-money outcomes.
- **Infrastructure integration.** The desalination plant integrates directly into the existing Hermanus bulk water distribution system without third-party involvement, via a dedicated pumping station and rising main, as described in Section 5.6. Adequate electrical supply capacity for Phase 1 is confirmed at the existing Still Street 11 kV switching station, with the planned new 66/11 kV substation — scheduled for completion by end 2029 — providing the additional capacity required for Phase 2. The phased plant implementation programme is well-aligned with the planned electrical infrastructure upgrade.

The remaining augmentation options — Remix and Reuse, Palmiet River abstraction, and Theewaterskloof Dam abstraction — retain strategic relevance as components of a longer-term, diversified water resource portfolio. However, their respective constraints in terms of hydrological reliability, implementation complexity, intergovernmental dependency, and regulatory burden render each unsuitable as a near-term supply solution capable of meeting the municipality's 2029 target.

The preferred technical solution — a phased SWRO desalination facility with an initial capacity of 5 MI/d expandable to 10 MI/d, located at the central Hermanus New Harbour site and leveraging the abalone farm's existing seawater abstraction infrastructure — is therefore confirmed as the appropriate basis on which to advance the feasibility study to the next stage, including assessment of the service delivery options and, in due course, the detailed value assessment required to determine whether PPP procurement represents the optimal procurement mechanism.

## 5 Bulk Supply Options Analysis

### 5.1 Introduction

When a municipality decides to significantly expand its bulk water supply service, as is the case with Overstrand pertaining to the proposed desalination plant, it must in terms of Section 78(1) of the MSA, assess whether the proposed bulk supply augmentation option can be provided effectively within the context of its current institutional capacity, technical capability, and financial position, prior to considering any external options.

Where it is found that the current or possible internal mechanisms will not be feasible to achieve the determined project objectives, the Municipality can then proceed to evaluate the feasibility of external bulk water supply delivery options and compare the internal and external delivery options to reach a decision on the most preferred option, its procurement strategy, and its contracting mechanism.

The departure points for assessing internal and external delivery options are an understanding of the project outputs and a proper definition of the Project.

### 5.2 Project Outputs

#### 5.2.1 Activity

The Municipality requires augmented bulk water supply through the development, commissioning and sustained operation of a seawater reverse osmosis (SWRO) desalination facility. The facility must have an initial production capacity of 5 MI/d, designed and built to be scalable to 10 MI/d, to supplement existing sources and meet projected demand from 2029 onward.

#### 5.2.2 Service Outputs and Standards

The facility must deliver potable water compliant with SANS 241 drinking water quality standards at the required volume, pressure and continuity into Overstrand's existing bulk distribution network. The scope encompasses the full physical plant — intake, pre-treatment, SWRO membranes, post-treatment and brine disposal infrastructure — together with associated civil works and an operational management system capable of sustaining output over the full project term.

The following standards are non-negotiable:

**Water quality:** Full and continuous compliance with SANS 241.

**Output:** Guaranteed minimum daily production volumes, with maximum permissible downtime thresholds clearly specified in the service agreement.

**Brine disposal:** Compliance with the terms of the applicable General Discharge Authorisation (GDA).

**Environmental:** Compliance with the Environmental Management Programme (EMPr) and all conditions arising from the environmental authorisation, once determined through the basic assessment process currently underway.

**Health and safety:** Compliance with the Occupational Health and Safety Act (OHS Act).

Additional minimum standards will be incorporated once the environmental authorisation conditions are confirmed.

### 5.2.3 Key Performance Indicators

Performance will be measured against the following KPIs:

- Daily and monthly potable water output volumes against guaranteed minimums.
- Water quality test results measured against SANS 241 parameters.
- Plant availability, expressed as a percentage over defined reporting period.
- Response and restoration times for unplanned outages.
- Number and nature of brine disposal compliance incidents.
- Energy consumption per kilolitre of water produced, relevant to both operational cost and sustainability commitments.

### 5.2.4 Service Interfaces

The primary interface is the point at which treated water from the desalination plant enters Overstrand's existing bulk distribution network. The handover point, metering point and quality verification point must each be precisely defined in the project agreements. Secondary interfaces include integration with the municipality's existing monitoring and control infrastructure, including SCADA systems. There is no operational interface with Veolia at the plant level; any responsibilities for operation and maintenance added to the Veolia scope as a result of bulk link infrastructure will be governed by the annual plan agreed between Veolia and Overstrand.

### 5.2.5 BEE and Socio-economic Targets

Broad based black economic empowerment (B-BBEE) is a specific national transformation policy in South Africa. Public entities, including municipalities, are subject to the Broad Based Black Economic Empowerment Act No. 53 of 2013 and the Preferential Procurement Policy Framework Act No. 5 of 2000 and the Regulations. Both Acts and regulations have been recently updated following Constitutional considerations. The Overstrand Preferential Procurement Policy (draft May 2026) was also recently updated and will determine the structuring of the preferential procurement points in any competitive tendering process. The value of the desalination project will determine if the 80/20 or 90/10 preferential procurement framework will apply. A key feature of the next stage feasibility study will be to establish the procurement strategy for the Project – including the preferential procurement framework and which two of the three specific goals in the Overstrand Preferential Procurement Policy will be applied and what if a sector specific general BBEE score card will be applicable. We note that the Municipal PPP Guidelines does propose a PPP score card, but this has not been promulgated by the Minister of Trade and Industry. Consideration will need to be given to as to whether the construction or property management specific score cards might be relevant.

Specific Broad-Based Black Economic Empowerment (B-BBEE) and socio-economic development targets will be identified during the feasibility study's due diligence phase, informed by applicable legislation, relevant B-BBEE sector scorecards and Overstrand's Supply Chain Management (SCM) Policy. A key output of the procurement strategy will be the determination of the specific transformation and socio-economic goals Overstrand seeks to achieve through the procurement process, ensuring these are embedded as measurable requirements from the outset.

### 5.3 *Project Definition*

The following parameters define the project's scope, context, and constraints. They have been established through technical studies and site assessments, and they directly shape the transaction structure and contractual framework.

#### 5.3.1 Infrastructure

The project requires entirely new infrastructure – referred to “greenfield” as opposed to existing “brownfield” requiring upgrading or refurbishing of existing infrastructure. It is a new activity and there are no existing municipal assets to repurpose. Under the MFMA PPP framework, this is significant: it confirms that a competitive procurement process is required for the Project, and that the full design, construction, and commissioning risk is a genuine transfer candidate under the substantial risk transfer test. The link between the new desalination plant and the Municipality’s reticulation system has been identified and upgrades required scoped as part of the project.

#### 5.3.2 Site

Following an options assessment, an optimal site has been proposed, offering direct sea access, proximity to the distribution network, and relative shelter from wave action. The site is owned by the Department of Public Works and Infrastructure (DPWI), a national government department. Securing site access requires an intergovernmental arrangement, most appropriately a long-term lease by Overstrand, with servitude rights to ensure tenure security for the private operator and its lenders. This process has been initiated. The option to secure access and rights will be to take transfer ownership and this option will be further explored in the feasibility study before making final recommendations to Council.

If it is shown in the feasibility study that the identified site is not feasible, alternative suitable options will need to be assessed.

Section 33 of the MFMA and SCM Regulation 36 of the MFMA govern the deviation from normal procurement processes that will be required for this intergovernmental access arrangement. The lease will be a long-term commitment requiring Council authorisation and, depending on its structure, public participation and National Treasury notification. Options to secure rights should be considered, in particular registering of servitude. Section 79(1) of the Water Services Act offers some protection to Overstrand in that it provides that any water services work placed in good faith by a water services institution in or on property not owned by it, remains the property of that water services institution, whether the work is fixed to any part of that property or not, and may be removed by it.

#### 5.3.3 Seawater intake and brine discharge

A private company operates existing seawater extraction and brine discharge infrastructure within proximity of the optimal site. Leveraging this existing infrastructure represents a significant capital saving and programme advantage — new marine works are among the costliest, complex, and environmentally sensitive components of a coastal desalination project.

However, whilst this has timing and costs benefits for the transaction, this dependency is a transaction risk. The private company holds private commercial rights and an environmental authorisation. The

municipality has no direct regulatory leverage. A term sheet — and ultimately a binding agreement underpinned by a servitude and contractual step-in rights for the desalination operator — must be concluded before the plant procurement commences. Deviation from competitive procurement due to sole supplier nature of the situation will also have to be established and authorised. Potential lenders providing project finance for a PPP will require legally secured feedwater and brine disposal rights as a condition of funding.

Discharge at the optimal site relies on the private company's existing GDA. Any variation in discharge volumes or concentrations that exceeds authorised parameters will require an amendment to the authorisation — a process subject to environmental impact assessment and DFFE oversight. DEA&DP does require a marine impact assessment, but it appears that this will not put the EA work on a critical path, their timeline is still aligned with the project programme. This process has been initiated with the authorised persons and the regulatory authorities and is underway.

#### 5.3.4 Municipal support activity

The scope of the project will be to augment the bulk supply. This is a municipal support activity.

#### 5.3.5 Third party interface

The potential of at least six interfaces with third parties are identified for the desalination project. The site access and infrastructure access agreements are prerequisites to the plant procurement, not parallel workstreams. Attempting to procure the plant before securing these rights will either fail in procurement (no rational bidder will price without certainty on feedwater access) or create a fatally deficient project finance case (no lender will fund without secured inputs).

Table 10 below captures the key activities that need to be further investigated in the feasibility phase, as established. Whilst the actions and parties are identified, the instrument and the regulatory basis are indicative and will be further explored in detail in the development of the contracting strategy and the consequent procurement strategy, whether Overstrand chooses to implement internal or external. This will be explored in further detail in the Feasibility stage.

*Table 10: Third party interfaces with Project*

| # | Action                            | Parties                                          | Instrument                                      | Regulatory Basis                                    |
|---|-----------------------------------|--------------------------------------------------|-------------------------------------------------|-----------------------------------------------------|
| 1 | Seawater inlet                    | Infra owner and operator → Desalination Operator | Access agreement + servitude + step-in rights   | SCM Reg 36 deviation; s.33 MFMA                     |
| 2 | Brine outlet                      | Desalination Operator → Infra Owner and operator | Agreement + servitude + environmental alignment | SCM Reg 36 deviation; s.33 MFMA; NEMA               |
| 3 | Site access                       | DPWI + Overstrand                                | Long-term lease + servitude                     | SCM Reg 36 deviation; s.33 MFMA; Water Services Act |
| 4 | Desalination plant infrastructure | Overstrand + Contractor                          | DBFOM Concession Agreement                      | MFMA Reg 309 PPP; Treasury Approvals I–III          |

| # | Action                    | Parties              | Instrument                     | Regulatory Basis                        |
|---|---------------------------|----------------------|--------------------------------|-----------------------------------------|
| 5 | Bulk supply               | Operator             | Bulk Supply Agreement          | SCM competitive procurement; s.120 MFMA |
| 6 | Distribution augmentation | Overstrand (WSA/WSP) | Infrastructure works contracts | Normal SCM                              |

The Bulk Supply Agreement is the anchor commercial document. Under the Municipal PPP Guidelines' payment mechanism framework, the bulk supply agreement should link the unitary payment to measurable outputs — volume of water delivered, quality compliance, and plant availability. The Municipal PPP Guidelines' Annexure 1 on payment mechanisms provides a detailed template for structuring availability-based and output-based payment deductions that protect the municipality's interests while providing the operator with sufficient revenue certainty to achieve financial close.

### 5.3.6 Summary

The key desalination project definition parameters and implications are briefly described and summarised in Table 11 below.

*Table 11: Summary of contracting parameters*

| # | Parameter                                   | Description                                                                                     | Key Implication                                                                                                      |
|---|---------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 1 | New greenfield infrastructure               | No existing assets can be repurposed. New infrastructure to be designed and built and operated. | Full competitive procurement; design and construction risk fully transferable                                        |
| 2 | Site: New Harbour                           | DPWI-owned land                                                                                 | Intergovernmental lease (with option to purchase) + servitude; s.33 MFMA process                                     |
| 3 | Seawater supply via existing infrastructure | Private commercial infrastructure.<br>Existing environmental authorisation                      | Binding access agreement + servitude; critical path item for project finance                                         |
| 4 | Brine discharge via existing infrastructure | Private commercial infrastructure.<br>Existing environmental authorisation                      | Agreement + DFFE alignment; amendment risk must be contracted against                                                |
| 5 | Municipal support activity                  | Support activity to the existing internal municipal service delivery mechanism                  | Municipal PPP Regulations apply if significant technical, financial and operational risk is to be considered further |

## 5.4 Internal Options

### 5.4.1 Options allowed

Section 76(a) of the MSA sets out the internal mechanisms and section 78(1)(a) the aspects to be taken into account in assessing internal service delivery options in relation to the proposed desalination plant.

The internal mechanisms allowed for in the MSA are:

- a department or other administrative unit within the Municipality's structures;
- a business unit operating within the administration and under Council's control;
- another component of the administration.

The aspects to be taken into account in assessing the impact of the Project on current resources and capacities are:

- The direct and indirect costs and benefits associated with the project if the service is provided by the municipality through an internal mechanism, including the expected effect on the environment and on human health, well-being and safety;
- The municipality's capacity and potential future capacity to furnish the skills, expertise and resources necessary for the provision of the service through an internal mechanism;
- The extent to which the re-organization of the municipality's administration and the development of the human resource capacity within that administration could be utilized to provide a service through an internal mechanism; and
- The likely impact on development, job creation and employment patterns in the municipality
- the views of organized labour.

The discussion below relies on the status quo and needs determined through Section 1 of this study.

#### 5.4.2 Institutional and Human Resources Considerations

As set out in the human resources assessment, Overstrand's internal bulk water services engineering capacity is concentrated in infrastructure planning, contract oversight and regulatory compliance — functions that, while performed to a high standard, do not encompass the specialist disciplines required for SWRO plant design and operation. The municipality also does not have a workforce complement dedicated to the operation and maintenance of bulk water treatment infrastructure, as this function has been externalised since 2015 through a long-term contractual arrangement that will run beyond the operationalisation of the proposed desalination plant. Within the short to medium term, there is no prospect of the municipality reorganising itself differently, or developing the human resource capacity, skills and expertise, to enable it to operate and maintain the proposed desalination plant. It has also been confirmed through consultation with organised labour that no existing employees or existing posts will be affected by the proposed plant.

#### 5.4.3 Financial Considerations

The pre-feasibility study by Zutari estimates the capital cost of a 10 MI/d SWRO facility at approximately ZAR 545,241,000 (excluding VAT). An initial 5 MI/d plant to meet the 2028 supply target would represent a capital outlay of approximately ZAR 300 million or more. For context, Overstrand's total capital budget across all service areas has historically ranged between ZAR 200 million and ZAR 400 million per annum. On-balance-sheet financing of this project, whether through the municipality's own resources or MFMA-compliant borrowing, would require the equivalent of its entire annual capital budget to be committed to a single project for multiple years. This would crowd out investment in roads, sanitation, electricity and housing infrastructure, and is not considered financially feasible without materially harming fiscal sustainability.

#### 5.4.4 Environmental, Health, Safety and Human Well-being Considerations

The expected effect on the environment associated with the proposed Project is currently being assessed through the basic assessment process, which is underway and which includes specialist studies directed at securing the necessary environmental authorisation. The terms and conditions attached to the environmental authorisation, once granted, will apply to the implementation of the Project irrespective of its delivery mechanism. The municipality, as employer and as the entity responsible for the proposed Project, is obliged to implement appropriate health and safety measures. The same obligations, however, apply regardless of delivery mechanism: any service provider engaged to deliver or operate the desalination plant would be bound by the same legislative health and safety requirements. Given the WSA role of the municipality, any service provider should be subjected to rigorous monitoring including an internal team. Therefore, service delivery mechanisms should not materially differ in the standard required, only in who carries primary responsibility for compliance and who monitors it.

#### 5.4.5 Socio-economic Considerations

As noted under the institutional and human resources considerations above, no existing posts or employees will be affected by the proposed plant. In terms of new development and employment, the construction and operation of a SWRO facility will generate employment opportunities and associated economic activity, particularly during the construction phase, irrespective of the delivery mechanism chosen. While the specialist skills required do not currently reside within the municipality, a fair percentage of the plant-related posts should present an employment opportunity for the local workforce. The job creation and development impact of the project therefore does not depend on the delivery option chosen but is rather a function of whether the project proceeds at all.

#### 5.4.6 Conclusion on Internal Options

Undertaking the Project by way of an internal municipal service delivery mechanism is not demonstrated to be optimal. The municipality lacks both the specialist technical capacity to design and operate a SWRO plant and the financial capacity to fund the required capital expenditure on-balance-sheet without unacceptable harm to its overall capital programme and financial sustainability. Proceeding to assess external mechanisms is therefore warranted and necessary.

However, the argument isn't that the existing internal mechanism itself is inadequate — Overstrand, and specifically here the Directorate: Infrastructure Services, is well-functioning — but that the resources it commands, namely financial means, institutional capacity, technical expertise, and operational capacity, are falling short with relation to the proposed desalination plant. Though, remaining adequate and augmentable, is the municipality's contract management and monitoring skills.

In this framing, an alternative to the internal engineering structure is not an external service delivery mechanism, but principally a procurement mechanism that allows the municipality to pull together the skills and resources to do the design, build, financing, operation and maintenance of the proposed desalination plant through which it can augment and diversify its bulk water supply. It does not change the service delivery mechanism as such, which is and must remain internal; it merely sources municipal support. This follows from the fact that bulk water supply is not, fundamentally, a municipal

service per se — were that the case, water boards would amount to partial municipalities — but is rather a municipal support function.

## 5.5 External Options

### 5.5.1 Options allowed

Although it is not the intention of this report to undertake a S78(3) Options assessment at this stage, to better inform strategic decision making and contextualise next steps, the discussion mention and give preliminary views on the options which may address the Project needs and project definition. Section 76(b) of the Systems Act makes provision for external service delivery mechanisms consisting of service delivery agreements with any of the following:

- A municipal entity including a private company, service utility or multi-jurisdictional service utility;
- Another municipality, i.e., a public-public partnership through non-competitive bidding and a Service Delivery Agreement (SDA);
- A national or provincial organ of state, i.e., a public-public partnership through non-competitive bidding and an SDA;
- A CBO or NGO legally competent to enter into an SDA;
- Any other institution, entity or person legally competent to operate a business activity, e.g., a PPP through a competitive bidding process and an SDA or another contractual arrangement as required.

We note that in accordance with section 19 of the Water Services Act, public entities must be considered, and this will be carefully assessed against the Project needs and the definition of a public private partnership. The contract will be for a support activity – and not a municipal service delivery mechanism, which will continue unchanged by the Project as an internal department. We therefore also note that the other S76 external mechanism options do not present as valid to meet the Municipal needs or the Project structuring requirements.

### 5.5.2 Options to meet needs

In order to meet the needs of the Project, which is in essence to augment the bulk supply and to do so by accessing alternative financing mechanisms, the option of procuring a public private partnership is briefly considered here and will be assessed in full in the Feasibility stage. Considering the Project's technical and financial requirements: the options of a traditional Design-Bid-Build (DBB) model and the integrated Design-Build-Finance-Operate-Maintain (DBFOM) model are highlighted.

#### *Design-Bid-Build (DBB)*

Under the DBB model, the municipality would separately procure (i) a designer, (ii) a construction contractor, and subsequently (iii) an operations and maintenance (O&M) contractor in sequential phases. The municipality funds the full capital cost — estimated at ZAR 300 million or more for an initial 5 MI/d plant and approximately ZAR 545 million for a 10 MI/d facility — from its own resources or MFMA-compliant borrowings at the time of construction. Responsibility for design, construction, and operational performance is fragmented across multiple parties, with the municipality retaining interface risk between each phase.

The DBB model does not resolve either of the municipality's fundamental constraints. Even after construction, Overstrand would need to either operate the plant itself — which it currently cannot do — or separately procure an O&M contractor. The municipality would retain construction cost overrun risk, performance accountability after commissioning, and the financial exposure of a large upfront capital commitment.

Against the Municipal PPP Regulation requirements: the DBB option is unlikely to satisfy the substantial risk transfer requirement; it presents a less favourable affordability profile given the upfront capital commitment; and its risk-adjusted value for money is likely poorer than DBFOM when the municipality's inability to manage interface risk across the plant lifecycle is properly costed.

#### *Design-Build-Finance-Operate-Maintain (DBFOM)*

Under the DBFOM model, a single private consortium takes integrated responsibility for the design, construction, financing, operation, and maintenance of the plant over a contract term of typically 20–25 years. On the strength of the bulk supply agreement with the Municipality, the private partner raises project finance — typically from a combination of development finance institutions (such as the DBSA and IDC), commercial bank debt, and equity from specialist infrastructure funds.

Overstrand does not borrow. Instead, it commits to paying a unitary payment over the contract term in exchange for a defined volume and quality of bulk water delivered to the municipal network. This converts a large, uncertain upfront capital risk into a predictable, manageable operational expenditure linked directly to service delivery performance.

The DBFOM model addresses both the capacity constraint and the capital constraint simultaneously. The private partner brings the specialist reverse osmosis engineering, membrane management, energy recovery, and operational expertise that the municipality lacks. Performance-based payment mechanisms — linking the unitary payment to plant availability, water output quality, and volume delivery — align the private partner's financial incentives with the municipality's service delivery obligations.

The Water Partnership Office (WPO) (see 3.4.8 above) was specifically created to assist municipalities to prepare and structure DBFOM projects of this type and has indicated its willingness to support Overstrand through project preparation, blended finance structuring, and access to Green Climate Fund concessional finance.

Against the Municipal PPP Regulations: DBFOM is anticipated to yield superior risk-adjusted value for money; its affordability profile — particularly when WPO blended finance is applied to reduce the unitary payment — should be more manageable against the municipality's tariff revenue stream than the DBB upfront capital commitment; and it is specifically designed to satisfy the substantial risk transfer requirement by transferring integrated design, construction, and operational performance risk to the private consortium.

#### *Options Assessment*

DBB provides the municipality with design control and immediate asset ownership, but it does not solve either the capacity constraint or the capital constraint. Post-construction, the municipality would need to either operate the plant itself (which it cannot do without building a capability it does not

possess) or separately procure an O&M contractor — fragmenting accountability and creating a new interface risk. The National Treasury's value for money guidance makes clear that apparent cheapness does not constitute value for money where risk transfer is low.

DBFOM is the recommended model. It simultaneously addresses the technical capacity gap, the capital constraint, and the performance accountability requirement. Its regulatory pathway under the Municipal PPP Regulations is well-defined. The WPO exists to support exactly this type of project. And the NW&SMP has explicitly identified DBFOM-style private delivery as the appropriate model for municipal desalination projects where institutional capacity is limited.

DBFOM is appropriate where there is a defined service need, measurable outputs, and institutional capacity to monitor performance. The South African MFMA PPP framework places strong emphasis on feasibility, value for money, affordability, and risk transfer.

The risk transfer achieved under DBFOM — construction cost certainty, performance-linked payment, long-term asset management responsibility — reflects precisely the outcomes the Municipal PPP Regulations framework is designed to incentivise. The municipality's role shifts from operator to contract manager: demanding performance, protecting the community's interests, and building the institutional capacity to do so effectively over the life of the concession.

Based on the assessment of internal options, and the preliminary external options assessment, it is recommended that the Municipality consider alternative contracting options and financing strategies before making a final decision. The DBFOM model is the recommended bulk mechanism for the proposed Overstrand Desalination Project. This recommendation is consistent with the National Water and Sanitation Master Plan (2018), which explicitly identifies DBFOM-style private delivery as the appropriate model for municipal desalination projects where institutional capacity is limited, and with the Municipal PPP Regulations, which provides the governing legal and procedural pathway for this structure.

The DBFOM structure preserves Overstrand's role as the Water Services Authority and Water Services Provider — the municipality retains constitutional accountability for water supply and continues to distribute water to end consumers. The private desalination operator supplies bulk water to the municipality under a Bulk Supply Agreement; it does not become a water services provider in the statutory sense. There is no privatisation of the municipal water service. The change is at the bulk supply level only: the source of raw water supplied to the municipality's distribution network is augmented by a new, climate-independent desalinated supply.

### 5.5.3 Risks

The allocation of risk is a core element of any feasibility study and the basis for the substantial risk transfer test. Risks allocated to the private party must be risks that the private party is best placed to manage — the Municipal PPP Guidelines warn against allocating risks to the private party that it cannot control, as this will be priced into the unitary payment and reduce affordability.

Table 12: Risk and mitigation

| # | Risk                                                           | Mitigation                                                                                       | Allocated To                    | Level  |
|---|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------|--------|
| 1 | Security of site access (DPW land)                             | Servitude + intergovernmental lease; s.33 MFMA process                                           | Municipality — pre-procurement  | Medium |
| 2 | Seawater / brine access (existing infrastructure and operator) | Binding term sheet + servitude + step-in rights; lender requirement                              | Municipality — critical path    | High   |
| 3 | Water tariff affordability impact                              | MFMA feasibility study tariff modelling; WPO blended finance to reduce unitary payment           | Municipality / WPO advisory     | High   |
| 4 | Regulatory compliance (PPP Regs, NEMA, NWA)                    | Proactive engagement with DWS, DFFE, NT; specialist transaction adviser                          | Municipality — transaction prep | Medium |
| 5 | Municipal PPP Regulations amendment uncertainty                | Monitor gazette; legal advice on transitional provisions; structure under existing MFMA PPP Regs | Municipality / Legal adviser    | Medium |
| 6 | Programme delivery timeline                                    | PSC stakeholder plan; contractual milestones with KPIs and performance deductions                | Private operator (DBFOM)        | Medium |
| 7 | Construction cost overrun                                      | Performance-based contract; DBFOM transfers construction risk to operator                        | Private operator (DBFOM)        | High   |
| 8 | Long-term plant performance / water quality                    | Availability-based unitary payment deductions; step-in rights; 3rd party monitoring              | Private operator (DBFOM)        | High   |
| 9 | Transaction preparation funding                                | WPO grant funding; DBSA Project Development Facility; early WPO engagement                       | Municipality / WPO              | High   |

We note that 6, 7, and 8 — programme delivery, construction cost, and long-term performance — are transferred to the private operator under DBFOM. These are the exact risks that the substantial risk transfer test requires to be allocated to the party best placed to manage them. Under DBB, all three remain with the municipality.

## 6 Next steps

### 6.1 Project preparation process

The project is currently at the Needs Analysis stage, which has encompassed a technical options assessment together with regulatory, financial and institutional analyses, culminating in the project scoping set out in this report. This report fulfils the requirements of a Section 78(1) internal assessment in terms of the MSA and presents views on the way forward from a transaction structuring perspective. The detailed due diligence and feasibility study of the preferred option will be undertaken in the subsequent Feasibility Stage.

Should a DBFOM delivery model be pursued — which the findings of this assessment support as the appropriate path forward — the Municipal PPP Guidelines prescribe a structured four-phase project cycle with defined deliverables, public participation obligations, and National Treasury engagement points at each phase. This framework is rigorous, but it is also well-established and provides the municipality and its community with the necessary assurance that any DBFOM arrangement is sound, affordable, and demonstrably in the public interest.

Table 13: Next steps

| Phase                                 | Key Steps                                                                                                                                                                           | Treasury Engagement                                                                                    | Public Participation                                                                                            |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Needs Analysis and Options Assessment | Identify project; appoint project officer; appoint transaction adviser; notify NT and DCoG; scope feasibility                                                                       | Notify National Treasury and DCoG of project                                                           | Identify stakeholders; begin community engagement planning                                                      |
| Feasibility Study                     | Needs analysis; technical options; service delivery options; value assessment (PSC + shadow bid); procurement plan; affordability model                                             | Submit feasibility study → TVR I (Treasury Views and Recommendations I)                                | 30-day public comment on feasibility study (60 days before Council meeting); Council resolution to procure PPP  |
| Procurement                           | Prepare bid documents incl. draft PPP agreement; RFQ (pre-qualification); RFP to shortlisted bidders; evaluate bids; preferred bidder; negotiate; finalise contract management plan | TVR IIA (post-RFQ); TVR IIB (post-RFP before preferred bidder); TVR III (before signing PPP agreement) | 30-day public comment on final PPP agreement (60 days before signing); Council resolution authorising execution |
| Contract Management                   | Accounting officer responsible; measure outputs; monitor performance; manage disputes; regulate variations; manage exit                                                             | Annual reporting obligations; material variations require NT notification                              | Ongoing community reporting on service delivery performance                                                     |

The feasibility study is the stage at which comprehensive due diligence is undertaken and the value for money, affordability and risk transfer cases are developed and substantiated. A well-executed feasibility study that satisfies National Treasury's requirements reduces the risk of challenge to the subsequent procurement process and provides the legal and financial certainty that project lenders require as a precondition for committing capital.

## 6.2 Key actions

The following actions are sequenced and interdependent. All subsequent steps are contingent on the resolution of Decision 1 — the municipality's position on capital contribution — which accordingly sits on the critical path of the project.

### 6.2.1 Capital contribution

The Municipality has indicated that the project is unfunded on the current capital programme. The need for the bulk supply augmentation requires an alternative financing strategy. The options for off-balance sheet structuring are possible for the Project, if the identified risks are mitigated and structured in the Feasibility Study Phase. When the feasibility study is complete, Council will be

required to take an in-principle decision as to whether or not to proceed with the procurement of a PPP (Section 120 of the MFMA). Council will further have to consider the contract in its final form and approve the future financial commitment (Section 33 of the MFMA). The decision as to how the Project will be funded - on-balance-sheet (upfront capital), off-balance-sheet (DBFOM unitary payment), or a hybrid structure - determines the contract model, procurement route, feasibility parameters, and National Treasury engagement process for all subsequent steps.

**Owner:** CFO confirmation

**Timing:** Immediate — required to initiate PPP – and to register the PPP with National Treasury

**Basis:** MFMA s.120; Municipal PPP Regulations; Municipal PPP Guidelines

#### 6.2.2 Transaction Adviser and Project Officer

The Municipal PPP Guidelines require the appointment of a qualified transaction adviser (legal, financial, and technical) and a designated project officer before the feasibility study can proceed. This step has been concluded – refer to Figure 4. The adviser will prepare the feasibility study including the PSC, shadow bid, value assessment, and procurement plan.

#### 6.2.3 Water Partnerships Office

WPO engagement should continue. The WPO's seawater desalination programme is the natural home for this project. WPO support can reduce the municipality's upfront transaction cost exposure through project preparation grants, provide access to blended finance structures that improve affordability, and bring specialist advisory capacity that supplements the municipality's internal capability.

**Owner:** Director / Chief Engineer; Infrastructure Services

**Timing:** Ongoing

**Contact:** Water Partnership Office, c/o DBSA; DWS Director General office

#### 6.2.4 Securing access to existing infrastructure

A bilateral commercial engagement with owner and operator of existing infrastructure to access seawater and discharge brine should be initiated immediately to test the terms on which seawater and brine infrastructure access can be obtained. The objective is a binding term sheet. Without this, the feasibility study cannot be completed (the feedwater cost and reliability are core inputs to the PSC and shadow bid) and no plant procurement can proceed.

**Owner:** Municipal Manager supported by legal and technical advisers

**Timing:** Immediate — critical path

#### 6.2.5 Securing access to site

Engagement with the Department of Public Works and Infrastructure to continue to establish the terms of the lease and site access at the New Harbour. A long-term lease with servitude rights is the target outcome. Given that this is an intergovernmental arrangement, early engagement allows political and administrative channels to be activated at the appropriate level.

**Owner:** Municipal Manager / Mayor's office for intergovernmental relations

**Timing:** Concurrent with Action 4

### 6.2.6 Feasibility determination

The tariff affordability study in the Feasibility Study will model the impact of DBFOM unitary payments on municipal water tariffs across consumer categories, including indigent households. This study is a Municipal PPP Regulations feasibility requirement and is essential for the political and community legitimacy of the project. The Overstrand community must understand and accept the tariff implications before the project proceeds to procurement.

**Owner:** CFO / Transaction adviser

**Timing:** As part of feasibility study; Action 2 dependent

### 6.2.7 WSA Contract Management Capacity Plan

Under the DBFOM, the municipality will require WSA contract management capacity. The Municipal PPP Guidelines' Module 6 on PPP contract management provides a detailed framework for the skills, systems, and governance structures required. A capacity plan — identifying whether this capability will be built internally or supplemented through a managing adviser — should be developed as part of the project preparation phase.

**Owner:** Municipal Manager / HR

**Timing:** Feasibility study phase

## 7 Recommendations

Recommended that Overstrand Local Municipality:

### 1. Note and confirm—

- The need to augment bulk supply in order to ensure service delivery;
- The project scoping to address the need – namely a desalination project with an off-take arrangement and interface with third parties where environmentally sound and feasible;
- The capacity constraint to fund the project in the Council's current capital budget process;
- The national and provincial policy imperatives to undertake supply side diversification as effectively and efficiently as possible including desalination;
- That the project is a support activity and does not impact the existing structures of the water services delivery mechanism currently serving the community (an internal department mechanism);
- The views received from organised labour and that there is no impact on existing employees in the municipal services delivery mechanism structure;
- The project will have a positive economic impact in that it will create new jobs; new skills and will address the supply-side bulk capacity requirements;

### 2. Following assessment of the criteria in S78(1) of the Municipal Systems Act No. 32 of 2000 resolve—

- In terms of S78(2) to continue to deliver water and sanitation services by way of an internal mechanism structured as an internal department; and

- to explore the feasibility of implementing the augmentation of bulk supply by way of desalination; and
- to authorise the Director / Chief Engineer: Infrastructure Services to:
  - Register the Municipality's intention to explore the option of a public private partnership with National Treasury and the Water Partnerships Office; and
  - Continue to engage with DPWI regarding access to the site identified for the desalination project; and
  - Nominate and authorise the Project Officer; and
  - Report back to Council with the Feasibility study in terms of S120(6) of the Local Government: Municipal Finance Management Act.