

AtkinsRéalis



# Draft Report on TasWater's capital expenditure

Office of the Tasmanian Economic Regulator

29 January 2026

OTTER\_2025 / 2 / DG / 004

# REVIEW OF THE TASMANIAN WATER AND SEWERAGE CORPORATION'S CAPITAL EXPENDITURE

# Notice

This document and its contents have been prepared and are intended solely as information for the Office of the Tasmanian Economic Regulator and use in relation to a Review of TasWater's Capital Expenditure.

AtkinsRealis Australia Pty Ltd assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 139 pages including the cover.

## Document history

Document title: Draft Report on TasWater's capital expenditure

Document reference: OTTER\_2025 / 2 / DG / 004

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	For client review	GJ, MB, MS	RN	DB	GJ	
2.0	For TasWater material factual inaccuracy check	GJ, MB, MS	RN	DB	GJ	20/01/2026
3.0	Updated in response to TasWater factual inaccuracy check	GJ, MB, MS	MB	MS	GJ	29/01/2026



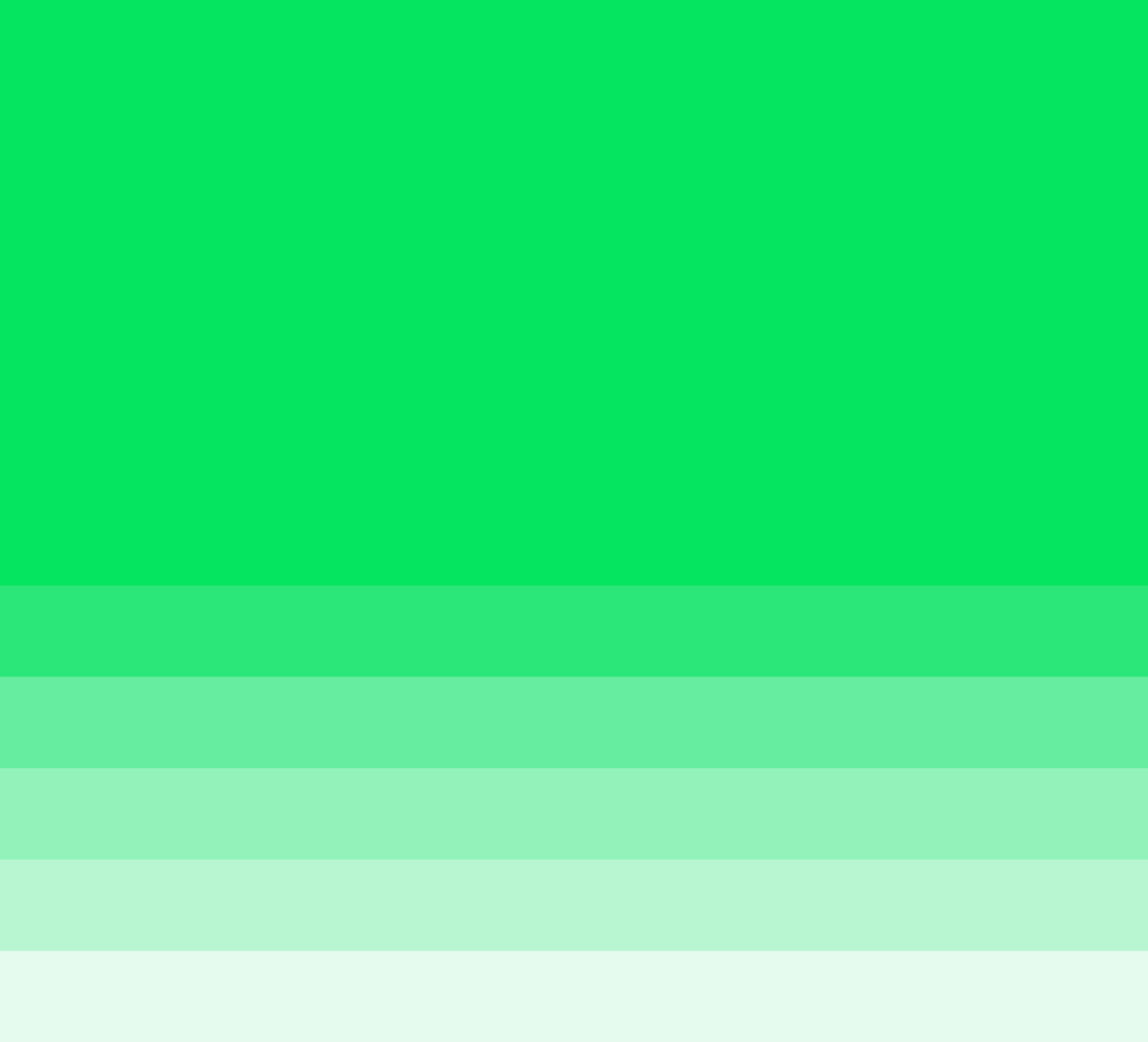
# Contents

List of acronyms .....	6
Executive Summary.....	8
<b>1. Introduction.....</b>	<b>14</b>
1.1 Scope .....	14
1.2 Approach .....	16
1.3 Price base .....	19
<b>2. Cross-cutting considerations .....</b>	<b>20</b>
2.1 Long-term strategy .....	20
2.1.1 TasWater’s Corporate Plan and Strategy .....	20
2.1.2 Masterplans.....	21
2.1.3 Water Security Strategy .....	21
2.2 Cost estimation .....	22
2.3 Cost treatment of ICT costs .....	22
2.4 Capital Delivery Office Transition.....	24
<b>3. Review of PSP4 capex .....</b>	<b>26</b>
3.1 Spend in PSP4.....	26
3.2 Variance from the allowance .....	27
3.3 Spend in FY25 and FY26.....	32
3.4 Project/program reviews .....	34
3.4.1 Growth.....	34
3.4.2 Renewals .....	36
3.4.3 Compliance .....	46
3.4.4 Improvement .....	52
3.5 Assessment of TasWater’s PSP4 expenditure .....	55
<b>4. TasWater’s proposed PSP5 capex .....</b>	<b>57</b>
4.1 Overall size of program .....	57
TasWater’s approach to escalation and proposed efficiency adjustment .....	59
4.2 Spend by service and driver .....	60
4.3 Growth.....	62
4.3.1 Overview .....	62
4.3.2 Growth projections .....	64
4.3.3 Specific projects/programs.....	66
4.4 Renewals .....	68
4.4.1 Overview .....	68
4.4.2 Water renewals .....	70
4.4.3 Sewerage renewals.....	83
4.4.4 Other renewals.....	92



4.5	Compliance .....	101
4.5.1	Overview .....	101
4.5.2	Water compliance .....	102
4.5.3	Sewerage compliance.....	110
4.6	Improvement .....	128
4.6.1	Overview .....	128
4.6.2	ICT Major system upgrades and enhancements .....	129
4.6.3	Other ICT costs .....	130
4.7	Recommended efficient and prudent capex .....	131
4.7.1	Expected life of new assets .....	137
<b>5.</b>	<b>Recommendations .....</b>	<b>138</b>





# List of acronyms

Acronym	Definition
ADWF	Average Dry Weather Flow
AFL	Australian Football League
ANCOLD	Australian National Committee on Large Dams
BAC	Biological Activated Carbon
BAFO	Best and Final Offer
BE	Bryn Estyn
BOD	Biological Oxygen Demand
CAL	Conventional Anaerobic Lagoon
Capex	Capital Expenditure
CCTV	Closed Circuit Television
CDO	Capital Delivery Office
CSC	Customer Service Code
D&C	Design and Construct
DAF	Dissolved Air Flotation
DBC	Detailed Business Case
DMA	District Metering/Metered Area
ECI	Early Contractor Involvement
EPA	Environmental Protection Agency
EPN	Environmental Protection Note
ERA	Environmental Risk Assessment
ERP	Enhanced Response and Prevention
ET	Equivalent Tenants
FIFO	Fly in Fly Out
FSL	Full Supply Level
FTE	Full Time Equivalent
FY	Financial Year
GAC	Granular Activated Carbon
GHWSS	Greater Hobart's Water Supply System
HV	High Voltage
HVAC	Heating, ventilation, and air conditioning
IaC	Infrastructure-as-code
ICT	Information and Communications Technology
ILI	Infrastructure Leakage Index
ILM	Investment Logic Mapping
IT	Information Technology
KPI	Key Performance Indicator
LRV	Log Reduction Deficit
LSIP	Launceston Sewerage Improvement Program
LST	Launceston Sewerage Transformation
MCA	Multi Criteria Analysis
MI/d	Megalitres per day
MoU	Memorandum of Understanding
N	Nitrogen
NPV	Net Present Value
NRW	Non-Revenue Water
Opex	Operational Expenditure



Acronym	Definition
OTTER	Office of the Tasmanian Economic Regulator
p.a.	Per annum
PARMS	Pipeline Asset Risk Management System
PDG	Project Delivery Group
PSP	Price and Service Plan
RAB	Regulated Asset Base
RAMSAR	Ramsar Convention on Wetlands
RFI	Request for Information
RTWSIP	Regional Towns Water Supply Improvement Program
RWS	Recycled Water Scheme
SaaS	Software as a service
SBC	Strategic Business Case
SCADA	Supervisory control and data acquisition
SOCI	Security of Critical Infrastructure
SPS	Sewage Pumping Stations
STP	Sewage Treatment Plant
TCC	Total Cost to the Community
TERHAP	Tamar Estuary River Health Action Plan
TOC	Target Outturn Cost
TSS	Total Suspended Solids
UF	Ultrafiltration
UV	Ultraviolet
WISER	Water Infrastructure for Sustainable and Efficient Regions
WTP	Water Treatment Plant
WWRMP	Wastewater Risk Management Plan
WWTP	Wastewater Treatment Plant



# Executive Summary

In June 2025 the Office of the Tasmanian Economic Regulator (OTTER), which supports the Regulator, commissioned AtkinsRéalis to undertake a review of TasWater's capital expenditure to support the investigation for determination of prices for regulated services for the regulatory period from 1 July 2026 to 30 June 2030 inclusive. This report presents the findings of the review.

The review commenced in June 2025, with an inception report in July 2025 and initial requests for information in August 2025. We held a number of online meetings with TasWater during this period and then carried out a week of in-person interviews and a site visit with TasWater in October 2025. TasWater has been open, helpful and collaborative during this review.

## Fourth Price and Service Plan period (PSP4)

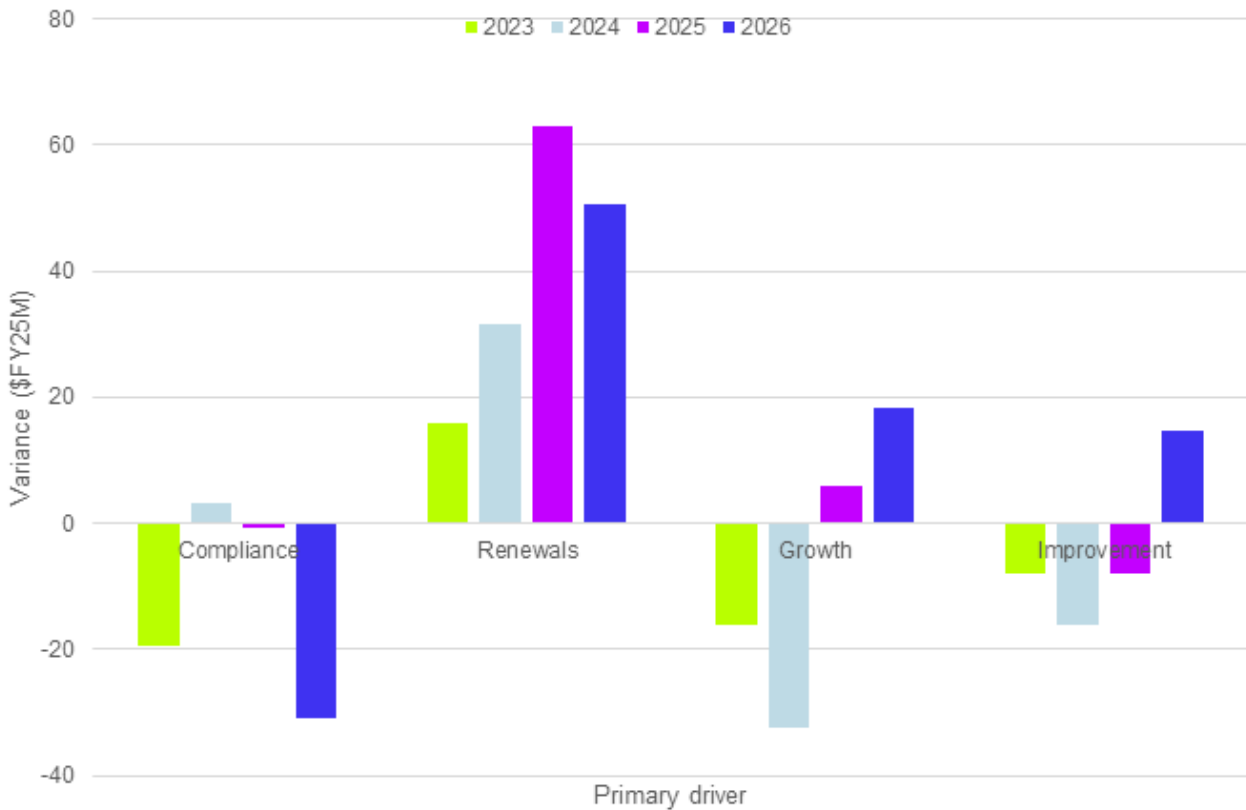
TasWater has demonstrated it can deliver major projects during PSP4.

When converted to 'real' \$FY25M terms, TasWater expects to have spent \$945M in PSP4, equivalent to \$72M (8%) higher than the allowance of \$873M. Almost half (47%) of this spend is classified as Compliance, with Renewals being the next largest driver at 37% of capex.

We have based the allowance by driver and service on TasWater's Final PSP4 plan pro-rated to match the regulator's PSP4 capex allowance. This analysis suggests that expenditure in PSP4 has shifted to delivering higher renewals spend than expected at PSP4 (\$161M or 88% higher than the allowance). This has occurred partly by overspending the allowance (by \$72M) but also by deferring non-renewal schemes, especially compliance schemes (\$48M lower than the allowance) such as the North-West Water Supply Strategy and the Ridgeway Dam upgrade. These trends are presented graphically below.



**Figure A - PSP4 variance by primary driver (\$FY25M)**



There has not generally been strong evidence provided for the decisions to increase renewals expenditure with limited documentation presented for the variance and of the decisions themselves. We consider that, based on the explanations provided to us, the approach to renewals, especially to water mains, is at an early stage of development, with limited consideration of root cause analysis, cost-effectiveness or cost-benefit prioritisation and alternatives to asset replacement (e.g. calm networks and relining).

That said, we have not seen enough evidence to be able to conclude that any of the expenditure in PSP4 clearly meets the definition of being imprudent or inefficient. We have therefore recommended accepting the actual expenditure in FY23, 24 and 25 in the RAB roll-forward.

The only amendment we recommend relates to forecast spend for FY26. We have recommended accepting TasWater’s estimate that \$21M of spend on Selfs Point which it initially expected to take place in FY25 has been deferred to FY26. This is reflected in the summary of recommended PSP4 expenditure below.

**Table A – Recommended PSP4 capex (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
<b>TasWater proposal figures (including FY25 actuals)</b>	188.7	208.1	276.0	245.0	917.8
<b>Adjustment for Selfs Point deferral</b>				21.0	21.0
<b>PSP4 recommended capex</b>	188.7	208.1	276.0	266.0	938.8

Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

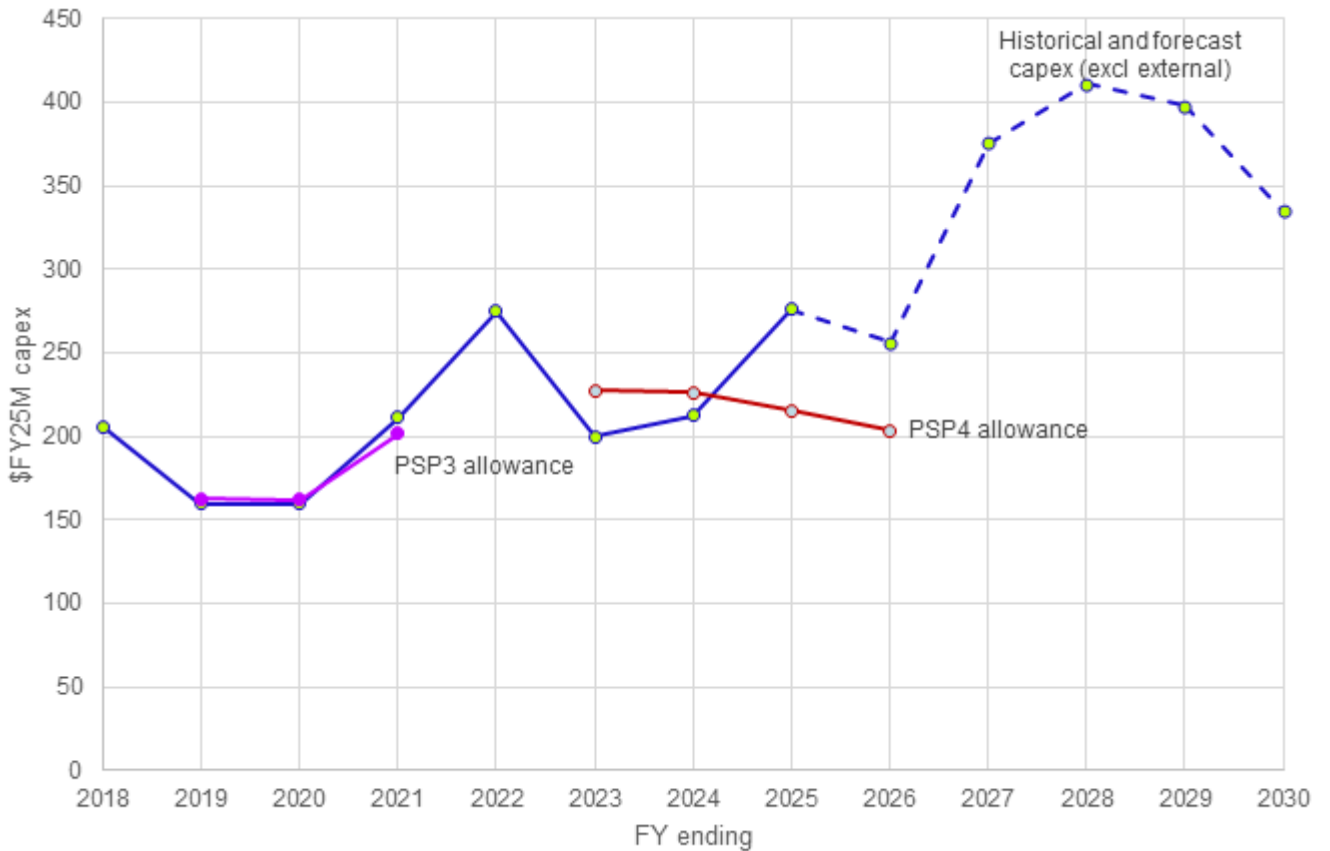


## Fifth Price and Service Plan (PSP5)

In developing its fifth Price and Service Plan, TasWater has demonstrated to us that its Board has been engaged in the high-level formulation of its capital program and that it has consulted with customers. It has developed a series of regional masterplans which review current performance and provide a longer-term plan for water and sewerage services.

It is proposing a significant ramp up in expenditure in PSP5 as can be seen graphically below.

**Figure B - Historical and projected TasWater capex (excluding external funding and TasWater’s efficiency target)**

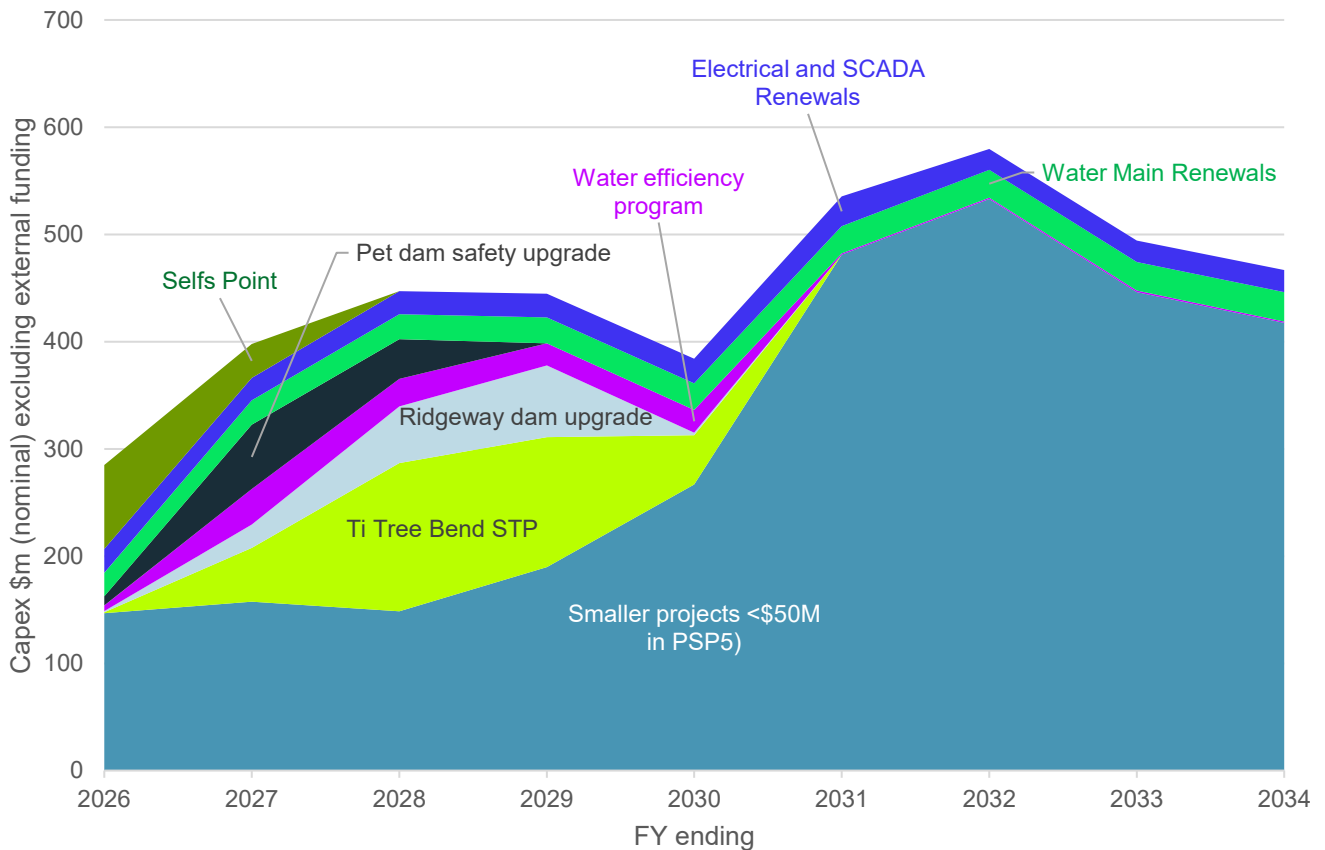


Source: Analysis of TasWater spreadsheet ‘Sup 2. Capital Expenditure Forecast PSP5 - September 2025’ and TER 2018 and 2022 Final Reports

The increase in expenditure in PSP5 is driven by a number of large projects/programs, with the largest ten making up \$1,020M or 61% of a total program of \$1,674M (both nominal). The effects of the large projects/programs are summarised graphically below.



**Figure C - Profile of TasWater's proposed large projects/programs**



Source: Analysis of TasWater spreadsheet 'Sup 2. Capital Expenditure Forecast PSP5 - September 2025'

We have reviewed the majority of proposed spend and have recommended a number of adjustments, including:

- We have assumed that Ti Tree Bend STP is not delivered in PSP5. The upgrade is proposed to be completed years before the other Launceston STPs are connected to the system, the STP is largely compliant with the effluent quality limits in its EPN and TasWater has not demonstrated that customers are willing to pay the considerable costs of the scheme.
- We have recommended allowing for a smaller water efficiency program. The costs outweighed the benefits in the business case presented to us. We have allowed for measures which should enable TasWater to gain a much better understanding of its losses in the PSP5 period. We consider it would be valuable for TasWater to develop economic level of leakage targets and a tailored losses management plan for each of its systems in the PSP5 period.
- We have updated the capex for the Ridgeway Dam upgrade to reflect the latest cost estimate. We have also reprofiled the spend so that it is assumed to be complete by FY31. TasWater classifies the project definition deliverables as being at 0-2% maturity with significant investigations still to be carried out in order to confirm the solution is feasible. Given this, the complexity of the works and previous experience of the project being deferred in both PSP2 and PSP4 we consider there is a reasonable likelihood the project is not completed in PSP5.
- We have recommended allowing less expenditure on water mains renewals than TasWater has proposed. We consider that robust justification for the significant level of (and increase in) expenditure on mains renewal spend has not been provided. The analysis provided to us suggests a broad range of efficient renewals between \$10M to \$30M p.a. so is not strongly supportive of the proposed spend of c\$23M p.a. TasWater does

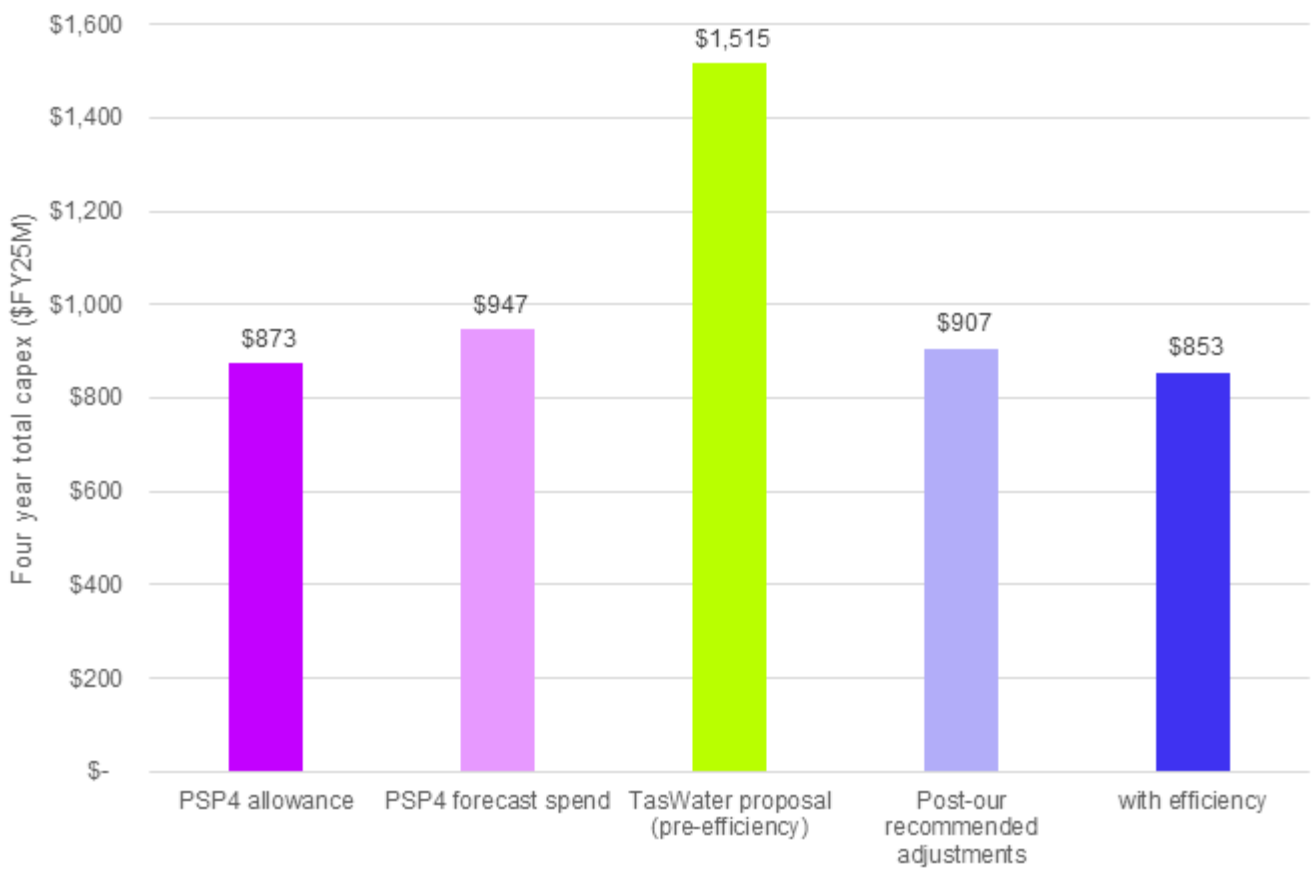


not appear to have considered or built into its submission more cost-effective ways to reduce bursts and leaks (such as calm networks) or to prioritise customer impact per dollar spent.

Our recommended capex allowance is summarised below. The recommended allowance for Renewals in PSP5 is significantly higher than it was in PSP4 (+\$193M in \$FY25). This is based on the case made by TasWater for investment in electrical renewals and meter replacement and to allow investment in water efficiency.

The recommended allowance for Compliance spend in PSP5 includes significant capex on dam safety at Ridgeway and Pet Dam as well as investment in the Smithton Recycled Water and Prospect Vale projects. The recommended allowance is, however, lower than at PSP4 (-\$131M in \$FY25) reflecting the fact that the case for completing the largest proposed PSP5 Compliance projects in PSP5 has not been robustly made. It also reflects the significant Compliance allowance made at PSP4, representing more than half of the capex allowance and encompassing delivery of projects and programs such as the North-West Water Supply Upgrade, Bryn Estyn major upgrade and Ridgeway Dam upgrade.

**Figure D – Comparison of recommended PSP5 capex to PSP4 and TasWater’s proposal (\$FY25M)**



Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025".

It is important to note that whilst they are formed by reviewing a sample of projects and programs, these recommendations are for the purpose of forming a view of the overall prudent and efficient envelope of capex rather than as recommendations for specific projects or programs to invest in.

**Building for the future**

TasWater has proven it can deliver large projects. We consider that it would now benefit from strengthening the demonstration and evidencing of its decision making for whether and what to spend customers’ money on. Whilst



we recognise the customer consultation undertaken by TasWater as part of the development of PSP5, including the bill simulator survey, our observation is that this process appears to have been decoupled from the proposed capital program in terms of both priorities and investment level.

We think it would be valuable to ingrain benefits thinking, making the identification, tracking and evaluation of customer-focused benefits the common thread throughout decision-making processes (from the Board to Investment Committee to Planners, Delivery, etc). Potential elements of this kind of change include:

- **Business cases:** best practice is for business cases to be a genuine review of all potential options and robust justification for the timing and case for the intervention. They should set out the benefits which can then be measured.
- **Decision framework:** it is useful to embed cost-benefit analysis (CBA) or similar tools into decision making, especially for investments which are not mandatory and for which a robust case therefore needs to be made. Customer research can be used to create a customer value framework which all decisions can be measured against.
- **Measures/targets:** businesses, and more importantly customers, can benefit from having a focused set of customer-centric outcomes as targets (like minutes of service interruptions rather than mains breaks). These targets should be informed by customer priorities and linked to proposed interventions.
- **Portfolio management/capex variance:** where decisions are made to significantly amend the program and/or to spend more than the allowance then good practice is for these decisions to be strongly justified and formally documented. This applies to renewals programs as well as discrete projects.

We would also highlight areas for consideration on three specific themes:

- For an environmental improvement program, whenever interventions are not mandatory, the strength of justification is key. It is good practice to ensure the specific issue which is being tackled is clearly identified and to demonstrate that the proposed intervention is both the most cost-effective approach and also cost-beneficial, i.e. customers are willing to pay for it.
- For renewals, best practice is for risk assessments to be forward-looking, to use rich data to justify the program and to prioritise cost-effectiveness for risk reduction or similar. It is important that alternatives to straightforward asset replacement are considered as often, when feasible, these are a more cost-effective way of achieving customer benefits (e.g. implementation of calm networks).
- Improving losses/leakage is a journey which starts with improved understanding of losses. We consider it would be useful to develop an economic level of leakage and tailored least cost plan specific to each major system as the economics of leakage management depend on the characteristics of each area (e.g. cost and availability of water supplies, level of losses, feasibility of pressure management, etc). We consider it is useful to prioritise measures with highest net customer benefits and/or lowest regret options first.



# 1. Introduction

The Tasmanian Water and Sewerage Corporation (TasWater) was established in 2013 through the merger of regional water and sewerage corporations and a common services provider company called Onstream. It owns and operates the water value chain from dams and reservoirs to customers' connections as well as sewerage systems from customer connections to wastewater treatment and disposal. It provides retail service and processes trade waste.

TasWater is regulated under the Water and Sewerage Industry Act 2008 and associated Regulations by the independent Tasmanian Economic Regulator (the Regulator), established under the Economic Regulator Act 2009. The Regulator plays a crucial role in overseeing industry licensing, protecting consumers, monitoring performance, and setting retail prices. In particular, the Regulator determines the prices for water and sewerage services and specifies TasWater's obligations for delivering services to customers through the Tasmanian Water and Sewerage Industry Customer Service Code (CSC).

Section 15 of the Water and Sewerage Act requires the Regulator to have regard to the promotion of **efficient long-term investment in water infrastructure and sewerage infrastructure**, so that regulated water services and sewerage services are delivered at the lowest sustainable costs.

The Water and Sewerage Industry (Pricing and Related Matters) Regulations 2021 requires the Regulator to conduct a price determination investigation before it makes a price determination. The purpose of the investigation is to gather information to assist the Regulator in making a determination.

In June 2025 the Office of the Tasmanian Economic Regulator (OTTER), which supports the Regulator, commissioned AtkinsRéalis to undertake a review of TasWater's capital expenditure to support the investigation for determination of prices for regulated services for the regulatory period from 1 July 2026 to 30 June 2030 inclusive.

Below we set out the scope of and approach used for the review.

## 1.1 Scope

The Regulator and OTTER commissioned AtkinsRéalis to review and provide support in assessing the efficiency and prudence of:

- i. TasWater's **actual** capital expenditure for the period **1 July 2022 to 30 June 2025**;
- ii. TasWater's **budgeted** capital expenditure for the period from **1 July 2025 to 30 June 2026**; and
- iii. TasWater's **proposed** capital expenditure for each financial year in the period from **1 July 2026 to 30 June 2030**.

The detailed scope of the capital expenditure review is as follows:

### Capital program assessment

- Assessment of the reasonableness of TasWater's capital program, including:
  - Capital expenditure during the current regulatory period (Price and Service Plan 4, or PSP4)
  - Proposed capital expenditure for the period **1 July 2026 – 30 June 2030**.



## Major capital works projects and program review

- Identification, description, and assessment of major capital works projects that represent a significant proportion of total capital expenditure, along with a sample of programs.
- Provide advice to the Regulator on whether, and to what extent, these projects/programs meet the following criteria:
  - **Appropriateness:** Alignment with key drivers and obligations (including regulatory and customer service standards).
  - **Supporting analysis:** Evidence of clear service outcomes, analysis of options to deliver these outcomes, and justification for preferred approach.
  - **Efficiency:** Consistency with best-practice asset management which considers risk and TasWater's regulatory obligations, and efficient long-term expenditure on infrastructure for regulated services.
  - **Deliverability:** Demonstrated planning and feasibility for delivery within proposed timeframes, considering past performance on major projects.
  - **Cost:** Well-supported, reasonable cost estimates based on industry rates and/or benchmarking.
  - **Prioritisation:** Rigour and effectiveness of TasWater's prioritisation process.
  - **Strategic alignment:** Consistency with longer-term plans and Regional Management Plans.

## Capital program classification audit

- Audit and assessment of the accuracy of TasWater's classification of capital expenditure by cost driver:
  - **Growth:** Capacity increases or new assets to meet growth in demand or to provide additional security of supply.
  - **Renewal:** Replacement of existing assets and maintenance of service levels.
  - **Improvements:** Service level and reliability enhancements.
  - **Compliance:** Meeting regulatory obligations.

## Regulated Asset Base advice

- Review TasWater's information and provision of advice to the Regulator on:
  - Efficient capital expenditure on new assets by classification (water/sewerage and regulated/unregulated).
  - Expected life of new assets by classification.

## Out-of-sequence expenditure

- Review and comment on the impact of capital expenditure occurring outside TasWater's long-term plans (out-of-sequence projects).



Our scope includes the delivery of draft and final reports that encompass our advice and recommendation based on our review of TasWater’s capital expenditure. Along with each report we are required to provide an Excel spreadsheet which includes all tables, graphs and calculations to allow transfer of the recommendations to OTTER’s pricing models.

## 1.2 Approach

Our methodology for undertaking this review is based on the combined experience of the team in undertaking similar expenditure reviews across Australia and internationally.

Our review work commenced in June 2025. Our initial task included preparation of an inception report setting out our intended approach and key issues for the review, based on our review of background documents including the *Investigation into TasWater’s prices and services for the period 1 July 2022 to 30 June 2026: Final Report* and *TasWater’s Corporate Plan 2025-2029*, in addition to early discussions with OTTER.

Following preparation of the inception report, we commenced our review of TasWater’s Price and Service Plan (PSP5) submission, which was published on 30 June 2025. The PSP5 submission laid out the business’s operating context and customer consultation approach for PSP5 as well as detailing its proposed capital expenditure program and outcomes for PSP5.

As part of our methodology to carry out the capex review, we proposed to cover a range of projects and programs for the ex-post<sup>1</sup> and ex-ante<sup>2</sup> capex reviews, through our review of a representative sample. In selecting the sample, we considered the value of the projects and programs as well as their asset class, primary driver and PSP5 outcome. Additionally, we engaged with OTTER to ensure that the sample selected was in line with their expectations and understanding of TasWater’s investment strategy.

In assessing projects and programs we have adopted the definitions of prudence and efficiency reproduced below:

---

<sup>1</sup> Based on actual results and project/program spend

<sup>2</sup> Based on forecast results and project/program spend



### **Definition of prudence**

*Expenditure is considered prudent if it:*

- *could be reasonably expected or required by an operator exercising good industry practice; and/or*
- *if it is consistent with delivering / meeting the required service levels, outputs and regulatory obligations over the relevant regulatory period.*

*Prudent expenditure also takes into account a planning horizon that extends beyond the relevant regulatory period. The Prudence Test assesses whether, in the circumstances existing at the time, the decision to expend the funds is one that an entity, acting prudently, would be expected to make at that time.*

*In assessing prudence, the successful consultant is required to assess whether, given the circumstances facing TasWater at the time the decision was made, a prudent entity would choose to undertake the program or project in a similar manner, in terms of size, scale or scope, having consideration for the opportunity cost of not investing in the program or project.*

*The successful consultant will also assess whether the expenditure is driven by and provides regulated services. Expenditure on assets used wholly or partly to provide unregulated services, like reuse, stormwater, recycling and irrigation, should be identified and proportionally excluded.*

Source: Specification for Review of TasWater's Capex

### **Definition of efficiency**

*Efficient expenditure is considered to be the minimum level of expenditure that is required to deliver a desired outcome or result consistent with an operator exercising good industry practice. The Efficiency Test assesses whether TasWater's proposed expenditure represents the most cost-effective way of providing the relevant regulated services.*

*In assessing efficiency, the successful consultant is required to assess whether, given the circumstances facing TasWater at the time the decision was made, an efficient entity would have spent the same amount of money or used the same procurement processes to undertake the program or project.*

Source: Specification for Review of TasWater's Capex

Our approach in selecting the sample included grouping the expenditure for each PSP period by primary driver and asset class categories. This allowed us to quantify the value of expenditure against each category, and analyse the spread of expenditure, to ensure appropriate and equitable coverage. We also selected programs and projects that we understood to be significant in spend and which form a key part of TasWater's PSP5 strategy. Additional refinements were made in consultation with OTTER. Ten programs/projects were selected for PSP4 and 23 for PSP5 for inclusion in the detailed review sample. For the ex-post expenditure, the sample represented approximately 40% of PSP4 capex, and the ex-ante sample represented approximately 75% of TasWater's proposed PSP5 capex. The proportion of expenditure reviewed was higher for the ex-ante (PSP5) review than the ex-post selection given its greater importance for price review purposes. Sections 3 and 4 provide further detail on the sample projects and programs.

Following our review of PSP5 and our selection of sample projects and programs for PSP4 and PSP5, we prepared initial requests for information (RFI). Alongside this, we also prepared a detailed interview schedule which included subjects to be covered during five days of interviews. We shared this with TasWater, through OTTER, and in collaboration developed a finalised interview schedule for the interviews, which took place over five days in early



October 2025. Due to TasWater staff availability, several online interview sessions also took place in August and mid-October 2025 covering the CDO transition and specific sample projects.

Our proposed interview topics during the five days of interviews in early October 2025 included the following:

- 2022-2026 regulatory determination (PSP4): expenditure variances and reasons
- Process and governance underlying 2026-2030 capex program, including project prioritisation, capex program iteration, governance, the role of stakeholders such as the Environmental Protection Agency (EPA) and how PSP5 fits into and reflects long term plan(s)
- Customer engagement and how it informed the plan: evidence that customers are supportive of the plan overall and of key elements in particular
- Current and projected capacity and program deliverability, with a particular focus on the new Future Delivery Model
- Approach to costing and budgeting: in house roles/capabilities, costing databases, outturn cost estimation performance, approach to risk/use of probabilistic estimates, and how PSP5 cost estimates have been derived
- Regulated and unregulated activities: explanation of where TasWater has drawn the line and whether any capex is/should/will be allocated to unregulated activities
- State of assets and service performance: including trends in key performance indicators (KPIs) such as leakage, interruptions and breaks
- Approach to asset management modelling and planning and renewals: overarching approach and goal of asset renewals plans
- Growth and development: approach to demand forecasting, planning horizon, link to official projections and policies, approach to planning policy optimism, and key assumptions underlying key plans and strategies
- Environmental compliance: approach to risk assessment, how the program has been derived, what iterations it has been through, regulatory requirements and customer support for the program

Additionally, we undertook detailed reviews of projects during the interview stage for a sample of projects for both PSP4 and PSP5. The selected projects are discussed in detail in this report in the following sections.

Based on information from TasWater's submission, interviews, and requested information and documents, we reviewed the activities and costs associated with a range of projects and programs for PSP4 and PSP5. We considered both the historical and proposed costs for a number of ongoing programs and considered whether adjustments to scope and proposed costs were warranted. Additionally, based on TasWater's systems and processes in delivering or developing historical and proposed projects and programs, we have considered the appropriate level of efficiency challenge. Within our review of PSP4 projects, where relevant we reference the findings and recommendations of the PSP4 capital and operating expenditure review undertaken by Carisbrooke CCGUS Consulting Group, Utilities Regulation Advisory (URA) and SIPA, published in May 2022 and herein referred to as CCGUS (2022).



TasWater published an update to its PSP5 submission on 30 September 2025. Of relevance to this review of capital expenditure this update included:

- Updated figures for actual capital expenditure for FY25 to be included in the Regulated Asset Base (RAB) and an update to the FY26 capital expenditure forecast.
- No update to forecast PSP5 capital expenditure.
- Provision of actual demand data for FY25 (connections and usage).
- An update to the proposed RAB, regulatory depreciation calculation and supporting material.

Our analysis incorporates the updated figures provided on 30 September 2025, except where explicitly stated in our report.

### 1.3 Price base

Expenditure amounts in this document are presented in a mix of nominal forecasts and in financial year 2024-25 prices (\$FY25). Whilst nominal figures drive the price setting process, \$FY25 figures have been used when it is useful to look at trends over time. The factors used to convert historical and future nominal (with inflation projections) to \$FY25 are summarised below.

**Table 1-1 - Index used to convert to \$FY25 prices**

FY:	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
						f	f	f	f	f
<b>CPI</b>	3.8%	6.1%	6.0%	3.8%	2.1%	3.10%	2.72%	2.72%	2.72%	2.72%
<b>Conversion factor to \$FY25</b>	1.19	1.12	1.06	1.02	1.00	0.97	0.94	0.92	0.89	0.87

Source: Analysis of TasWater’s spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”



## 2. Cross-cutting considerations

### 2.1 Long-term strategy

#### 2.1.1 TasWater's Corporate Plan and Strategy

TasWater's Corporate Plan FY2026-2030<sup>3</sup> and TasWater's Strategy 2024<sup>4</sup> provide the framework for TasWater's capital expenditure proposals and outline how TasWater will meet its regulatory, legislative and customer obligations.

TasWater's current **strategy** sets out the local and global challenges for the region's water and wastewater systems, grouped based on the topics of community, business, and environment. These challenges include population growth, rising living costs, increasing customer expectations, regulatory change, supply chain management, climate change, the green energy transition, driving circularity, and biodiversity protection. To address these challenges and deliver its vision of **water forever**, TasWater has defined four strategic outcomes, each supported by measurable targets:

- **Driving customer value:** involving the community in decision making to cater to different needs and innovating to deliver true value. This will be judged on achieving a Customer Trust rating of at least 70% by 2030.
- **Better together:** supporting TasWater's employees to achieve their full potential through meaningful work, physical and psychological safety, personal growth, autonomy and purpose. Additionally, TasWater will partner with external stakeholders to deliver better outcomes for local communities. This will be judged on achieving success metrics including a stakeholder trust rating of 70% by 2030.
- **Healthier environment:** reducing greenhouse gas emissions, waste generation, and discharge of unwanted nutrients into waterways. This will be judged on achieving success metrics including a 30% reduction in total nitrogen and phosphorus discharge by 2030.
- **Water forever:** Maintaining infrastructure to support the delivery of high quality, reliable water, and the safe, efficient treatment of wastewater. This will be judged on achieving success metrics including over 60% of customers at the agreed level of water security level of service by 2030.

**TasWater's Corporate Plan 2026-2030** identifies detailed actions and success measures TasWater must complete across the next five-year period to achieve the goals outlined in its strategy document. The corporate plan scorecard outlines the targets for each financial year between 2026 and 2030, showing that TasWater must achieve significant improvements compared to baseline rates across almost all metrics to fulfil their strategy goals. The financial forecast shows that expenditure, net cash flow, borrowing, and gearing must all increase significantly across this five-year period to achieve TasWater's stated ambitions. Capital expenditure is expected to increase by 122% from \$208.4M in FY23 to a maximum of \$463.3M in FY28 while total debt is expected to rise by over 146% to \$2.1Bn by FY30.

---

<sup>3</sup> Corporate Plan 2026-2030, TasWater 2024. Available from: [Publications | TasWater](#)

<sup>4</sup> Corporate Strategy, Taswater, 2024. Available from: [Our Strategy | TasWater](#)



## 2.1.2 Masterplans

In November 2025, TasWater released nine regional masterplans which lay out the long-term water and sewerage infrastructure roadmap TasWater believes is needed to unlock housing, support industry and protect the environment across Tasmania<sup>5</sup>. Each masterplan begins with an overview of current services in the region. For example, the Derwent-Hobart Masterplan notes that the region currently has four water systems served by 16 water treatment plants, 25 sewerage systems and treatment plants, and 50 recycled water customers.

The masterplans also identify key growth areas, such as the 55,400 potential development lots in the Derwent-Hobart region across the next 50 years. They also highlight challenges likely to impact the local water and sewerage systems, including ageing infrastructure, high risk discharges from sewage treatment, variable water quality, and uncertainty in the timing of new development.

Based on this analysis, each masterplan sets out tailored water and sewerage plans for the region. These plans identify key new and upgraded infrastructure required to meet the proposed outcomes for the area and categorise them into short, medium, and long-term priorities for action. TasWater's aim is to implement an approach which tackles the most urgent issues immediately while deferring major spending and reducing the need for complex new infrastructure to reduce costs long-term. TasWater intends that these masterplans provide the underpinning evidence for their investment plans across PSP5 and into the future. Therefore, the prioritisation of projects proposed in these masterplans should be reflected in TasWater's proposed capital expenditure programs analysed in this report.

## 2.1.3 Water Security Strategy

In past years TasWater's water investment has focused on drinking water quality, as exemplified by the 24 Glasses Regional Towns Program, which was initiated in 2016 and resulted in the removal of all public health alerts on drinking water across Tasmania<sup>6</sup>. TasWater's recent Water Security Strategy 2023<sup>7</sup> is aimed at ensuring sufficient drinking water, fair and sustainable bills, resilient communities, and a healthy environment and actions from which are incorporated into the water sections of the regional masterplans discussed above. The intended water security outcomes are a response to challenges such as limited system capacity, climate change, population growth, high water loss, and near-full resource allocation.

The strategy is built on four pillars:

- **Define water security levels of service**, including a critical minimum of 100 l/person/day.
- **Plan and invest adaptively** to manage uncertainty in supply and demand.
- Engage and incentivise customers to **reduce demand** and defer costly upgrades.
- **Build capability** through improved planning and data management.

TasWater's implementation plan for the water security strategy focuses on short-term actions, with no milestones beyond June 2027. TasWater justifies this strategy as follows:

---

<sup>5</sup> Masterplans, Taswater, 2025. Available from: [Master Plans | Your Say](#)

<sup>6</sup> 'TasWater successfully completes historic 24 glasses', Tasmanian Times, 2018. Available from: [TasWater Successfully Completes Historic 24glasses – Regional Towns Water Supply Program - Tasmanian Times](#)

<sup>7</sup> 'Water Security Strategy', Taswater, 2023. Available from: [Publications | TasWater](#)



*To ensure we make prudent and efficient decisions in delivering this strategy, our implementation plan proposes in the near term on gathering necessary data, completing Regional Master Plans and engaging and educating customers.*

*Progress against the implementation plan will be reviewed and updated each year. We will also continue to monitor future trends and progressively update this strategy and our Regional Master Plans to adapt to changing circumstances.*

Therefore, actions related to the water security strategy should be reflected within the regional masterplans discussed above.

## 2.2 Cost estimation

Cost estimates play a key role in the development of an efficient capital program, both as an input to decision making and the overall level of prudent and efficient expenditure.

We asked TasWater to explain its approach to cost estimation at interview. Our understanding of the principal ways in which cost estimates are sourced are as follows:

1. Delivery partners: contractor estimates or contracted target outturn costs (TOCs) in some cases.
2. Costs curves: these are used for preliminary estimates such as masterplanning and are based on TasWater's own outturn cost data, brought to a common price base using the Australian Bureau of Statistics (ABS) construction index.
3. Consultant estimates: used for specialist items such as some of the elements of the water efficiency program and also as an independent check on contractor estimates.

TasWater is building up its project performance team, with two senior cost estimators being transferred back in-house from the Capital Delivery Office (CDO). We understand that cost estimation accuracy is reported quarterly to the Executive as a KPI albeit against agreed TOCs rather than early stage project cost estimates.

We understand that in putting its Submission together the business has gathered cost estimates together then applied CPI to the whole program. We note that this may mean that there is a double-counting of inflation where TOCs have already been agreed as these generally are in nominal terms, i.e. they include the Contractor's assessment of future inflation. We have made an adjustment for this as outlined in Section 4 below.

TasWater's general approach has been to agree TOCs with a 50/50 pain-gain share with a collar (cap) on the pain-gain borne by the contractor. We understand that the CDO has made an average 2% additional return due to TOC outperformance. With a 50/50 pain-gain share **this suggests to us, that on average, TOCs are 4% higher than outturn costs**. We consider it likely that this 'TOC pessimism' is due to the incentives built into the pain-gain mechanism. We have therefore applied a 2% reduction (i.e. TasWater's share) to estimates which are at or near TOC stage as set out in Section 4.

## 2.3 Cost treatment of ICT costs

In recent years there has been a shift towards ICT solutions being procured as cloud or software as a service (SaaS). This has led to ICT related costs increasingly being expensed (treated as opex) rather than capitalised because of accounting standard definitions of assets.



Where procurement has not yet started and there is not a clear preference for an on-premise or SaaS solutions, there can be ex-ante uncertainty as to the blend of capex and opex.

We have considered alternative cost treatment approaches for ICT costs to which this uncertainty might apply, as set out below. Given the relatively low materiality of this uncertainty on the scale of TasWater’s expenditure we consider that **there are benefits in the simplicity of applying a straightforward approach which does not require special treatment or administration**. We also consider that TasWater has not requested opex for interventions which it may then be able to capitalise, so there is limited room for a capex incentive.

**We have therefore adopted approach (2) and applied an assumption for the capex/opex mix of interventions.**

**Table 2-1 - Approaches to cost treatment of ICT costs**

	Approach	Advantages	Disadvantages
1	Full capitalisation: treat costs as capex ex-ante and ex-post	Some ICT spend is not standard opex e.g. new systems, upgrades. Their benefits may last more than one accounting period  Reduces incentive to ask for opex and spend as capex (“capex incentive”)	Does not align with statutory accounting  Definitions would be required for which costs will be treated as capex (for ex-post RAB roll forward)
2	Estimated opex / capex allocation using the standard approach	Consistent with other expenditure  Easy to administer	Optioneering not in place to know whether some costs will be opex or capex  “Capex incentive”- creates in-period incentives to invest in capex-able spend (underspend opex allowance whilst creating RAB)
3	Adopt fixed capex/opex proportions ex-ante and apply them ex-post.	Hopefully closer to likely statutory accounting treatment than (1) or (4)  Simple to administer  Removes capex bias incentives Dilutes importance of definitions	Hard to know what the “right” proportion is.  Needs a clear definition of what spend is illegible.
4	Treat as opex (zero capex allowance ex-ante or ex-post)	Move to SaaS and change to accounting standards increases opex element.	Some of the solutions may be capex.  Need definitions (e.g. which hardware is excluded)

Source: AtkinsRéalis analysis



## 2.4 Capital Delivery Office Transition

In 2019, TasWater established a Capital Delivery Office (CDO), as an alliance style contracting model. The establishment of the CDO was driven by the perception that TasWater was not effective at delivering capital projects and there was a need to entice Tier 1 contractors into the Tasmanian market. TasWater noted during interviews that prior to the establishment of the CDO they were only able to effectively deliver approximately \$100M in capex per annum, whereas in FY25 the CDO is forecast to deliver \$240M of the planned \$372M capital program. The CDO has been awarded approximately \$1.1Bn in projects since its commencement.

Throughout the operation of the CDO, due to the fact that this structure includes both TasWater resources and contractor resources, TasWater believes there has been significant upskilling of the internal workforce in relation to capital delivery capability. As such TasWater have begun a transition away from the CDO, bringing more of the capital delivery program in-house, with lower complexity works moved out of the CDO as early as 2020. Renewals have also been removed from the CDO. TasWater noted during interview that as of June 2025 the CDO has ended (with regards to new projects) and will wind-up over the course of the next two years. The amount of capex delivered under the CDO will therefore tail off from now until June 2027, whilst the CDO is delivering its final major projects (a significant portion of which is the Selfs Point Sewer Transformation project).

The CDO is being replaced by the Future Delivery Model, which includes the following frameworks:

**Table 2-2 - TasWater's Future Delivery Model frameworks**

Framework	Progress comments	Contract Execution	Contract Model	Contractor/Partner
<b>Linear Renewals</b>	Start Date: 1 <sup>st</sup> February 2024 End Date: 31 <sup>st</sup> January 2029	Completed	TasWater Bespoke	Primary Delivery Partners are: - MMS Tas Civil Pty Ltd (South) – PDP1 - Water Industry Solutions Pty Ltd (South) – PDP2 - Paneltec Pty Ltd (North) – PDP3 Overflow Delivery Partners are: - Shaw Contracting (Aus) Pty Ltd (Statewide)–ODP1 - Paul Zanetto Pty Ltd – (North)–ODP2
<b>SCADA Electrical &amp; OT</b>	Start: 9 <sup>th</sup> September 2024 End Date: 9 <sup>th</sup> September 2029 (subject to 2 + 2 year options to extend)	Completed	TasWater Bespoke	SAGE Automation Pty Ltd
<b>Engineering Planning &amp; Design</b>	Start: 1 <sup>st</sup> September 2025 End Date: 1 <sup>st</sup> September 2030 (plus 5 year option)	Completed	NEC4 – Professional Services Contract	Partner: GHD Pty Ltd. Panel: Pitt & Sherry, JMG, IPD, and GANDEN



Framework	Progress comments	Contract Execution	Contract Model	Contractor/Partner
<b>Metering</b>	RFT in market	September 2025	TasWater Bespoke	TBA
<b>Plant and Station Refurbishment Program</b>	RFT in Approvals	Completed	TasWater Bespoke	Pensar, Gradco, Netco
<b>Medium Projects</b>	In development	December 2025	NEC4 – Engineering and Construction Contract	TBA
<b>Major Projects</b>	In development	2026	NEC4 – Engineering and Construction Contract	TBA

Source: TasWater presentation on the CDO transition

TasWater has developed this structure following market sounding and benchmarking analysis across the industry. By bringing the capital delivery function in-house via these frameworks, TasWater believes it will gain efficiencies through removal of duplicate roles that are held by TasWater staff and CDO partner staff. The ability of the CDO and key TasWater project delivery resources to successfully delivery capital projects has given TasWater the confidence to bring the program in-house.

Having reviewed the ability of TasWater to deliver capital projects and having been presented with the analysis that has informed TasWater’s decision to move from the CDO to the Future Delivery Model, our view is that the change appears reasonable. There is a risk that moving back to an in-house model will result in TasWater losing capital delivery whilst the new arrangements bed in. However, we understand the justification and the potential efficiencies that may be gained via the change. Based on the information provided, we have not applied any top-down adjustments to reflect constraints on TasWater’s capacity to deliver the overall scale of the proposed PSP5 capex program.



# 3. Review of PSP4 capex

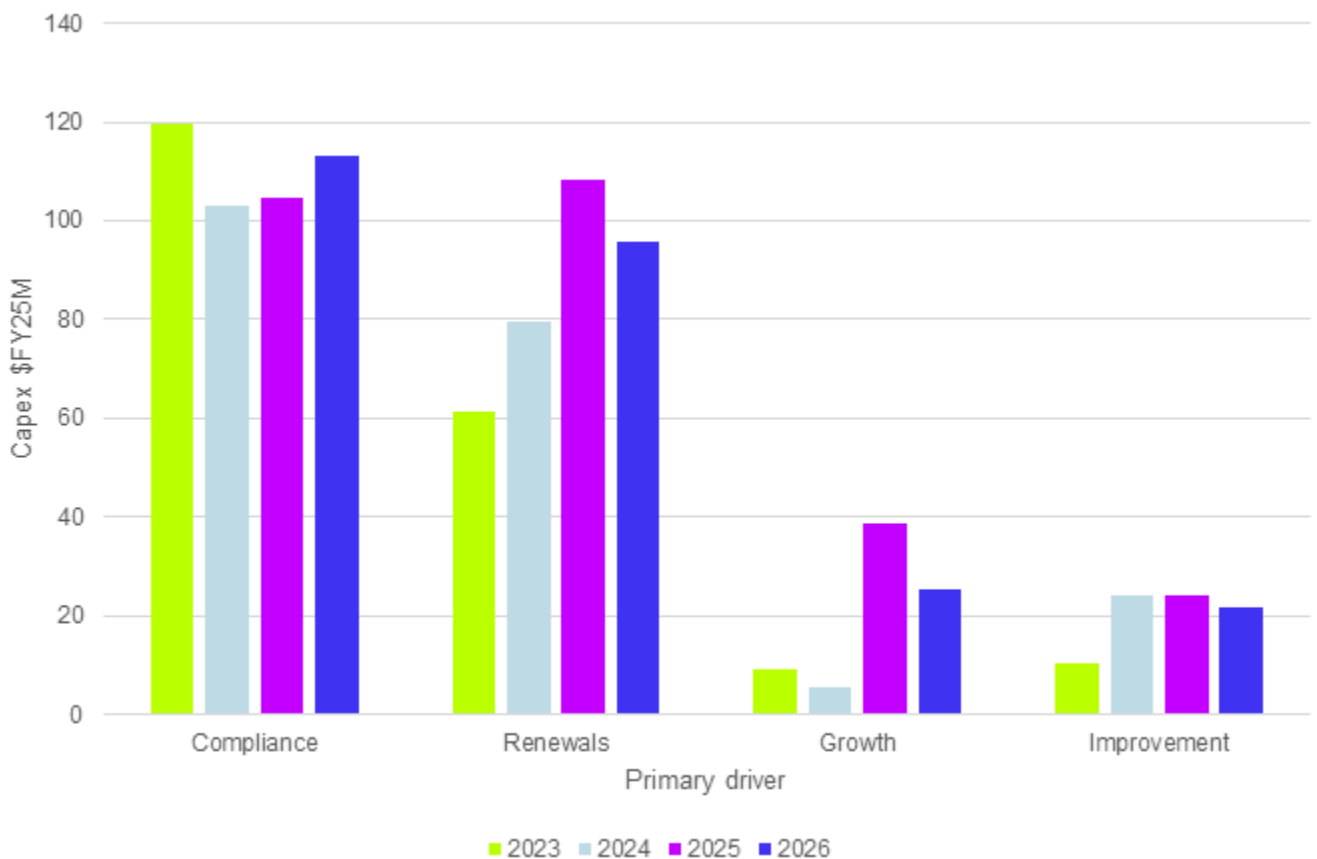
This section considers the prudence and efficiency of capex in the PSP4 period i.e. from 1 July 2022 to 30 June 2026 or FY23 to FY26.

## 3.1 Spend in PSP4

Based on its September 2025 resubmission (i.e. with FY25 actuals), TasWater expects to have spent \$937M in the PSP4 period compared to an allowance of \$862M. Both of these figures are in nominal terms. When converted to 'real' \$FY25M terms, TasWater expects to have spent \$945M, equivalent to \$72M (8%) higher than the allowance of \$873M.

At \$441M (in \$FY25M), almost half (47%) of TasWater's expected PSP4 spend is classified as Compliance, with renewals being the next largest driver at \$345M (\$FY25M) or 37% of capex. Renewals have been on a generally increasing trend albeit expected to be lower in FY26 than the high level seen in FY25.

Figure 3-1 - PSP4 spend by driver

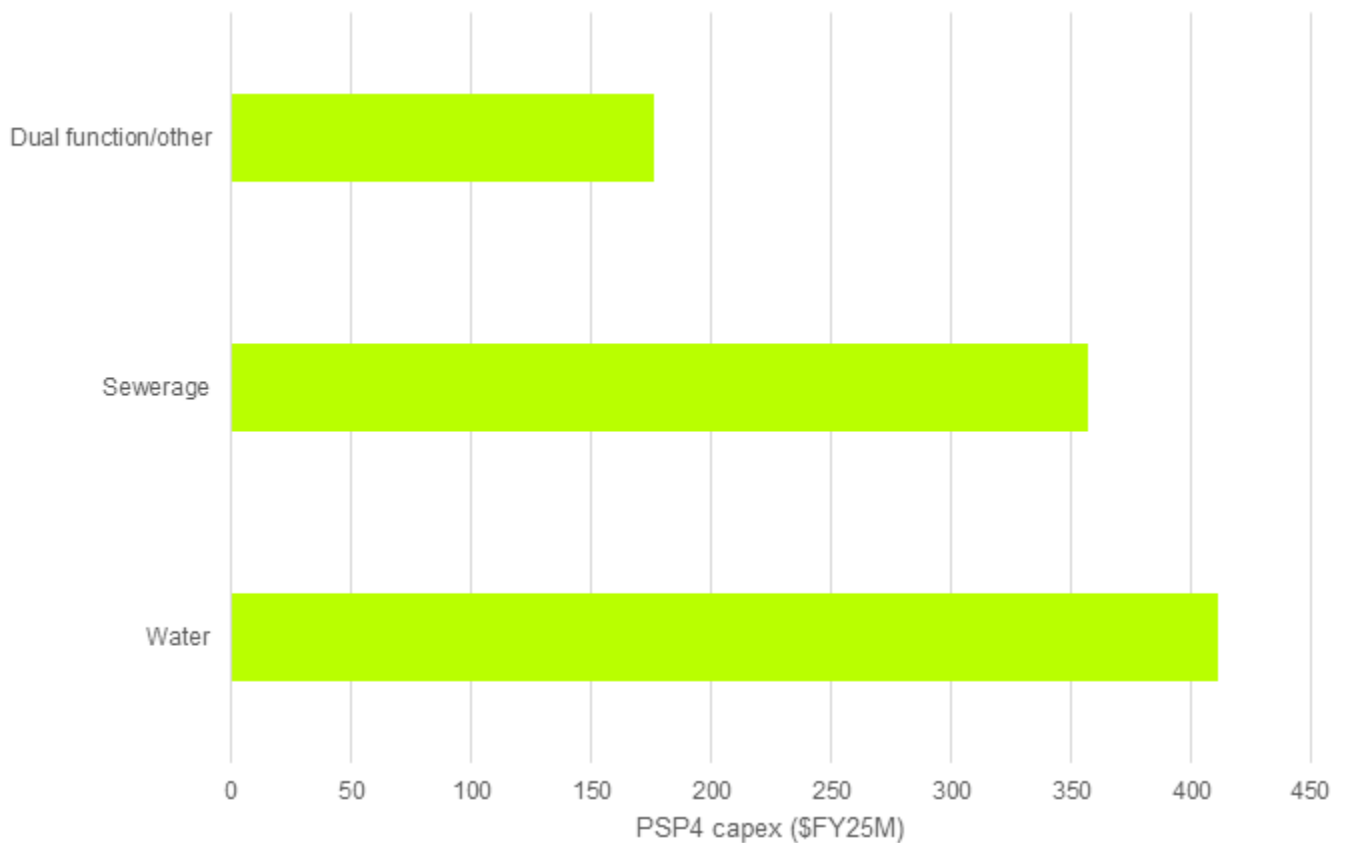


Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025".

Spend is expected to be reasonably evenly spread between water (44%) and sewerage (38%) with a reasonably large proportion of dual function/other spend (19%).



Figure 3-2 - PSP4 capex by service



Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025".

We comment below on the drivers for the variance followed by a review of a sample of significant projects/programs delivered in PSP4.

### 3.2 Variance from the allowance

We have examined the variance in PSP4 by driver and service. We have based the allowance by driver and service on TasWater’s Final PSP4 plan<sup>8</sup> pro-rated to match the regulator’s PSP4 capex allowance. We present the analysis in ‘real’ \$FY25M terms to enable a like-for-like comparison of variance over time.

<sup>8</sup> Table 5.2 of TasWater’s final PSP4 document sets out its view of PSP4 capex by cost driver



**Table 3-1 - PSP4 variance by service and driver (\$FY25M)**

	2023	2024	2025	2026 (f)	Total	% variance
<b>By driver</b>						
<b>Compliance</b>	-19	3	-1	-31	-48	-10%
<b>Renewals</b>	16	32	63	51	161	88%
<b>Growth</b>	-16	-32	6	18	-24	-24%
<b>Improvement</b>	-8	-16	-8	15	-17	-18%
<b>By service</b>						
<b>Water</b>	-10	-29	23	-21	-38	-8%
<b>Sewerage</b>	-20	9	23	57	70	24%
<b>Dual function/other</b>	2	6	14	17	40	29%
<b>TOTAL</b>	-28	-14	60	53	72	8%

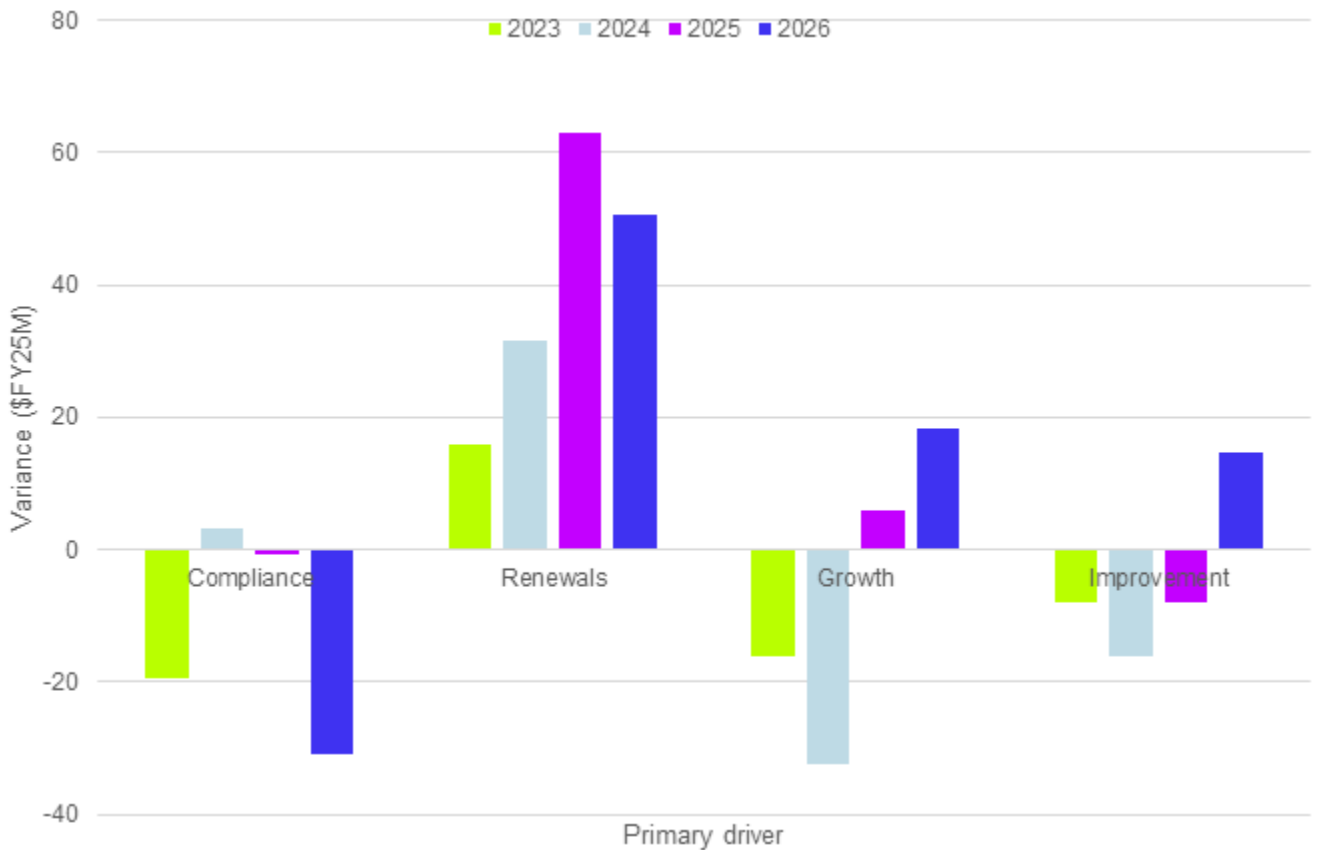
Source: Analysis of Final PSP4 document and TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025". Note that FY25 (actuals) and FY26 reforecast expenditure has not been provided by driver so the variance between the September update and June 2025 (with driver) forecast has been assumed to be due to Selfs Point which is coded as a Growth project.

This analysis, also presented visually below, suggests that:

- there has been significant overspend in renewals counterbalanced by lower spend than the allowance for other drivers
- the overspend has been focused on the sewerage service but also the dual function/other area.



Figure 3-3 - PSP4 variance by primary driver (\$FY25M)



Source: Analysis of Final PSP4 document and TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025".

In its PSP5 spreadsheet, TasWater has provided an explanation for projects/programs with increased expenditure which we reproduce below.

Table 3-2 – TasWater explanations for PSP4 expenditure increases (\$M nominal)

Description	PSP4 Approved	PSP4 Actual	Variance PSP4 actual v approved	TasWater comment
Water main renewal program	11.6	60.9	49.3	Increased water main renewal to address end of life / water quality issues
Selfs Point Transformation/ Macquarie Point STP <sup>9</sup> relocation	60.0	109.3	49.3	Expanded government commitment

<sup>9</sup> Sewage Treatment Plant



Description	PSP4 Approved	PSP4 Actual	Variance PSP4 actual v approved	TasWater comment
<b>Bryn Estyn WTP<sup>10</sup> major upgrade/ replacement</b>	56.9	76.1	19.2	Increased expenditure in PSP4 - forecast to be delivered below budget
<b>Sewer main renewals</b>	8.5	21.7	13.2	Increased renewals to address end of life assets and guarantee ongoing service
<b>PDG<sup>11</sup> overheads for minor projects</b>	0.0	12.3	12.3	<i>No comment provided</i>
<b>Orford Sewage Pump Stations Upgrade Project</b>	5.8	13.7	7.9	Increased expenditure in PSP4 to achieve environmental outcomes – forecast to be delivered below budget
<b>Non-Revenue Water Reduction Program</b>	0.0	7.4	7.4	New program to reduce non-revenue water
<b>Ulverstone STP upgrade</b>	10.9	16.9	6.0	Increased expenditure in PSP4 to achieve environmental outcomes — forecast to be delivered below budget
<b>Penna Recycled Water Scheme Expansion</b>	0.0	5.4	5.4	Expansion of the Recycled water scheme allowed full discharge/ storage to be obtained preventing discharge into Pittwater from the Midway Point and Sorell STPs
<b>Dover STP Outfall Replacement and Extension</b>	0.0	4.4	4.4	Dover outfall is considered at end of life with multiple failures in the intertidal zone. The replacement also extended outfall to improve the mixing point.
<b>Green Point STP – Biosolids Treatment and Handling Upgrade</b>	0.0	4.3	4.3	Condition reporting indicated significant degradation of existing digester with increased scope ensuring operation.
<b>Minor projects program</b>	6.9	11.2	4.3	<i>No comment provided</i>
<b>Tamar (kanamaluka) Estuary River Health Action Plan</b>	31.4	35.5	4.1	Increased expenditure in PSP4 to achieve environmental

<sup>10</sup> Water Treatment Plant

<sup>11</sup> Project Delivery Group (PDG)



Description	PSP4 Approved	PSP4 Actual	Variance PSP4 actual v approved	TasWater comment
				outcomes – forecast to be delivered below budget
<b>Beauty Point - Re-use Property Gypsy Hill</b>	0.0	3.5	3.5	Acquisition of Re-use Water Disposal Property
<b>Pioneer Water Supply</b>	3.1	5.0	1.9	Reintroduction of treated water supply for the community of Pioneer
<b>Total</b>	195.1	387.6	175.9	<i>Total added by AtkinsRéalis</i>

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" tab named "DB\_Sup\_D".

TasWater also provided some explanation of the variance in a session we requested called "2022-2026 regulatory determination (PSP4): expenditure variances and reasons". It highlighted variance in spend on four projects/programs:

**Table 3-3 – TasWater explanations for PSP4 variance (\$M nominal)**

Project/program	Proposed in PSP4	TasWater reported progress	TasWater comment on expenditure	Our comment
<b>Bryn Estyn WTP</b>	\$56.9M	Delivered in 2023 for total cost of \$243.9M	\$76.1M in PSP4	Classified as Compliance in the PSP5 spreadsheet
<b>Tamar Estuary River Health Action Plan (TERHAP)</b>	\$31.4M	In final stage of delivery. Jointly funded	\$35.5M funded by TasWater	\$14.4M included as Growth spend in FY25 and FY26. Hard to see spend in prior years clearly.
<b>Selfs Point including Macquarie Point relocation</b>	\$60M		\$156M funded by TasWater of which \$109.3M in PSP5	Classified as Growth in the PSP5 spreadsheet
<b>North-West Water Supply Strategy</b>	\$76.2M	Currently developing the business case	\$4.6M funded by TasWater	"NWWs other project" is classified as "Compliance" in the Long Term CWP

Source: TasWater presentation "Introduction"

Based on these explanations for variance and a review of the largest projects envisaged in the final PSP4 document we note the following:



- The largest increase in non-externally funded expenditure relates to water main renewals which is more than five times the PSP4 allowance. In a similar vein sewer main renewals spend was more than 2.5 times the PSP4 allowance. We comment on both projects further below.
- Selfs Point has exceeded expected expenditure but is largely externally funded. We comment on this and on Bryn Estyn further below.
- Delivery of a number of schemes proposed by TasWater at PSP4 appears to have been deferred including:
  - North-West Water Supply Strategy (\$4.6M spent instead of \$76.2M, only \$5.8M included in PSP5)
  - Ridgeway Dam upgrade (assumed to be \$51.6M at PSP4, now \$144M proposed for PSP5 as Compliance).

We comment on the dam safety schemes in the PSP5 section below.

**This analysis suggests that expenditure in PSP4 has shifted to delivering higher renewals spend than expected at PSP4 (\$161M higher than the allowance) partly by overspending the allowance (by \$72M) but also by deferring non-renewal schemes, especially compliance schemes (\$48M lower than the allowance) such as the North-West Water Supply Strategy and the Ridgeway Dam upgrade.**

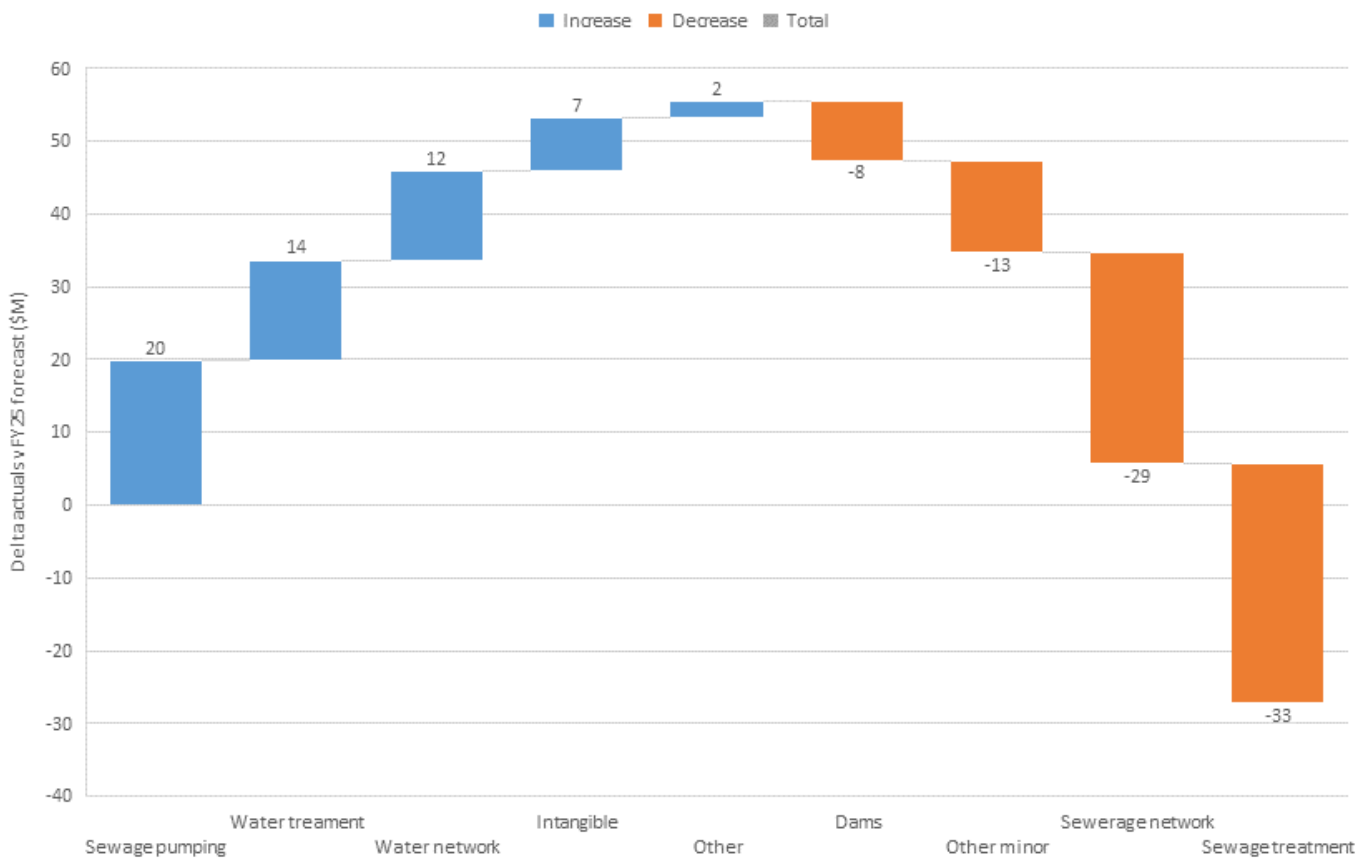
### 3.3 Spend in FY25 and FY26

In its initial PSP5 submission, TasWater forecast capex of \$303M in FY25 and \$243M in FY26 (both nominal). In September 2025, TasWater provided details of its actual spend in FY25 and updated its forecast for FY26.

Actual spend in FY25 was \$276M i.e. \$27M or 9% below the forecast. This is made up of a number of variances at asset type level, especially related to sewage treatment, sewerage network ('pipes') and pumping and water treatment as can be seen below.



**Figure 3-4 - Difference between FY25 actuals and forecast total expenditure**



Source: TasWater’s analysis presented in spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025” tab named “Actuals\_FY25”. Note that we have amended the coding error for Selfs Point which was classified as “TREATWATER” in TasWater’s analysis

Approximately \$23M of the lower spend in sewage treatment relates to lower spend on Selfs Point, with a further \$9M underspend on the Bicheno STP and Recycled Water Scheme, which has now been deferred as discussed below.

The apparent overspend in sewage pumping and underspend in sewerage network appears to largely be a difference in coding of the \$16M TERHAP spend which is treated as sewage pumping in the actuals but was classified as sewerage network (‘pipes’) in the FY25 forecast. Spend on TERHAP also appears to be \$9M lower than forecast contributing further to the underspend against forecast for sewerage network.

The higher spend on water treatment relates mainly to the “Regional Towns Stage 4 - WTP’s - St Marys- Bothwell- Tullah- Oatlands- Yolla- Ellendale- Dover” project which saw spend of \$13M compared to expected spend of less than \$1M.

For FY26, the business has updated its previous (June 2025) forecast of \$243M by assuming that \$21M of spend on Selfs Point which it originally expected to happen in FY25 now occurs in FY26. This results in an adjusted forecast capex of \$264M (nominal).



The main deltas at a project level between the original FY25 and FY26 forecast were:

- Increased spend on Prospect Vale (+\$22M) and Pet Dam safety upgrade (+\$14M). These represent the ramp-up of schemes which are expected to be completed in the first two years of PSP5 and which we review in the PSP5 section below.
- Reduced spend on Sells Point (-\$39M, now partially reversed by the \$21M deferral), TERHAP (-\$26M) and Bicheno STP and recycled water scheme (-\$11M), noting that this project has now been deferred.

We now present a review of a sample of PSP4 projects and programs. These have been selected in an attempt to ensure representation across TasWater's primary investment drivers and project/asset categories.

## 3.4 Project/program reviews

We comment on the projects and programs by primary driver below.

### 3.4.1 Growth

#### 3.4.1.1 Whitemark raw water storage upgrade - Hendersons Dam Rising

The Henderson Dam Upgrade project aimed to improve water security for Whitemark, a small town on Flinders Island, which was identified as having insufficient storage capacity during extended dry periods. A new Water Treatment Plant (WTP) at Whitemark was commissioned in 2016 to improve water quality and enable removal of a 'Do Not Consume' notice, which placed further demand pressure on Hendersons Dam. During early 2017, a long period of dry weather resulted in the implementation of Stage 2 water restrictions<sup>12</sup> and mitigation activities to maintain supply. Investigations to upgrade Hendersons Dam identified that whilst not a significant safety risk, the existing dam suffered from structural deficiencies, including a leaking outlet pipe and failing spillway sections, making it non-compliant with the *Water Management Act 1999*. The primary driver for the project was assigned by TasWater as Growth, with Compliance as a secondary driver.

Five strategic options were investigated to augment raw water storage, all of which included an upgrade of Hendersons Dam due to the safety issues identified. The preferred option was to raise Hendersons Dam by 2m to provide an additional 45 Ml storage, as well as undertaking safety upgrades, as this option was estimated to have the lowest Net Present Value (NPV) (-\$1.4M) and capex and to provide efficiencies in addressing both the augmentation and safety requirements simultaneously. A re-assessment of the strategic options was undertaken in 2018 due to it becoming apparent during detailed design that the required dam safety improvements were more substantial than anticipated. This resulted in a significant increase to all option costs by c.\$5M; however, the dam raising option remained as the lowest NPV (-\$7.0M).

At detailed business case stage, five alternative approaches to increasing dam storage in combination with the required safety upgrades were assessed. These included raising the existing spillway weir and chute wall, constructing a new spillway with chute wall, and a 'do nothing' option. The option selected was to upgrade the dam, increase its capacity and rebuild the spillway in its current location. This was approved by the Board in November 2018 with an estimated capex of \$6.8M inclusive of 20% contingency. In December 2019, the TasWater Board approved a project budget of \$11.7M, including a total TOC of \$8.8M.

---

<sup>12</sup> Includes specific requirements for garden and sporting ground watering, vehicle and washing, pool and spa refilling/topping up, and washing of concrete and other hard surfaces: [Water restriction guidelines | TasWater](#)



During construction in early 2021, however, the condition of the dam was found to be significantly worse than predicted. In March 2021 the Board approved a request for a contingency of \$2.5M to be added to the existing budget until the revised costs were available, a change to the TOC to a Project Budget Estimate and a CDO contract change for the subcontractor to a cost reimbursable model. In May 2021, the Board approved a further request to formally increase the budget by \$3.01M, resulting in a revised total budget of \$17.2M, including the \$2.5M already approved in March 2021. This request was made because it was identified that the dam needed to be re-built with a larger footprint, rather than upgraded, and had been reassessed as requiring an additional level of flood protection due to a higher failure consequence category. During the project interviews TasWater reported that this was the only project delivered under the CDO for which approval for additional funding had to be requested from the Board.

At this point a review was undertaken of the selected option against a second new strategic option, comprising discontinuance of the project, decommissioning of the dam and WTP and installation of a new desalination plant. This had an estimated NPV of -\$27.9M and was therefore considered a less efficient solution.

Construction started in 2020 and was completed in early 2022, with majority of costs in PSP3. There was a small amount of remaining expenditure in early PSP4 (\$0.6M). The total project cost has been reported by TasWater as \$17.2M. Limited information has been provided on the final scope and specification delivered; however, we understand that this includes a full rebuild of Hendersons dam.

The project was delivered under the CDO and the dam works were competitively tendered, with Gradco Pty Ltd securing the subcontract.

The outturn cost of this project exceeded the Board-approved budget by \$5.4M, primarily due to significant scope increases arising from the dam's condition being far worse than originally anticipated. In our experience, such overruns are relatively common for dam projects of all sizes. Given the proportion of capex that was spent to address dam safety, in our view this should be re-considered as a Compliance-driven project.

The original driver for the project was Growth - specifically, improving water security for the town and reducing the frequency of water restrictions during dry periods. While TasWater has demonstrated the prudence of expenditure to improve water security and has reported that the augmentation has delivered water security benefits, we note that the town experienced water restrictions again this year. This outcome is non-compliant with TasWater's stated levels of service during the interviews of restrictions no more than once every 10 years. TasWater attributed this during the interview to climate change impacts not being fully considered in the original assessment of need. Furthermore, TasWater has not provided information on the growth horizon that the current level of supply and the augmentation delivered is expected to meet. As a result, it is unclear whether the strategic options assessment reflected a long-term view or whether additional water supply will be required during PSP6, raising questions about whether the chosen option represents the most efficient long-term expenditure. TasWater has not provided an evaluation report or any information relating to the evaluation of benefits for this project.

However, given that:

- the majority of costs relate to dam safety compliance, which is generally prudent;
- most expenditure occurred during PSP3, which is outside the scope of this review; and
- TasWater has not requested funding to further improve water security on Flinders Island during PSP5,

we have not recommended an ex-post capex adjustment for this project.



**Table 3-4 - Hendersons Dam Rising PSP4 allowance, expenditure, variance and adjustment (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
PSP4 proposed capex	-	-	-	-	-
PSP4 recommended capex	-	-	-	-	-
Outturn cost	0.5	0.1	0.0	0.0	0.6
Variance	-	-	-	-	-
Recommended capex	0.5	0.1	0.0	0.0	0.6
Recommended capex adjustment	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025". Hendersons Dam Rising was not included in the project sample during the PSP4 investigation.

## 3.4.2 Renewals

### 3.4.2.1 Water Main Renewals

The business has 6,708 km of water mains, of which 5,513 km are reticulation and 1,195 km classified as trunk/distribution mains<sup>13</sup>.

TasWater describes<sup>14</sup> the drivers for water main renewals as "... the renewal of existing infrastructure." It describes the current criteria to trigger a renewal as:

- 4 Failures in a rolling 12-month period
- 8 Failures in a rolling 5-year period
- 6 Water quality discoloration incidents per 1,000 connections

It is expecting to spend \$75M compared to its initial PSP4 assumption of \$16M and explains that the increase is "to address end of life / water quality issues".

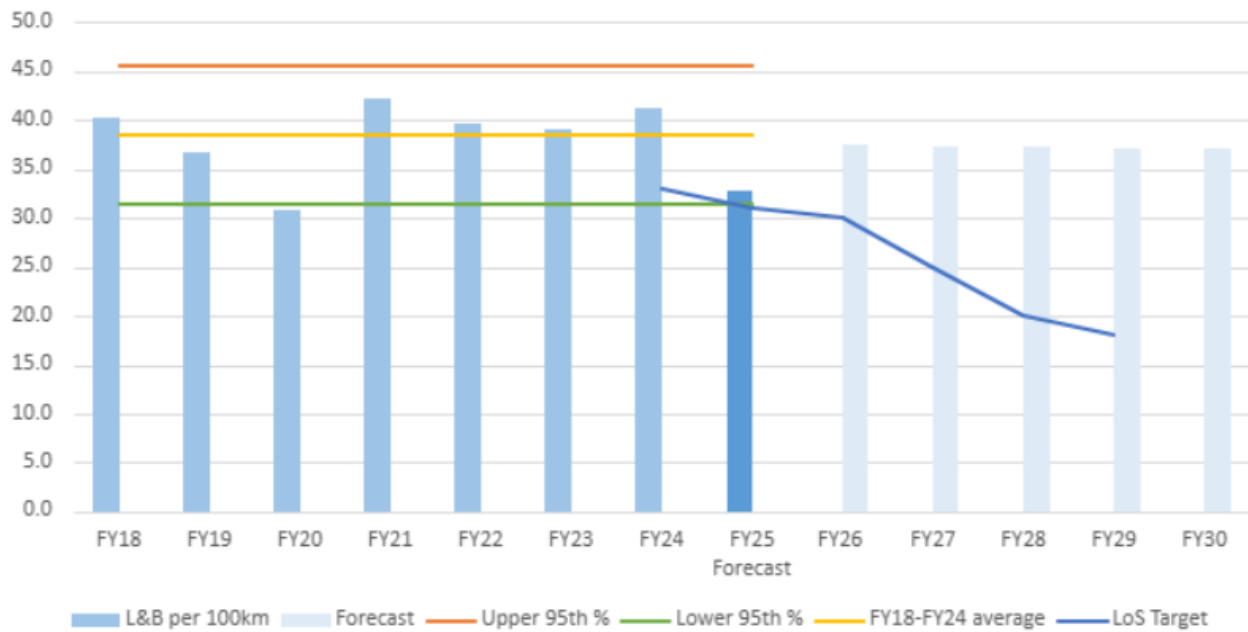
We asked for supporting evidence for us to be able to see the worsening risk to justify historical spend significantly higher than the allowance (and to set the scene for proposed future spend, discussed in the PSP5 section below). The data provided back to us in graphical form is reproduced below.

<sup>13</sup> Based on TasWater presentation of water efficiency and water mains renewals 7 November 2025

<sup>14</sup> TasWater document "Att. D. 34 - PSP5 Major Program Summary - Water Main Renewals Program"



**Figure 3-5 – Water main leaks and breaks**



Source: TasWater document “RFI - From 06-10-2025 - Capex Investigations - Action List”

At interview the team was not confident in the lengths of main replaced but estimated that it had replaced 5 km in FY24 and 20 km in FY25.

The mains renewals are delivered by the project delivery group (PDG) through a panel framework.

We understand that some of the renewals have been undertaken as a result of water quality and pressure issues. This includes renewal of approximately 6 km of galvanised and cast iron mains in Queenstown.

However, the evidence provided to support expenditure being significantly higher than the allowance relates to leak and break trends as can be seen in the figure above and these data provided are **not strongly supportive of a worsening trend**.

We also note that leaks and bursts are not a measure of customer outcomes or impacts. Some breaks may have significant effects and cause interruptions to customers, whereas others have limited effects because of network configuration for example.

We also note that the business was not able to demonstrate that it had considered alternatives to renewals such as scraping and lining and implementation of calm networks to reduce burst rates.

Our conclusion is that **whilst the justification for such a significant ramp up in mains renewals spend has not been clearly set out, and it is not clear that more cost-effective measures have been considered, there is not sufficient evidence for us to determine that the investment is not prudent or that it is inefficient**. Whilst we have concerns about the effectiveness of these renewals, we have not therefore recommended an ex-post adjustment to expenditure.



**Table 3-5 – Water mains renewal PSP4 allowance, expenditure, variance and adjustment (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
<b>PSP4 proposed capex</b>	3.4	3.8	3.6	5.5	16.4
<b>PSP4 recommended capex</b>	3.4	3.8	3.6	5.5	16.4
<b>Outturn cost</b>	7.3	14.9	30.7	22.0	74.9
<b>Variance</b>	3.9	11.1	27.0	16.5	58.5
<b>Recommended capex</b>	7.3	14.9	30.7	22.0	74.9
<b>Recommended capex adjustment</b>	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025 and CCGUS (2022) Final Report

### 3.4.2.2 Non-network Other – Fleet

TasWater owns and manages a current fleet of 750 vehicles. These vehicles are needed to enable TasWater staff to deliver water and sewerage services across Tasmania. Due to the remote nature of many of TasWater’s operational sites, many operational staff are provided with their own take-home vehicle, rather than using pooled vehicles. However, TasWater also has a number of pool vehicles for use by staff.

TasWater’s fleet replacement program encompasses the regular replacement of TasWater fleet vehicles due to:

- specific operational need, e.g. the need for specific vehicle types;
- changes to relevant legislation and standards to maintain compliance and safety;
- and/or vehicle age/mileage and associated increases in maintenance costs.

TasWater’s current fleet management model is a full ownership model, which has remained unchanged throughout PSP4. TasWater advised that the CDO also previously had approximately 18 leased vehicles, which have now been added to the TasWater fleet and their replacement will therefore incur capital expenditure. TasWater is proposing to continue using a full ownership model during PSP5.

TasWater’s fleet renewal program was reviewed during the PSP4 investigation. The reviewers were unable to establish an efficient level of expenditure due to lack of information, particularly given that a strategic review of fleet expenditure undertaken in 2017 recommended a lower level of expenditure than that proposed by TasWater for PSP4. The review team therefore recommended an adjustment to the proposed capex to align with the recommendations of the 2017 strategic review.

TasWater provided the following breakdown of its current fleet (FY26):

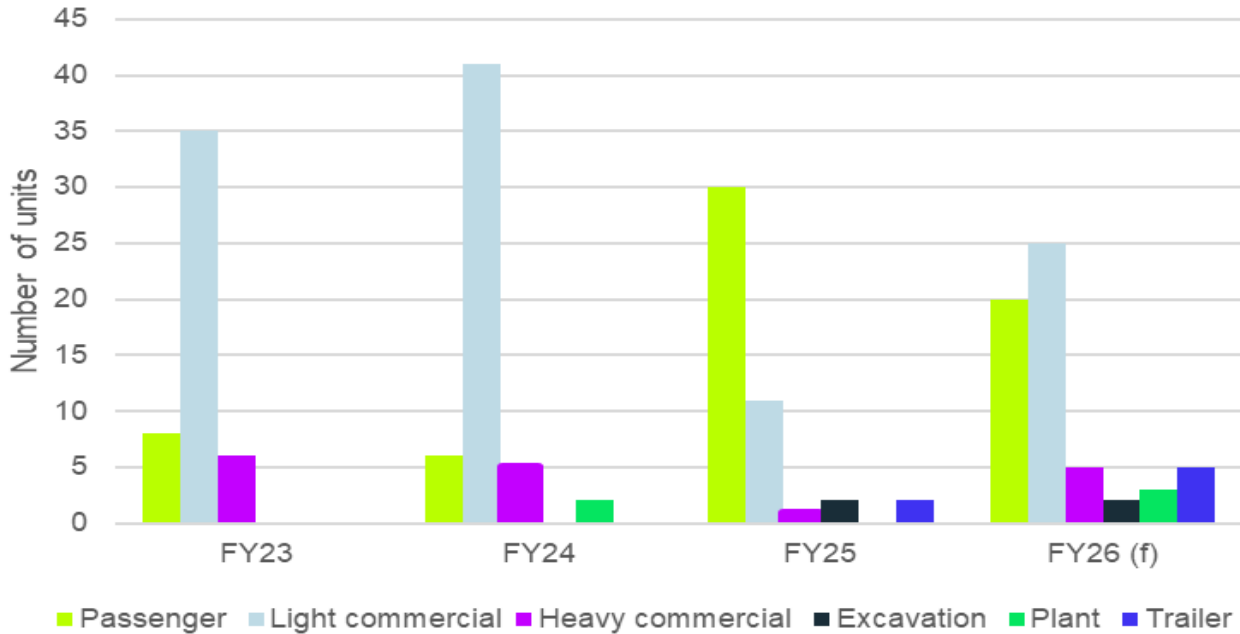
- Passenger - 76
- Light commercial - 283
- Heavy commercial - 82
- Excavation - 75
- Plant - 102



- Trailer – 134
- **Total – 752 units**

TasWater also provided a breakdown of its fleet purchases during PSP4 (see Figure 3-5). This shows that during FY23, FY24 and FY25 TasWater purchased 149 vehicle units in total, an average of 50 per year. Light commercial vehicles dominated fleet purchases in FY23 and FY24, whereas during FY25 the majority of purchases were passenger vehicles. During FY26 TasWater is forecasting a 30% increase in fleet vehicle purchases (60 units) compared to FY25, dominated by passenger (30 units) and light commercial (25 units) vehicles.

**Figure 3-6 - Fleet units purchased by TasWater during PSP4**



Source: Analysis of TasWater spreadsheet “RFI - From 06-10-2025 - Questions 33 & 34 - PSP5 Capex Investigations.2 - fleet\_”

TasWater has developed a Fleet Management Guideline document, the most recent version of which is dated September 2024. This sets out the details and protocols of TasWater’s fleet management approach, including relevant standards for fleet vehicles, usage guidelines and default renewals periods for vehicles.

Fleet purchasing and disposal is currently managed in house by TasWater’s Fleet Team, although operational expenses (including fuel, maintenance, tyres, windscreens and roadside assist) are managed by an external company, LeasePlan.

TasWater’s outturn cost for PSP4 was \$13.7M, an increase of \$3.2M from the recommended expenditure at PSP4; however, slightly below TasWater’s proposed expenditure. During the interviews TasWater explained the high spend in FY24 compared to prior years as the continuation of effects from COVID-era purchasing, including delayed vehicle deliveries, “a diverse fleet and ad hoc procurement decisions”. FY25’s lower expenditure and level of vehicle purchases was explained by a reduced fleet replacement rate, which did not comply with TasWater’s fleet guidelines and has now been addressed, resulting in an increase in FY26.



TasWater has demonstrated the prudence of its fleet renewal program in general. TasWater has not, however, provided information to explain the variance between the recommended expenditure at PSP4 and outturn costs. We have therefore been unable to fully establish the efficiency of TasWater’s PSP4 expenditure on fleet renewals. We note that outturn expenditure is aligned with the level proposed at PSP4. Given this, we have not recommended an adjustment for PSP4. There are also a number of planned improvements to fleet management which are further discussed in Section 4.4.4.3.

**Table 3-6 - Fleet renewal PSP4 allowance, expenditure, variance and adjustment (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
PSP4 proposed capex	3.6	3.8	3.4	3.7	14.5
PSP4 recommended capex	2.6	2.8	2.4	2.7	10.5
Outturn cost	3.3	4.7	2.4	3.3	13.7
Variance	0.7	1.9	0.0	0.6	3.2
Recommended capex	3.3	4.7	2.4	3.3	13.7
Recommended capex adjustment	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025” and CCGUS (2022) Final Report

### 3.4.2.3 Sewage Treatment Plant Renewals

Taswater has 110 operational STP assets, comprising 4,657 unit level assets.

TasWater’s ongoing STP renewal program is designed to ensure sewerage service reliability, continuity and compliance by renewing critical STP assets. An Asset Class Management Plan for STP Assets was developed in early 2021 and sets out the asset management objectives, in addition to the state of STP assets and renewals expenditure scenarios. We note that it is a static document and was due for major revision in Q1 2024; however, this revision does not appear to have taken place.

During the project interviews TasWater explained that the company is on a continuous program to assess asset health and understand risk of asset failure, the main consequences of which are environmental spills and odour.

During PSP4 TasWater’s STP renewals program has included a desk-based condition assessment of each asset, which is confirmed via asset inspections, currently prioritised based on risk. Along with reactive works, this has been used to determine the solution need for assets deemed highest risk. All asset information is currently held in the asset management software Maximo.

A new asset-wide asset health assessment framework has recently been developed and implemented during early FY26. This is aimed at systematically identifying the most appropriate solutions for asset health issues more systematically, including both reactive and proactive renewals and maintenance. While the process itself is not entirely new, TasWater reported that it is now being applied more consistently across the business. This approach is considered to deliver significant benefits, including cross-business investigations and improved efficiency by addressing multiple asset issues collectively. It reduces the need for repeated site visits, promotes consistency, and enables more effective use of investment by breaking down silos. This approach is enabling TasWater to build its future investment program from the ground up, so will be used during PSP5.

As part of this approach, TasWater aims to have completed an inspection of all STP assets within the next two years to obtain better visibility of the forward program.



TasWater’s STP renewals program was reviewed during the PSP4 investigation. The reviewers found that TasWater’s capital expenditure on STP renewals had **declined over the course of PSP3**, from a peak of \$7.6M per year in 2019-20 to \$2.5M per year in 2021-22, with an average of **\$4.6M per year**. TasWater’s proposed expenditure during PSP4 was \$10.6M across four years, with an average of \$2.7M per year. The reviewers noted that the proposed budget and scope of works was significantly lower than delivered during PSP3 and furthermore, was five times lower than the scenarios developed in the STP Asset Class Management Plan, indicating that the proposed scope was too low. It was noted, however, that TasWater’s view was that service level performance would not be affected by this lower spend. The review team therefore did not recommend any adjustments to the proposed PSP4 expenditure.

Our own analysis of PSP4 capital expenditure on STP renewals indicates a significantly higher outturn expenditure than the proposed level, suggesting that the amount proposed by TasWater for PSP4 was indeed too low. Based on analysis of TasWater’s capital expenditure spreadsheet, capital expenditure during PSP4 (including forecast value for FY26) was **\$33.5M**, or **\$8.4M per year** on average, compared to the \$10.6M proposed over the period, **a total increase of \$22.8M**. Expenditure peaked in 2024 at \$11.9M, declining to \$3.9M in 2025. When asked to provide an explanation for this variance compared to the proposed budget TasWater provided the following response:

*Spend during PSP4 has been above allowance as the business allocated additional funding for STP renewals to address identified extreme and high-risk defects within STPs.*

The PSP4 renewals program was removed from the CDO early during PSP4 and is delivered via the Plant and Station Refurbishment framework, which includes around three suppliers.

**TasWater has been unable to provide any detail on or adequate explanation of its expenditure during PSP4 under the STP renewals program** and we have therefore been unable to assess the efficiency of this expenditure. However, **given that there is no evidence that expenditure during PSP4 was unnecessary, given STP asset risk and reactive works over this period, we have not recommended an ex-post adjustment.**

**Table 3-7 – STP renewal program PSP4 allowance, expenditure, variance and adjustment (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
<b>PSP4 proposed capex</b>	2.5	2.6	2.8	2.8	10.6
<b>PSP4 allowance</b>	2.4	2.4	2.6	2.6	10.0
<b>Outturn cost</b>	10.7	11.8	7.0	3.9	33.5
<b>Variance</b>	8.3	9.4	4.4	1.3	23.5
<b>Recommended capex</b>	10.7	11.8	7.0	3.9	33.5
<b>Recommended capex adjustment</b>	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”, TasWater q30 response within “RFI - From 06-10-2025 - Capex Investigations - Action List” and CCGUS (2022) Final Report

### 3.4.2.4 Sewer Main Renewals

TasWater has approximately 4,981 km of sewer mains within its network<sup>15</sup>. The aim of its sewer mains renewal program is to “complete asset renewal for sewer network assets based on condition-based risk assessment to maintain required levels of service.” The sewer main renewals program is aimed at reducing sewer breaks and chokes, environmental spills and customer complaints, which are key company KPIs. Sewer main breaks and chokes are required under TasWater’s Customer Service code to be maintained at 40 incidents or fewer per 100 km

<sup>15</sup> TasWater Annual Report 2024-25



of sewer main<sup>16</sup> (FY23 and FY24 target). In addition, TasWater is required to attend to at least 90% of sewer main breaks and chokes within 60 minutes<sup>17</sup>.

In contrast to the STP renewals program for which multiple solutions exist depending on the individual asset, there are only two principal sewer main renewals options considered by TasWater, which are relining and replacement. TasWater's recent focus has moved from replacement to relining, and its program continues to be very reactive, with a focus on extreme risk assets. During the interviews TasWater reported that the current ratio of works is approximately 60% relining, 30% replace, and 10% other, which it plans to maintain during PSP5. TasWater was unable to justify this ratio, which is based on a top-down assessment of need, due to the limited asset information available for its sewer network. Replaced mains are recorded as a new asset in Maximo, whereas relining is represented as an existing relined asset with a new asset life.

TasWater's sewer main renewals program was reviewed during the PSP4 investigation. The investigation found that TasWater's expenditure on mains renewals had **declined over the course of PSP3** from a peak of \$5.3M in 2019-20 to \$1.9M in 2020-21, with an average capital expenditure of \$4.0M per annum. The reviewers noted that this decline in sewer mains renewals investment occurred despite TasWater's performance against its service targets continuing to decline after 2018-19.

**TasWater's proposed total PSP4 sewer mains renewals capital expenditure was \$9.5M**, an approximately 35% reduction from a spend of \$14.7M in PSP3. In contrast to this, TasWater had forecast an overall long-term increase in renewals expenditure at the time of the investigation, and the draft sewer main Asset Class Lifecycle Plan provided to the reviewers also indicated a significantly higher long term average renewals expenditure. At this time, TasWater indicated that despite the planned lower expenditure level during PSP4, they would be able to continue meeting company service level performance targets, at least in the short term. As such, the reviewers did not recommend any adjustments to the proposed sewer main renewals expenditure for PSP4.

**Our analysis of TasWater's outturn capital expenditure on its PSP4 sewer main renewals program, including reactive works, indicates that it was \$29.3M (see Table 3-10).** This includes a peak value of \$11.8M for FY25, and a forecast value of \$6.0M for FY26. Total expenditure is significantly (three times) higher than its proposed expenditure over PSP4. During the interviews TasWater was unable to fully account for the variance in expenditure, but attributed it to the following factors:

- Executive-driven initiative to increase expenditure on renewals.
- Capacity to increase delivery from FY24 onwards, particularly in relation to relining, resulting in increased expenditure on relining towards the end of PSP4.
- A high break and choke rate in June-July 2024 due to extreme dry weather followed by heavy rainfall and further dry weather. This is reflected in the notifiable dry weather spills data shared by TasWater, which shows dry weather spills peaking in 2024 (see figure below).

Following the interviews, TasWater provided the following explanation of its PSP4 expenditure on sewer main renewals:

*Spend during PSP4 has been above allowance as the business allocated additional funding for sewer main renewals (predominantly relining) to manage identified declining break and choke performance and*

---

<sup>16</sup> TasWater Annual Report 2024-25

<sup>17</sup> TasWater Annual Performance Report 2023-24



increasing risks during FY24 and FY25. The investment levels and focus of relining has arrested that declining performance during FY25.

In relation to customer benefits from increased spend in PSP4, TasWater stated that:

*During PSP4 investment focus was targeted to reduce spills primarily caused through break and choke events. The risk-based investment targeted community benefits associated with environmentally sensitive areas. The number of notifiable wet and dry weather spills to these sensitive receiving environments has reduced [see figures below].*

In relation to the uplift in spend in FY25, and FY26, TasWater stated that “The level of investment in FY25 and in FY26 is maintaining the current level of performance”.

We note that sewer main breaks and chokes per 100 km, a key corporate KPI specified measure within TasWater’s Customer Service Code, has exceeded the current target of 40 between FY20 and FY25 (Table 3-9). Sewer main breaks and chokes per 100 km peaked in FY24 and FY25 at 63.9 and 63.0 respectively (Table 3-9, Figure 3-8). During the interviews, this was attributed by TasWater to better data, aging assets and insufficient prior maintenance.

Conversely, we note that as demonstrated by notifiable dry and wet weather spills to the environment was significantly lower in FY25 than during PSP3 and prior years of PSP4 (see figures below).

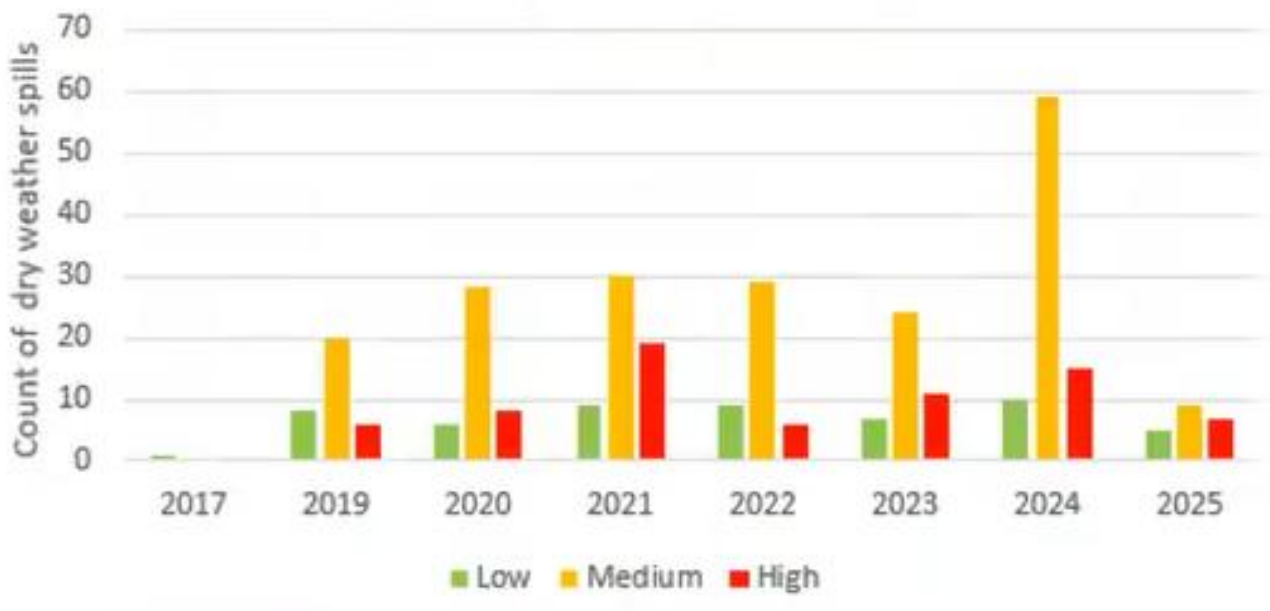
**Table 3-8 - TasWater sewer mains performance versus targets, FY19 to FY26**

Sewerage			FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
12	Number of sewer main breaks and chokes per 100km of sewer main	Target	65	65	65	65	40	40	39	38
		Result	36.6	41.2	56.6	43	48.1	63.9	63.0	
13	Percentage of sewer spills, breaks and chokes responded to within 1 hour	Target	85%	85%	90%	90%	90%	90%	90%	90%
		Result	88.9%	91.5%	91.0%	83%	83.4%	79.8%	75.7%	

Source: TasWater spreadsheet “RFI - From 06-10-2025 - Question 5 - Spreadsheet of PSP3 and 4 performance v targets”

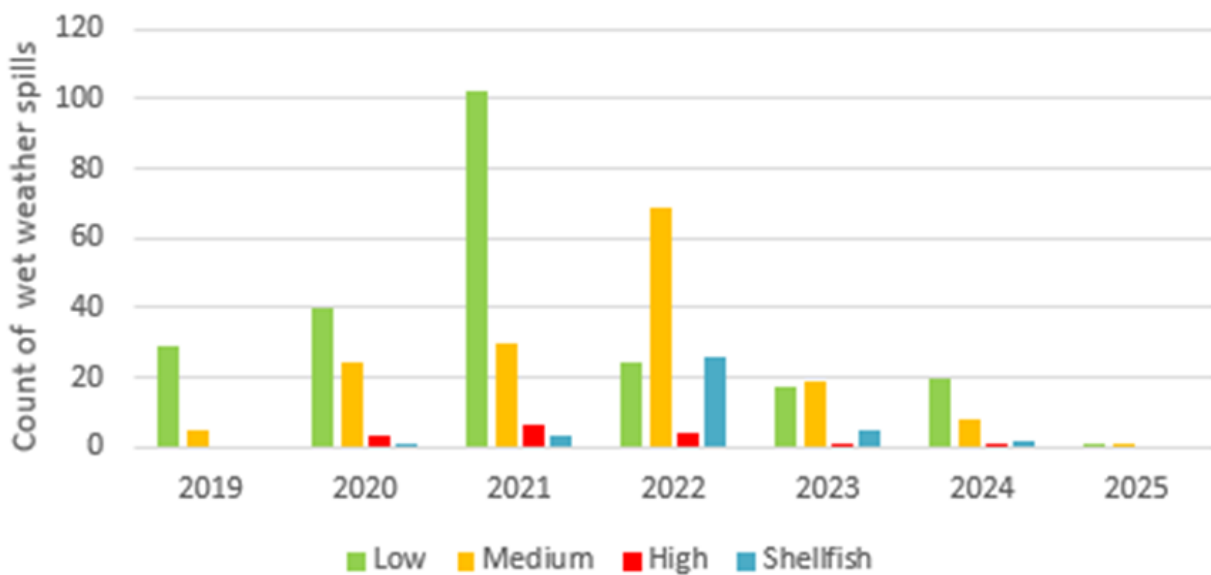


Figure 3-7 - Number of notifiable dry weather spills to environment by location risk, 2017-2025



Source: TasWater Sewer Mains Renewals program presentation

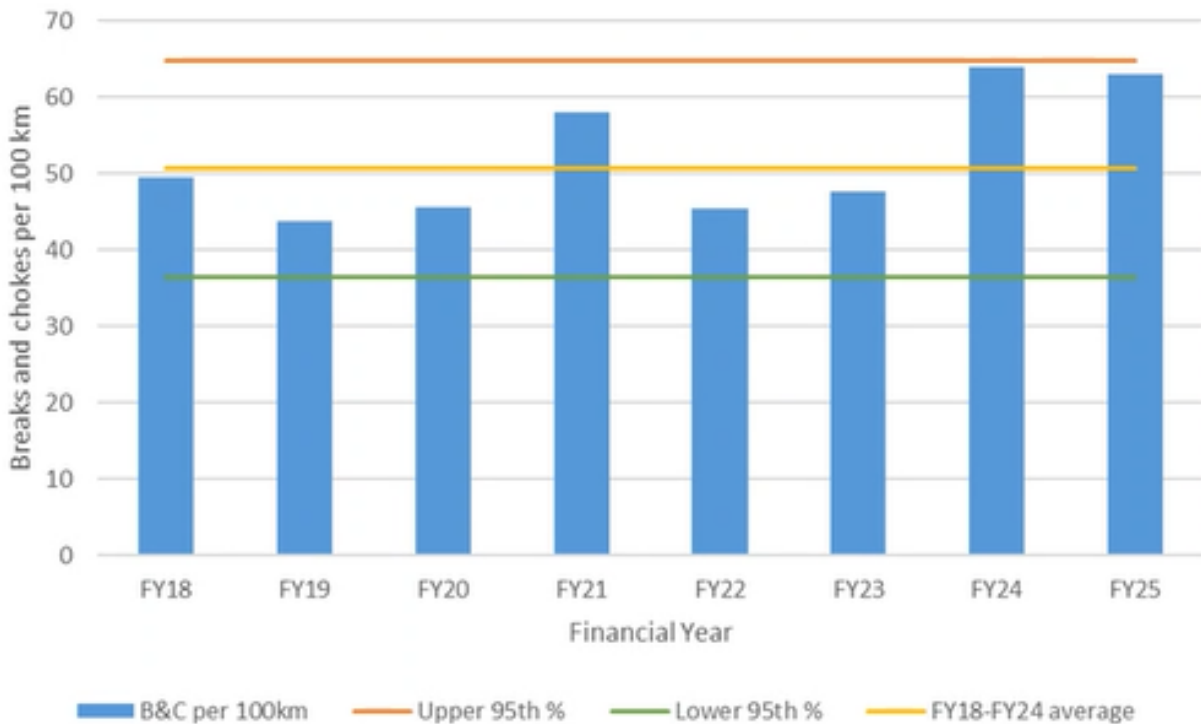
Figure 3-8 - Number of notifiable wet weather spills to environment by location risk, 2019-2025.



Source: TasWater response to additional information request 29 within "RFI - From 06-10-2025 - Capex Investigations - Action List"



**Figure 3-9 – Sewer main breaks and chokes per 100 km of sewer main, FY18 to FY25.**



Source: TasWater Sewer Mains Renewals program presentation

TasWater’s sewer main renewals program was originally managed through the CDO but was then transitioned back to TasWater and managed in-house for three years. TasWater subsequently launched its new linear renewals framework in February 2024, one of the first to be established under its post-CDO future delivery model. The approach has evolved from managing individual projects to a program-based model, which assesses whether to use a dig-and-lay or relining method. TasWater considers that this program approach is more efficient because delivery partners are already in place, removing the need to tender each project separately. It also reportedly provides time for detailed project development, particularly for dig-and-lay, which requires comprehensive design work.

The linear renewals framework includes several suppliers, with allocation based on geographic area and individual company capability. Efforts are made to distribute work relatively evenly so contractors can deliver in parallel. TasWater considers that the new linear renewals framework has proven highly efficient in both delivery volume and cost per meter. Relining has been developed as its own framework, separate from the linear model and is not part of the seven future delivery model frameworks. A new single contractor has been engaged for relining, with the aim of introducing innovation from across Australia.

We are satisfied that investment in sewer main renewals to maintain asset performance and customer service standards is prudent. TasWater’s explanation for the increased spend in PSP4 compared to the original proposal, includes a combination of a top-down directive to increase renewals expenditure, increased capacity within the business and supply chain, and reactive spend to address declining performance.

We disagree with TasWater’s assertion that the increase in sewer main breaks and chokes per 100 km in FY24 and FY25 was likely due to ‘aging assets’ since this would typically manifest as a long-term trend. **However, we accept the level of expenditure during PSP4 and have not recommended an ex-post adjustment, as it is not evident that this expenditure was unnecessary given the condition and performance of sewer mains over this period.**



We recommend that TasWater leverage available data to develop a clearer understanding of the relationship between sewer main investment and performance during PSP5.

**Table 3-9 – Sewer mains renewal program PSP4 allowance, expenditure, variance and adjustment (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
<b>PSP4 proposed capex</b>	2.1	2.1	2.1	2.1	8.6
<b>PSP4 allowance</b>	2.2	2.1	2.1	2.1	8.6
<b>Outturn cost</b>	4.3	7.2	11.8	6.0	29.3
<b>Variance</b>	2.1	5.0	9.7	3.9	20.7
<b>Recommended capex</b>	4.3	7.2	11.8	6.0	29.3
<b>Recommended capex adjustment</b>	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”, TasWater q.27 response and CCGUS (2022) Final Report

### 3.4.2.5 Non Network IT

Few details have been provided on expenditure on non-network IT in the PSP4 period. In their review the PSP4 expenditure review team examined the proposed \$13.5M (nominal) non-network IT program, which included three sub-areas:

- End user devices: renewals of end user devices such as laptops, mobile phones and tablets as part of lifecycle management;
- Data centre and network infrastructure: a data centre refresh and move to a wide area network, with a number of data centres at capacity, at the end of life and falling out of manufacture support;
- Cybersecurity: maturity uplift and risk reduction related to compliance with the Security of Critical Infrastructure Act 2018 for example.

The reviewers recommended accepting it as a prudent and efficient program.

Few details have been presented for what has been delivered in PSP4. However, replacement of end-user devices and, to some extent, data centres is an on-going item, and expenditure has been similar to the recommended PSP4 allowance. We have not therefore recommended any adjustment related to this expenditure area.

**Table 3-10 – Non-network IT PSP4 allowance, expenditure, variance and adjustment (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
<b>PSP4 proposed capex</b>	3.2	3.2	3.6	3.5	13.5
<b>PSP4 allowance</b>	3.2	3.2	3.6	3.5	13.5
<b>Outturn cost</b>	3.8	4.7	4.6	1.8	14.9
<b>Variance</b>	0.6	1.5	1.0	-1.7	1.4
<b>Recommended capex</b>	3.8	4.7	4.6	1.8	14.9
<b>Recommended capex adjustment</b>	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”, TasWater q.27 response and CCGUS (2022) Final Report



## 3.4.3 Compliance

### 3.4.3.1 Bryn Estyn Water Treatment Plant Major Upgrade

Bryn Estyn Water Treatment Plant (WTP), originally constructed in 1962 and located on the bank of the River Derwent is Hobart's principal WTP, which supplies around 60% of Greater Hobart's Water Supply System (GHWSS) demand annually.

Bryn Estyn WTP had been previously upgraded to deliver additional capacity in 1972 and 1992. The third major upgrade of Bryn Estyn WTP, during PSP3 with construction across PSP4 and PSP4, had several key drivers:

- **Compliance (primary driver):** Bryn Estyn's two treatment plants were not achieving best-practice risk mitigation, specifically the Health-Based Targets for drinking water, due to insufficient log reduction capability. Declining raw water quality in the Derwent further increased exposure to water quality events, including protozoa risks that the existing systems were not designed to manage.
- **Growth:** The plant's design capacity was 160 MI/d, but actual output was closer to 130 MI/d and could reduce to 85 MI/d during poor water quality periods when Plant 2 was rendered ineffective and shut down. These limitations, driven by plant age and influent quality, meant Bryn Estyn was operating at capacity during peak demand and unable to meet future growth requirements.
- **Improvement:** Bryn Estyn lacked adequate redundancy, storage connectivity and resilience against single points of failure, compromising supply during raw water incidents and extreme events. Taste and odour complaints linked to compounds in the River Derwent had previously prompted upgrades in 2016-17; however, these measures increased operating costs, introduced additional safety risks from extra dosing, and reduced production capacity.

The upgrade of Bryn Estyn WTP formed a key part of the Greater Hobart Water Supply System Strategy, published in 2018. The aim of the proposed upgrade was to deliver a more resilient plant that meets drinking water compliance requirements, is capable of treating a wider range of water quality parameters, and maintain a consistent output of 160 MI/d.

Although not a formal driver of the project, during the project development phase Bryn Estyn was supplying up to 26 MI/d to Tasmanian Irrigation (this was noted to be closer to 10 MI/d during the project interviews). The Detailed Business Case (DBC) confirms that this demand was included in the project's capacity specification and demand forecasting. However, removing Tasmanian Irrigation's demand was not expected to materially reduce the project's capital expenditure; it would only extend the timeframe before a further upgrade became necessary. A key aspect of the intended design was that provision would be made at the site for future augmentation to 200 MI/d, considered likely to be required around 2041.

At Strategic Business Case (SBC) stage, the report for which was submitted to the board in October 2018, concept level brownfield, greenfield and hybrid options were assessed based on cost, alignment to requirements, outcomes and risk, and a hybrid greenfield and brownfield option selected. Two alternative treatment sub-options were then evaluated, with a further six process options analysed in 2019 against a range of factors including NPV, with a preferred option identified.

DBC approval was sought from the Board in February 2020, with costs at this stage estimated to be \$227.3M (\$FY20), inclusive of contingency. At Total Outturn Cost (TOC) stage (October 2020) the overall project budget was estimated at \$243,944,209. The TOC was reviewed by Ranbury, TasWater's Client Cost Estimator, who recommended acceptance of the final TOC estimate.



The Bryn Estyn WTP upgrade project was reviewed on an ex-post basis as part of the PSP4 investigation. This is because at the time of the PSP3 review there was insufficient information available on the project to enable an assessment of prudence and efficiency.

The PSP4 review noted that the project was originally intended to be completed during PSP3, but was reviewed and enhanced by the CDO through re-doing the DBC. This resulted in a deferral of a significant proportion of capital expenditure into PSP4, with the remaining capital budget redirected to renewals.

The PSP4 investigation accepted the prudence and efficiency of the project and did not recommend any adjustments to the proposed capital expenditure required during PSP4. The review team noted that *“the Regulator may seek a final reconciliation of the BE WTP expenditures following the commissioning of the plant (and decommissioning of redundant plant elements), for inclusion into the regulated asset base (RAB) to support longer-term pricing.”*

**The PSP4 investigation noted that the proposed capital expenditure for PSP4 for the project was \$87.2M**, with \$78.0M of the expenditure occurring in FY23, \$8.5M in FY24 and \$0.7M in FY25 (\$nominal). The outturn cost reported by **TasWater was \$75.9M**, with \$62.3M occurring in FY23, \$13.0M in FY24 and \$0.5M in FY25; an overall reduction of \$11.4M (see Table 3-11).

The TasWater Environment, Public Health, Infrastructure and Climate Change Committee Post Implementation Review report prepared in August 2025 reported that the project outturn cost was \$218.7M, **\$25.2M less** than the TOC budget of \$243.9M. The report stated that this includes a gain share payment for the Joint Venture of \$5.5M. TasWater reported within the paper that *“the fee is well within industry benchmarks and represented value for money under current market conditions.”*

**During the project interviews, the outturn cost provided by TasWater was \$226M, resulting in a reduced project saving of \$17M.** The reasons for this discrepancy with the Post Implementation Review report are unclear. Furthermore, we note that TasWater has not provided any explanation of the source of these cost savings, nor is this included within its Post Implementation Review report. As such, this provides limited ability to inform future project costings.

The project was completed in line with the program at TOC stage, with the commissioning phase ending in June 2023.

The project’s Post Implementation Review paper reports several project learnings to be carried forward into the Selfs Point Sewer Transformation Project, including:

- **Operational engagement:** significant increase in operational capability and engagement since the design phase. Early design decisions led to increased manual intervention, underscoring the need for stronger operational input during process selection. The Selfs Point project demonstrated the benefits of early involvement of the Operational Support and Improvement Team, fostering ownership and alignment with operational requirements. For example, incorporating redundancy in the Secondary Treatment Process to provide flexibility for system optimisation and future capacity increases.
- **Technical capability framework:** development of a comprehensive framework was reported to be underway by TasWater management to assess and benchmark technical skills across the organisation. The framework was reported to have been informed by the lessons learnt from the Bryn Estyn upgrade, which represented a change from a traditional treatment process to modern, highly automated facilities. This transition highlighted the need for a clearer understanding of technical competencies required to operate a more contemporary plant. The framework is intended to support workforce planning, training and recruitment strategies.



- **Maintenance planning and scheduling:** the extended handover period of Bryn Estyn WTP from construction to steady-state operation highlighted challenges in establishing maintenance routines post-handover. A key learning to be applied at Selfs Point was that maintenance planning must start earlier and TasWater's intention was that maintenance routines will be developed and procured by the Capital Delivery Office before operational takeover to ensure continuity and minimise disruption.

During the project interviews, TasWater reported the following additional lessons learned:

- **External funding:** the project did not seek any additional sources of funding, which has since been sought for more recent major projects.
- **Risk management:** TasWater's experience and understanding of risk management has matured, including clarity on where this should sit.
- **Safety:** the project achieved a reduction in both the number and severity of safety incidents during the course of construction.
- **Procurement:** Tier 1 contractors are needed for major projects but not for smaller ones.

The Project Completion Report published in July 2024 found that the plant had been successfully operating and meeting its performance requirements since commissioning in June 2023 and over the 12 month defects liability period, specifically by demonstrating compliance against Department of Health water quality requirements at both peak design capacity and during poor water quality events.

Based on the TOC report, the final scope planned to be delivered was as follows:

1. New treatment plant including the following selected process technology:
  - Conventional coagulation and flocculation
  - High-rate clarification
  - Ozonation + Biological Activated Carbon (BAC) filtration
  - UV irradiation
  - Stabilisation of treated water.
2. Sludge transfer to remediated sludge drying plans
3. Inter-stage pumping station
4. New storage and handling areas for chemical dosing systems and lime system to meet design capacity and storage requirements
5. New high voltage and low voltage power distribution
6. New instrumentation, control and automation
7. General site works including, roads, drainage, fencing and security
8. Master Plan for the site, with provision made for a future augmentation to a 200 MI/d capacity.

The TOC excluded upgrade and/or modification of the existing plant and equipment. TasWater planned to retain these and look for future uses for Plant 2, which was in better condition than Plant 1, in the future.

The project was delivered under the CDO, with detailed design being undertaken by Jacobs as sole designer except for certain Design and Construct packages, which went out to market including the following elements:

- Ultraviolet system vendor package
- Ozone vendor package
- CO<sub>2</sub> dosing vendor package
- Structural steel work
- High voltage modular switch rooms and layout



- Electrical equipment and installation drawings
- Heating, ventilation and air conditioning for all buildings

For the remaining elements the CDO’s chosen approach was to separate equipment procurement from construction and installation procurement and procure individual work packages separately. A range of benefits were anticipated from this approach, including reduced markups from contractors, maximisation of local contractor involvement, increased tendering competition for certain smaller packages, and an easier tender process for suppliers.

Given that the primary driver for the project was compliance with drinking water standards for a supply source serving a significant proportion of the Greater Hobart population, along with the additional benefits delivered, we consider the Bryn Estyn WTP upgrade to be prudent. The outturn cost was \$25M lower than the TOC, and this variance has been subject to independent audit and review.

On this basis, **we recommend accepting the expenditure as efficient and have not recommended an adjustment.** However, as noted above, **TasWater has not provided any explanation for the reasons behind this variance.** We recommend that more detailed evaluations be undertaken for this and other current and future projects to support continual refinement of project cost forecasts.

**Table 3-11 – Bryn Estyn WTP upgrade PSP4 allowance, expenditure, variance and adjustment (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
<b>PSP4 proposed capex</b>	78.0	8.5	0.7	0.0	87.2
<b>PSP4 recommended capex</b>	78.0	8.5	0.7	0.0	87.2
<b>Outturn cost</b>	62.3	13.0	0.5	0.5	76.4
<b>Variance</b>	-15.7	4.5	-0.2	0.5	-10.9
<b>Recommended capex</b>	62.3	13.0	0.5	0.5	76.4
<b>Recommended capex adjustment</b>	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025” and CCGUS (2022) Final Report

### 3.4.3.2 NMSIP - Longford STP Upgrade

The primary driver for the Sewerage Treatment Plant upgrade at Longford was **Compliance**.

Prior to the upgrade the STP was a conventional anaerobic lagoon (CAL) system, which was handed over to TasWater from the council as part of the amalgamation process. TasWater noted that this CAL system was not effectively treating the influent, which was causing issues related to both odour and effluent quality.

Effluent from the site runs directly into “Back Creek”, and at times this effluent from the plant contributes to 100% of the flow in the creek. TasWater noted that as a result (and due to the insufficient treatment being achieved by the CAL system) the site was at times non-compliant with its discharge licence. Along with this effluent discharge issue, due to the fact that approximately 80% of the load received by the plant comes from a local abattoir, the existing lagoon system had significant odour issues, resulting in complaints in the nearby town.

Growth was also referenced as a secondary driver, with the upgrade at this plant a part of the rationalisation plan for the area and a key component of the 50-year growth plan.

Four options were considered by TasWater before tendering the project, each with alternative discharge arrangements (excluding the Do Nothing option):

1. Do nothing
2. Option 1 - Upgrade and Discharge to Back Creek



3. Option 2 - Upgrade and Discharge to South Esk River
4. Option 3 - Upgrade and Discharge to Partial Reuse with excess to Back Creek

Following an NPV analysis, Option 3 was selected as the appropriate option, which was reviewed as part of the PSP4 investigation process and deemed sufficiently justified (although note that this project was only specifically reviewed as part of the Opex investigation).

Technical optioneering was also carried out once Option 3 above was selected. An Early Contractor Involvement (ECI) phase was completed as part of the procurement method for the project. Three tenderers were invited to this ECI phase, and each asked to develop a technical proposal as part of their submission. All three of the technical solutions put forward, which included SBR and Nereda processing options, were deemed technically suitable, however the Nereda process and associated contractor (Aquatec Maxicon) were selected as the best technical solution and best value for money.

The Longford STP upgrade was not individually reviewed as part of the PSP4 Capex Investigation; however, it was reviewed in detail as part of the Opex investigation, and thus the appropriateness of the project was reviewed in some capacity.

Although unrelated directly to capex, the report notes that the review team considered that TasWater had followed an appropriate process in determining the least cost totex option for the project. There were a number of notes on lack of clarity with regards to opex impacts associated with the upgrade and that it was therefore difficult to conduct a robust opex efficiency assessment. It was recommended that a more detailed breakdown of opex estimates and underlying assumptions therefore be provided.

As noted above, the Longford STP upgrade was not included in the PSP4 capex sample and therefore figures on the PSP4 proposed capex and the PSP4 recommended capex are not available for this project.

During interview, TasWater noted that the total capex for the project was **\$33.7M**, with the majority of the works completed during PSP3 (the contract was awarded in 2019). Due to the COVID pandemic causing lockdowns and impacting the delivery program, the completion of the project was delayed, with the final certification for the project completion issued in May 2025.

Although no evidence was provided, at interview TasWater noted that despite the impact of COVID resulting in exceedance of the project program and the need to fly in resources to work in a Fly-In Fly-Out (FIFO) capacity, the project was delivered under-budget by \$800k.

The scope of the project was to upgrade the existing CAL system to a mechanical system. This included the following components:

- Decommissioning of the conventional anaerobic lagoon - these were made inert and one of them was converted into a Treated Effluent Lagoon
- Mechanical Inlet Screen for domestic flows
- DAF commissioned for abattoir flow pretreatment
- Combined balance tank for hydraulic and load balancing
- Nereda Process
- Biosolids Handling (screw press)
- Effluent lagoon (converted from decommissioned CAL)
- Effluent treatment via sand filtration and UV disinfection

The project was delivered outside of the CDO via a lump-sum D&C tender with an Early Contractor Involvement (ECI) phase. During the ECI phase, three contractors were engaged to develop a competitive design and Best and



Final Offer (BAFO) submission. The unsuccessful tenders were paid for their time spent developing their design and BAFO, and the successful tenderer (Aquatec Maxicon) engaged under the lump-sum D&C contract.

During the delivery of the project it was decided that the CDO should be utilised to provide oversight of the project and provide the project team with support.

Due to the environmental compliance issues noted as the primary driver for this project, along with the alignment with the 50-year growth plans (including rationalisation plans) for the region and the potential for the use of recycled water and generation of renewable energy from the upgraded plant, based on the information provided **we consider the upgrade to be prudent.**

Appropriate levels of optioneering have been evidenced to have been conducted, with the ECI phase also providing a competitive optioneering and costing exercise via market engagement. TasWater at interview noted that the project was delivered at an \$800k underspend, but significantly delayed due to COVID impacts. There was, however, **a lack of summary documentation provided associated with this project, making a quantifiable assessment difficult.** Based on the qualitative information provided at interview, the project appears to have been delivered in an efficient manner. However, more detailed project implementation reviews would be useful to demonstrate benefits realisation and ensure lessons are learned for future projects.

**Table 3-12 – Longford STP upgrade PSP4 allowance, expenditure, variance and adjustment (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
<b>PSP4 proposed capex</b>	-	-	-	-	-
<b>PSP4 recommended capex</b>	-	-	-	-	-
<b>Outturn cost</b>	1.7	0.5	0.8	0.0	3.0
<b>Variance</b>	1.7	0.5	0.8	0.0	3.0
<b>Recommended capex</b>	1.7	0.5	0.8	0.0	3.0
<b>Recommended capex adjustment</b>	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

## 3.4.4 Improvement

### 3.4.4.1 Macquarie Point and Selfs Point Sewer Transformation

The Macquarie Point Sewage Treatment Plant (STP), originally constructed in 1966, is a 12 ML/d Level 2 (regulated by the Environmental Protection Agency) secondary treatment facility located at Macquarie Point in Hobart. It services around 16,000 Equivalent Tenants from residential, business and light industrial customers, in addition to receiving tankered and septage waste. It was upgraded in 1988 to provide secondary treatment.

The Macquarie Point / Selfs Point Sewer Transformation project encompasses the decommissioning of the Macquarie Point STP and construction of a new STP at Selfs Point, adjacent to the current one, with construction during PSP4 and early PSP5. As such, we consider this an ex-post review, with additional consideration of the remaining expenditure proposed for FY26 and FY27.

We note that there is some inconsistency in the stated primary driver for this project, with TasWater’s PSP5 capital expenditure spreadsheet showing the primary driver for ‘Macquarie Point STP Planning Works’ listed as ‘**Improvement**’ for PSP4, whereas for ‘Selfs Point Sewer Transformation’, which we understand to be part of the same project, the primary driver is shown as ‘**Compliance**’ for PSP4. For the remaining spend in PSP5, the primary driver is stated as ‘**Growth**’.



The project is part of TasWater's wider Hobart Sewerage Improvement Plan, with additional opportunities for rationalisation identified for other STPs in the vicinity (Risdon, Cameron Bay and Prince of Wales Bay).

### *Macquarie Point STP*

The DBC for the project, published in August 2022, states that the primary project driver is compliance, with growth and renewal as secondary drivers. Conversely, TasWater's Major Project Summary assigns the primary driver to **Improvement**, with Compliance as secondary. In terms of compliance, the DBC states that during FY21 the STP's discharge was regularly non-compliant with the Environmental Protection Notice (EPN) limits for chlorine, Biological Oxygen Demand (BOD), and Total Nitrogen. In addition, insufficient mixing at the outfall to meet dilution requirements for ammonia and nutrients was reported to present a high risk of direct toxicity and medium risk of eutrophication. We note that TasWater's latest compliance assessment provided shows that Macquarie Point STP is:

- Compliant with its EPN for ammonia, E.coli and Total Suspended Solids
- Substantially compliant with its EPN for BOD, chlorine and phosphorus
- Non-compliant in relation to nitrogen

We note, however, that Macquarie Point STP ranks 13th out of 110 STPs in TasWater's Environmental Risk Assessment and is assigned high risk, with far field key risks noted as nitrogen and phosphorus and nearfield key risks noted as chlorine. The DBC reports that the Macquarie Point STP was an outstanding PSP3 EPA commitment to reduce risks and improve performance that had not been fulfilled. Renewed commitments to the EPA to reduce risk at high risk sites required completion of the project before the end of PSP4.

The project was originally instigated by the State Government's proposals to redevelop Macquarie Point, incorporating land uses which are considered by both the State Government and TasWater to be incompatible with the continued operation of the STP. In response to this, TasWater committed to decommissioning of Macquarie Point STP, formalised through execution of a Memorandum of Understanding (MoU) with the State Government and Macquarie Point Development Commission in 2015. This had a target date of June 2019 for the decommissioning but the project was put on hold in 2016, due to the need to confirm funding from the State Government. A Grant Deed for a new state funding agreement was signed by both parties in September 2021, with the state committing to providing 71.4% of the funding associated with relocation and replacement of the servicing provided by Macquarie Point STP.

During the project interviews it was highlighted by TasWater that more recently in 2022 the Tasmanian Government announced funding for a new Australian Football League (AFL) stadium at Macquarie Point with federal funding<sup>18</sup>, leading to a misconception amongst some stakeholders that this was a key driver for the project.

The DBC states that the retention of the existing Macquarie Point STP would require investment and upgrades of the existing assets to maintain environmental compliance. It also cites the lack of available land at the site as a key constraint on future upgrades to accommodate future growth in the surrounding area, more stringent environmental regulations and renewals. The DBC notes that the STP would therefore need to be relocated in the future, although the likely timing is not specified and there is no analysis provided to evidence this. The DBC does not elaborate on the anticipated more stringent environmental regulations, other than to state that the redevelopment of Macquarie Point is likely to lead to increased odour and noise complaints which will result in more stringent environmental controls, or community dissatisfaction due to delays to development.

---

<sup>18</sup> [Macquarie Point Multipurpose Stadium - City of Hobart, Tasmania Australia](#)



Without an agreement to relocate the STP with the State Government, addressing Macquarie Point's non-compliance with its EPN did not necessarily require relocation, as an upgrade could have been a viable option. **Therefore, we agree that assigning 'Improvement' as the primary driver may be appropriate.**

### *Selfs Point STP*

The second element of the project is the construction of a new STP at Selfs Point, adjacent to the existing facility. The current Selfs Point STP is also a Level 2 secondary treatment facility treating around 8.5 ML/d of predominantly residential wastewater and servicing around 15,700 Equivalent Tenants. Selfs Point STP was originally commissioned in 1972 and upgraded in 1978 and 1996.

The DBC notes that whilst there are condition-related risks at Selfs Point STP, these are not currently impacting operations or plant performance and are being addressed under the renewals program. In accordance with this, we note that Selfs Point STP has been assessed as low risk within TasWater's Environmental Risk Assessment. It has one substantially non-compliant parameter (phosphorus), with the remainder being compliant or substantially compliant.

An initial optioneering process undertaken in 2016 encompassed an assessment of ten potential sites for the relocation of Macquarie Point, with five sites shortlisted including Selfs Point, Prince of Wales Bay, Rokeby STP, Gibson Point and Droughty Point. Selfs Point was selected due to several factors including proximity, performance of the Blinking Billy outfall, and availability of land adjacent to Selfs Point.

A subsequent strategic options report prepared in 2020 assessed three alternative options:

1. Option 1 – Base case: retention of existing asset and servicing configuration.
2. Option 2 – Full build: rationalise the Macquarie Point STP to Selfs Point STP, requiring construction of one new plant to take the combined flows from both catchments.; i.e. an upgraded rather than new facility.
3. Option 3 – Staged development: Relocate the Macquarie Point STP to a new facility at Selfs Point. This would initially only accept flow from the Macquarie Point catchment, but would be constructed to enable expansion in future to accommodate growth from the Selfs Point catchment.

Option 1 was not considered viable as it did not meet TasWater's commitment to the State Government and the Macquarie Point Development Corporation to decommission the Macquarie Point STP.

The strategic options report, as described in the August 2022 DBC, identified Option 3, with a cost of \$275M, as the preferred option compared to Option 2 on the following basis:

- Lower capital cost for Option 3 than Option 2
- Enables the residual economic life of the existing Selfs Point STP to be realised,
- Easier and lower risk construction staging due to the ability to construct the new plant largely independently to both the existing Selfs Point and Macquarie Point STPs.
- Capacity of the new Selfs Point plant to take all forecast flows within the 30-year planning period, allowing the majority of the existing plant to be decommissioned.

An additional treatment technology optioneering process was undertaken and assessed based on Multi Criteria Analysis as part of the DBC.

However, we note the change in approach during 2023 reported in TasWater's Major Project Business Case, with the TasWater Board endorsing Option 2 instead, due to a similar NPV whilst removing the technical risks associated with a staged approach. The TOC process also resulted in a revised project capex of \$380M, of which \$314M was associated with the relocation of sewage treatment to Selfs Point, to be funded jointly with the state, and \$66M for



upgrades at Selfs Point to be funded by TasWater alone. TasWater reports that the 71.4% (5/7) split to be funded by the state for the relocation capex was related to a “*historical estimate of benefits decided by the Tasmanian government*”. **The total forecast capex for the project funded by TasWater was therefore \$156M.**

At the time of the PSP4 investigation the DBC had not been finalised or shared with the review team. The contribution to be provided by TasWater was estimated at the time to be \$40M, significantly lower the TOC figure of \$156M. However, due to insufficient evidence and concerns with the figures provided (e.g. potential double counting, lack of robust cost estimates), it was unclear to the reviewers whether TasWater’s proposed contribution at the time represented a fair amount for customers, which was described as the NPV of:

- Avoided future costs (associated with STP upgrades and renewals)
- Plus any revenue associated with asset disposal
- Minus the bring forward costs of advanced completion of capital works
- Minus forgone revenue related to the decommissioning of Macquarie Point STP.

The reviewers did not find a strong case for the full proposed expenditure at PSP4 and recommended an adjustment of -\$12.6M, noting that the DBC may resolve some of these issues.

The project is now in construction, with \$61.0M spent between FY21 and FY25, \$49.3 forecast for FY26, and \$31.5M for FY27, the first year of PSP5, with a total forecast outturn cost of \$141.8M. Commissioning of the new Selfs Point STP and decommissioning of Macquarie Point is scheduled for FY27.

The PSP4 investigation noted that the PSP4 proposed capex was \$59.8M, with \$4.7M in FY23, \$35.1M in FY24, \$16.7M in FY25 and \$3.3M in FY26. The outturn cost reported by TasWater over this period was \$107.2M, with significantly lower spend (\$12.5M) in FY24 and higher spend in FY25 (\$42.3M) and FY26 (\$49.3M). When asked to explain this variance, TasWater stated that “*The PSP4 Macquarie Point STP and PSP5 Selfs Point Sewer Transformation are both ahead of schedule.*” However, we note that TasWater’s original forecast for FY25 was \$65.1M, \$21M higher than outturn, which appears inconsistent with the assertion that the program is ahead of schedule.

The project involves the following:

- Decommissioning of Macquarie Point STP
- Capacity upgrade of the existing nearby Selfs Point STP via construction of a new STP adjacent to the existing one
- Construction of transfer pipeline between Selfs Point STP and the current Macquarie Point STP
- Construction of a new pump station and emergency storage at Macquarie Point.

The project was selected to be delivered under the CDO with the project being procured as a series of work packages to reduce cost, leverage local market capability and give TasWater maximum control. It involves the same Tier 1 contractor for the major works as Bryn Estyn, with lessons learned applied and a number of the site facilities being reused from Bryn Estyn.

The scope of this project is primarily driven by the agreement with the State to relocate the Macquarie Point STP, alongside the opportunistic replacement of Selfs Point. We concur with the previous review that there should be no



net impact on customers, i.e. customers should only have to pay for expenditure that would have been required regardless, due to compliance, growth, and renewal drivers.

However, as we have not seen any information justifying the funding split or the amount customers are expected to pay, we are unable to provide a complete assessment. We also note that the final cost to TasWater customers will be significantly higher than the estimate at the time the funding split was determined (around \$40M). Furthermore, we have not seen any confirmation from TasWater regarding the final outturn costs and whether there is likely to be an overall underspend or overspend, although current outturn forecast appears to be \$142M, which is below the TOC of \$156M.

Noting, however, the significant new sewage treatment infrastructure delivered and compliance issues resolved by the program, we have not made an adjustment based on the information available. We note that the Sels Point Sewer Transformation project represents an example of out-of-sequence expenditure, with the decommissioning of Macquarie Point and construction of a new STP at Sels Point occurring earlier than required based on asset risk and remaining asset life.

**Table 3-13 - Macquarie Point and Sels Point Sewer Transformation PSP4 allowance, expenditure, variance and adjustment (\$M, nominal)**

	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Total
<b>PSP4 proposed capex</b>			4.7	35.1	16.7	3.3		59.8
<b>PSP4 recommended capex</b>			3.7	27.7	13.1	2.6		47.1
<b>Outturn cost</b>	0.3	2.8	3.1	12.5	42.3	49.3	31.5	141.8
<b>PSP4 variance</b>			-0.6	-15.2	29.2	46.7		60.1
<b>Recommended capex (PSP4 and 5)</b>			3.1	12.5	42.3	49.3	31.5	138.7
<b>Recommended capex adjustment</b>			0.0	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and CCGUS (2022) Final Report

## 3.5 Assessment of TasWater's PSP4 expenditure

Capex spend in PSP4 is forecast to exceed the allowance by \$72M or 8%.

The analysis in this chapter suggests that expenditure in PSP4 has shifted to delivering higher renewals spend than expected at PSP4 partly by overspending the allowance but also by deferring non-renewal schemes, especially compliance schemes (\$48M lower than the allowance) such as the North-West Water Supply Strategy and the Ridgeway Dam upgrade.

There has not generally been strong evidence provided for the decisions to increase renewals expenditure with limited documentation presented for the variance or of the decisions themselves. We consider that, based on the explanations provided to us, the approach to renewals, especially to water mains, is at an early stage of development, with limited consideration of root cause analysis, cost-effectiveness or CBA prioritisation and alternatives to asset replacement (e.g. calm networks and relining).

That said, we have not seen enough evidence to be able to conclude that any of the expenditure in PSP4 clearly meets the definition of being imprudent or inefficient. We have therefore recommended accepting the actual expenditure in FY23, 24 and 25 in the RAB roll-forward.



The only amendment we recommend relates to forecast spend for FY26. We have recommended accepting TasWater’s estimate that \$21M of spend on Selfs Point it initially expected to take place in FY25 has been deferred to FY26.

This is reflected in the summary of recommended PSP4 expenditure below.

**Table 3-14 - Recommended PSP4 capex (\$M, nominal)**

	2023	2024	2025	2026 (f)	Total
<b>TasWater proposal figures (including FY25 actuals)</b>	188.7	208.1	276.0	245.0	917.8
<b>Adjustment for Selfs Point deferral</b>				21.0	21.0
<b>PSP4 recommended capex</b>	188.7	208.1	276.0	266.0	938.8

*Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”. No adjustment is applied to FY25 as the figures in this table reflect FY25 actuals.*



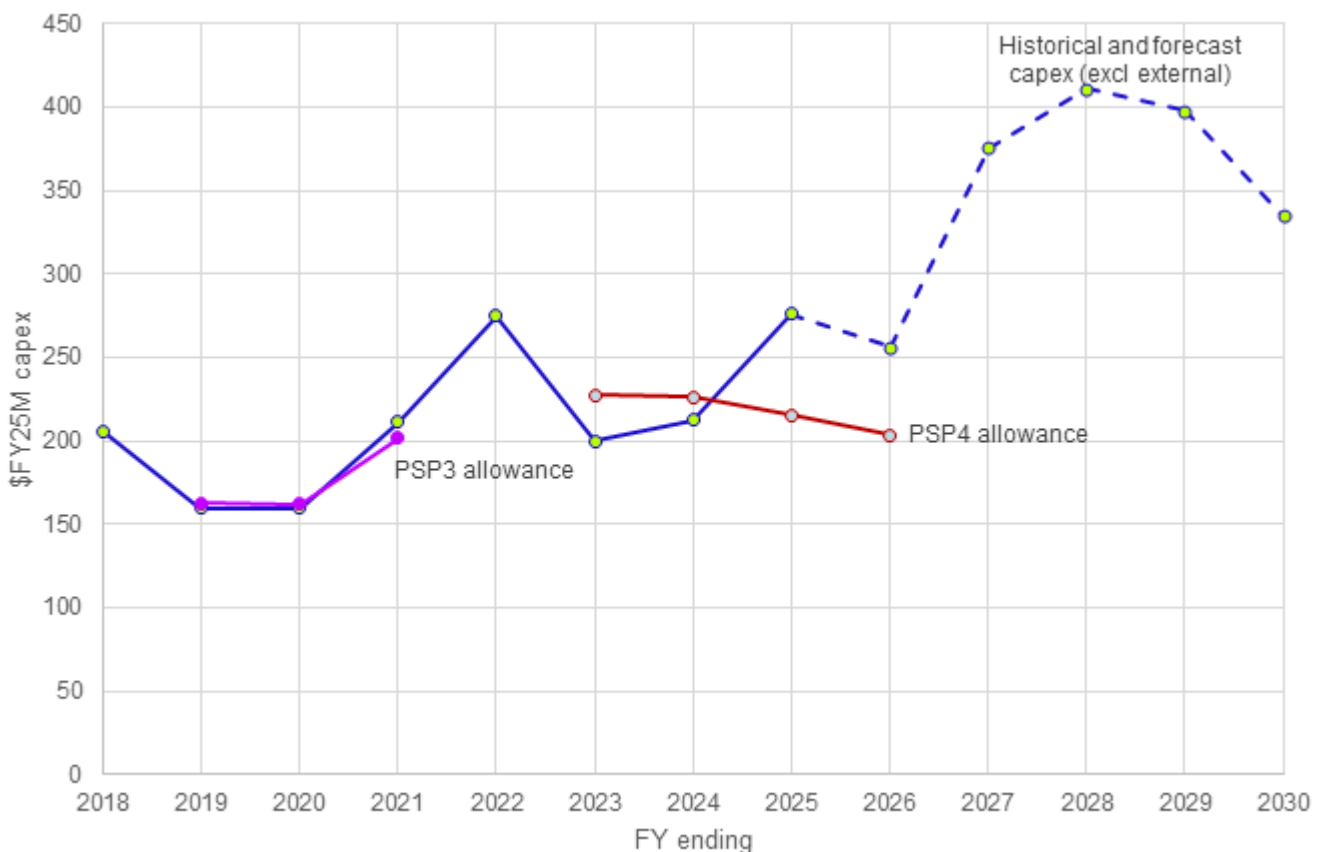
# 4. TasWater’s proposed PSP5 capex

## 4.1 Overall size of program

TasWater has spent an average of \$212M p.a. (in \$FY25) of customer-funded capex since 2018 with peaks of \$275M and \$276M in FY22 and FY25 respectively. It is proposing an average of \$380M p.a. (in \$FY25) in PSP5 or a 79% increase in average customer-funded capex. These figures are the total proposed spend before the application of TasWater’s proposed efficiency discussed below.

This high-level trend is summarised graphically below. This also highlights that whilst TasWater spent broadly in line with its allowance in the PSP3 period, it underspent it in the first two years of PSP4, has overspent it significantly in FY25 and forecasts doing so again in FY26. This is discussed in the PSP4 chapter above.

**Figure 4-1 - Historical and projected TasWater capex (excluding external funding and TasWater’s efficiency target)**



Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025” and TER 2018 and 2022 Final Reports

The increase in expenditure in PSP5 is driven by a number of large projects/programs, with the largest ten making up \$1,020M or 61% of a total program of \$1,674M (both nominal). These projects are set out below. We review all of these projects/programs as part of our sample review presented below.



**Table 4-1 - Largest proposed PSP5 capital projects/programs**

Name	Proposed PSP5 Capex (\$M nominal)
LSIP <sup>19</sup> #1 – Ti Tree Bend STP Transformation	\$356
Hobart - Ridgeway Dam Upgrade	\$144
Water Efficiency Program – NRW <sup>20</sup> reduction and Scheme Improvements	\$101
Burnie - Pet Dam Ridgley Safety Upgrade	\$97
Water Main Renewals	\$95
Electrical and Supervisory control and data acquisition (SCADA <sup>21</sup> ) Renewals	\$87
Metering Renewals	\$45
Hadspen and Carrick to Longford Pipeline - MVSS	\$34
Selfs Point Sewer Transformation	\$31
Sewer Main Renewals	\$30

Source: 'CWP' tab of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025". Excludes external funding.

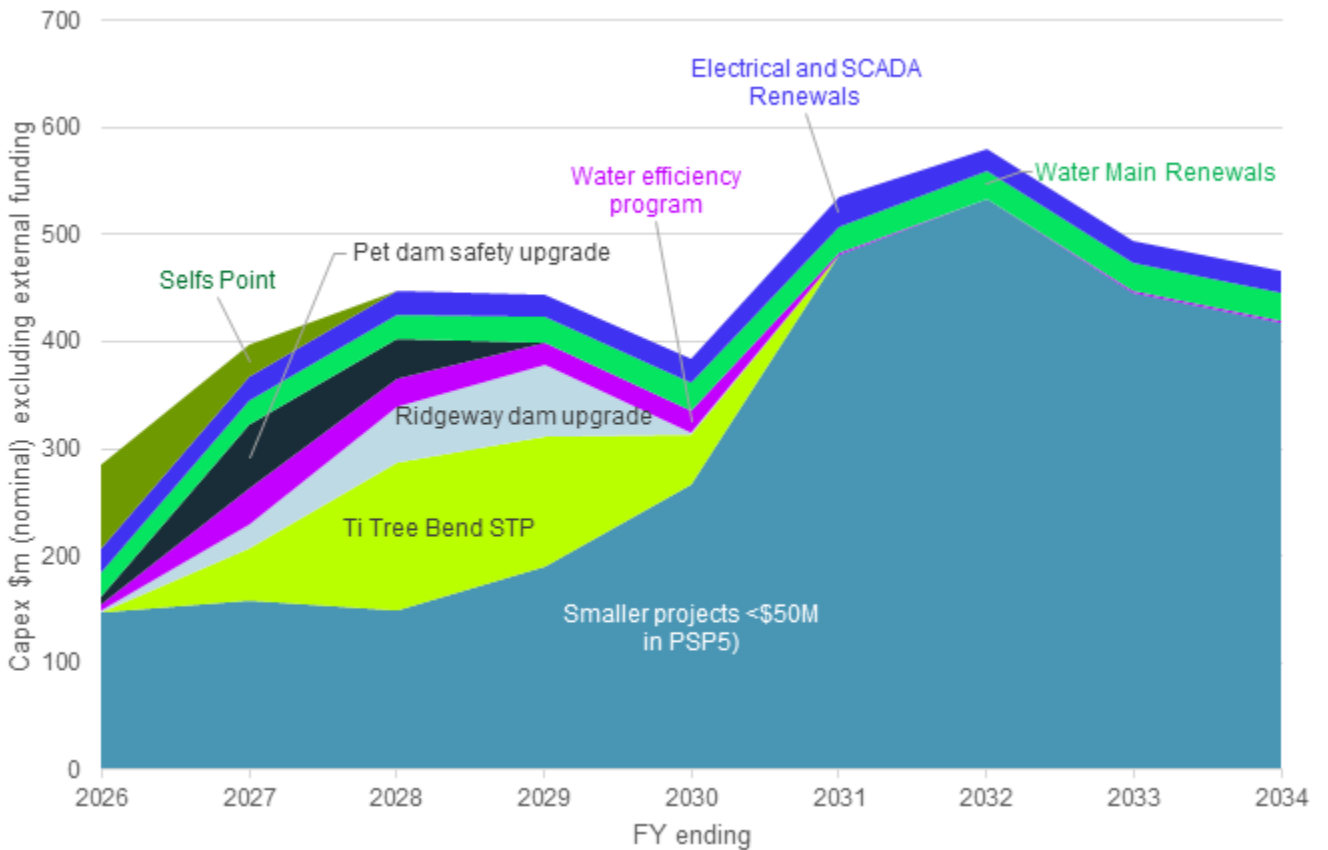
The effects of the large projects/programs are also summarised graphically below.

---

<sup>19</sup> Launceston Sewerage Improvement Plan  
<sup>20</sup> Non-Revenue Water  
<sup>21</sup> Supervisory control and data acquisition



**Figure 4-2 - Profile of TasWater's proposed large projects/programs**

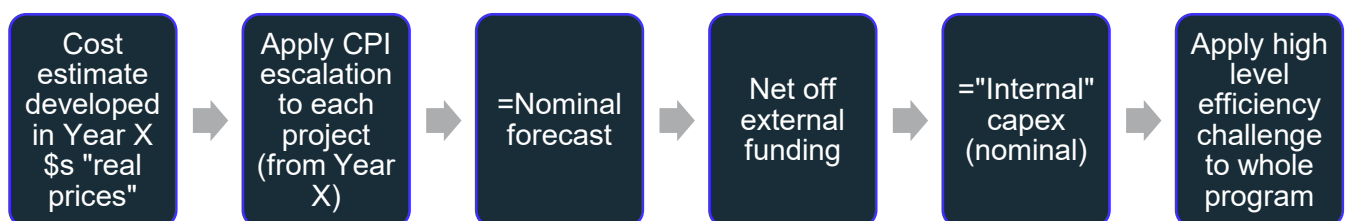


Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" tab named "CWP". Does not incorporate TasWater's proposed efficiency adjustment

The ramp up in spend on "smaller projects (<\$50M in PSP5) towards the end of PSP5 and continuing thereafter is partly due to a number of medium size projects moving towards delivery at the end of PSP5 followed, in the PSP6 forecasts, by increased spend on the Launceston Sewer Transformation / LSIP program as well as a number of larger projects such as "NWWWS Forth - New WTP".

## TasWater's approach to escalation and proposed efficiency adjustment

Our understanding of the way in which TasWater has applied escalation, taken account of external funding and applied its own efficiency challenge is as follows:



Where a comparison of historical and projected costs is useful we have used the “real prices” figures converted to \$FY25. Where there is external funding we have used nominal projections to be able to show the effects of external funding on the amount to be factored into customer bills (the “internal” amount in TasWater’s terminology).

TasWater has proposed a \$100M (nominal) or 5.9% efficiency challenge at a top level to its proposed capital program. As it has not been applied to specific projects and programs we have examined proposed spend before this adjustment (i.e. pre-efficiency) and revisit the application of an efficiency adjustment at the end of this section.

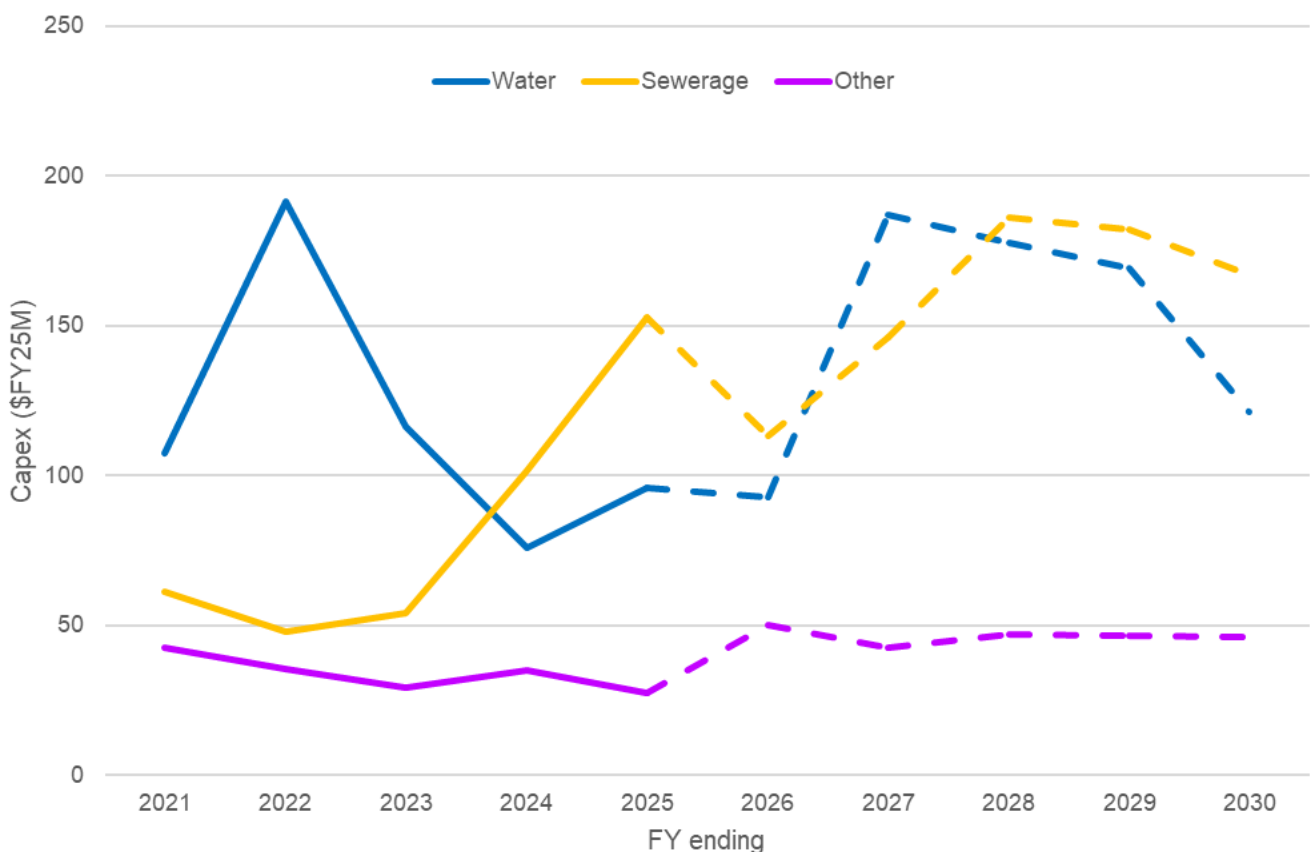
We revisit the approach to escalation and the application of the efficiency adjustment in our recommended expenditure below.

## 4.2 Spend by service and driver

The proposed increase in spend between PSP4 and PSP5 is reasonably evenly split between water (+\$274M or +72% in \$FY25) and sewerage (+\$260M or +62%). TasWater has proposed a \$40M or 28% increase (in \$FY25M) in ‘other’ capex which relates to spend which contributes to both water and sewerage services.

This is summarised graphically below.

**Figure 4-3 - Historical and proposed capex by service (\$FY25M)**



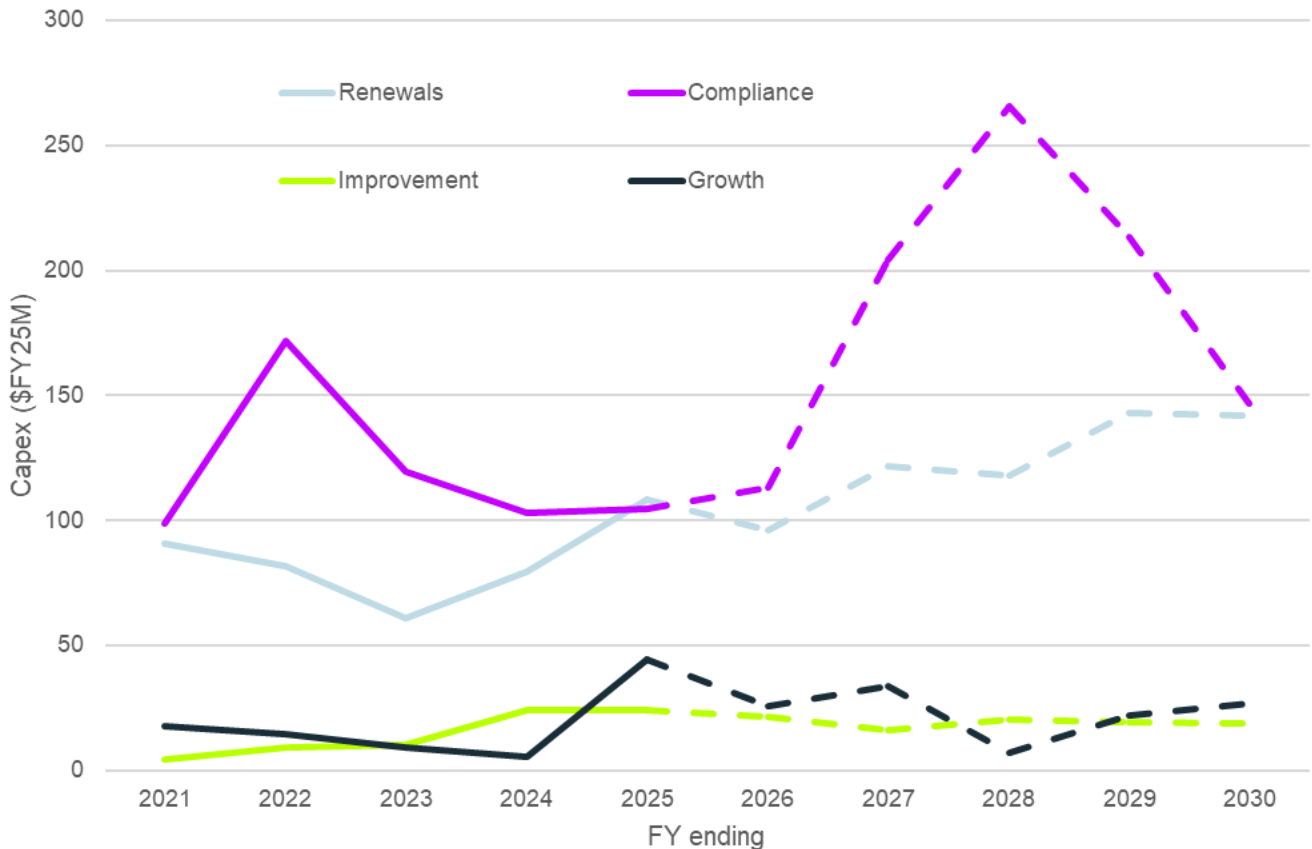
Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025” multiple tabs. Does not incorporate TasWater’s proposed efficiency adjustment



When examined by driver, the biggest proposed increase is in Compliance spend at +\$389M (four year total) or +88% in \$FY25. This is followed by Renewals at +\$180M or +52% continuing its general upward trend, with Improvement and Growth also seeing significant percentage increases albeit not as significant in total expenditure terms.

We note that whilst we have FY25 actual expenditure data, the driver-level information presented in this section is based on FY25 forecast not actuals as the FY25 actual spend data does not include driver information.

**Figure 4-4 - Historical and proposed capex by driver (\$FY25M)**



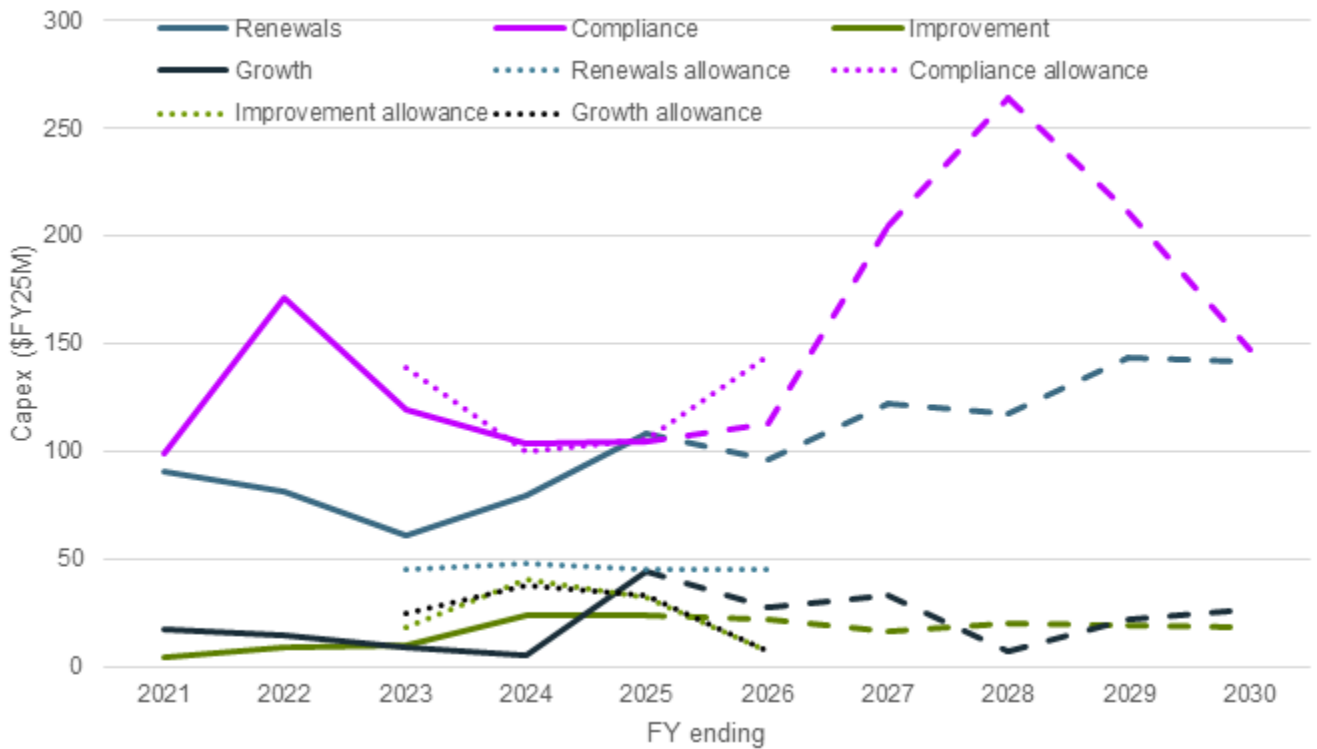
Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025” multiple tabs. Does not incorporate TasWater’s proposed efficiency adjustment.

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast.

We have also included the PSP4 allowance in the graphic below to give an indication of the change relative to the PSP4 assumptions. This highlights that the proposed spend on Renewals continues to be significantly higher than the PSP4 assumptions, as whilst the proposed spend on Compliance becomes significantly more than the allowance from FY25.



**Figure 4-5 - Historical and proposed capex by driver including PSP4 allowances (\$FY25M)**



Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast

We now present a review of a sample of TasWater’s proposed projects and programs below. As with PSP4, we have attempted to ensure representation across TasWater’s primary operational drivers and outcomes across the PSP5 period.

## 4.3 Growth

### 4.3.1 Overview

TasWater has proposed a significant increase in growth capex compared to recent actuals, with a large increase in the sewerage service outweighing a reduction in water spend as can be seen below.



**Table 4-2 - Growth capex trends (\$FY25M p.a.)**

Service	FY21 to 24 actuals	PSP4 average	PSP5 average	Delta FY21-24 actuals to PSP5	Delta FY21-24 actuals to PSP5
				\$FY25M p.a.	%
<b>Water</b>	9	6	5	-4	-43%
<b>Sewerage</b>	2	15	17	15	683%
<b>Other</b>	0	0	0	0	64%
<b>Total</b>	12	21	22	11	90%

Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast

However, there is significant volatility in these figures. We would make the following observations:

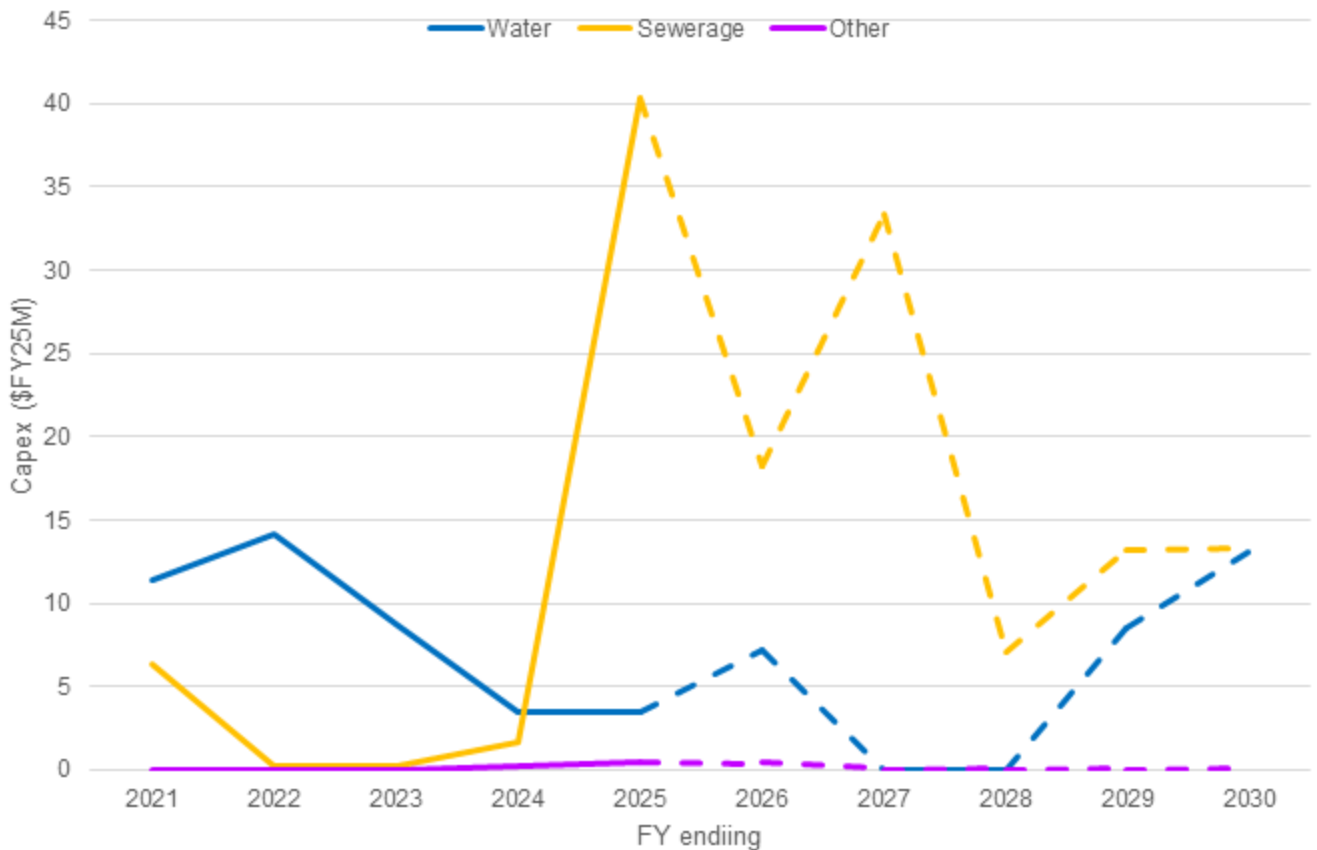
- On sewerage:
  - The spike in FY25 is largely driven by forecast spend of \$20.4M on the Tamar Estuary River Health Action Plan (TERHAP) and \$9.7M on “Bicheno STP and Recycled Water Scheme”. We understand that actual spend in FY25 was \$16.0M on TERHAP and \$0.5M<sup>22</sup> for Bicheno STP so the outturn spike is less than would appear from the graphic.
  - We have reflected TasWater’s expected deferral of \$21M of expenditure on Sells Point to FY26 in the graph below. FY26 also incorporates a \$6.0M negative forecast expenditure for TERHAP and \$1.9M negative forecast<sup>23</sup> for the Bicheno STP project. Given the Bicheno project has been deferred we consider it unlikely this negative expenditure (which we assume to relate to external funding for the project) will occur.
  - The spike in sewerage growth spend in FY27 is due to \$31.5M of Sells Point Sewer Transformation coded to growth that year.
  - The next largest sewerage service growth project relates to Sorell STP growth upgrade which we review below. This is followed by the Cambridge STP capacity improvement project.
- On water:
  - There are four growth water schemes proposed for PSP5, of which two are <\$1M. The two larger schemes only have spend forecast for FY29 and 30 and relate to a water main and pump station upgrade (both <\$20M).

<sup>22</sup> Both outturn figures are taken from the tab “Actuals\_FY25” from TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

<sup>23</sup> Both of these figures are taken from the tab “Forecast\_FY25\_FY26” from TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”



**Figure 4-6 - Growth capex trends (\$FY25M)**



Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast

### 4.3.2 Growth projections

TasWater considers that it operates in a low growth environment compared to most of the mainland utilities, with an annual population growth rate of only 0.2% from March 2024 to March 2025, and an annual average of 0.7% p.a. for the five years to March 2025.

To understand future growth, TasWater developed nine regional Connections, Population and Land Supply Reports in 2023 which used a combination of information sources to provide a suburb-level growth forecast and spatial maps of land supply and developments (see Figure 4-7). Forecasts have been developed for five yearly intervals to 2070. These have been used to develop TasWater’s nine regional water and sewer demand forecasts and masterplans (see Section 2.1.2).

Population growth forecasts within the Connections, Population and Land Supply reports are based on the following information sources:

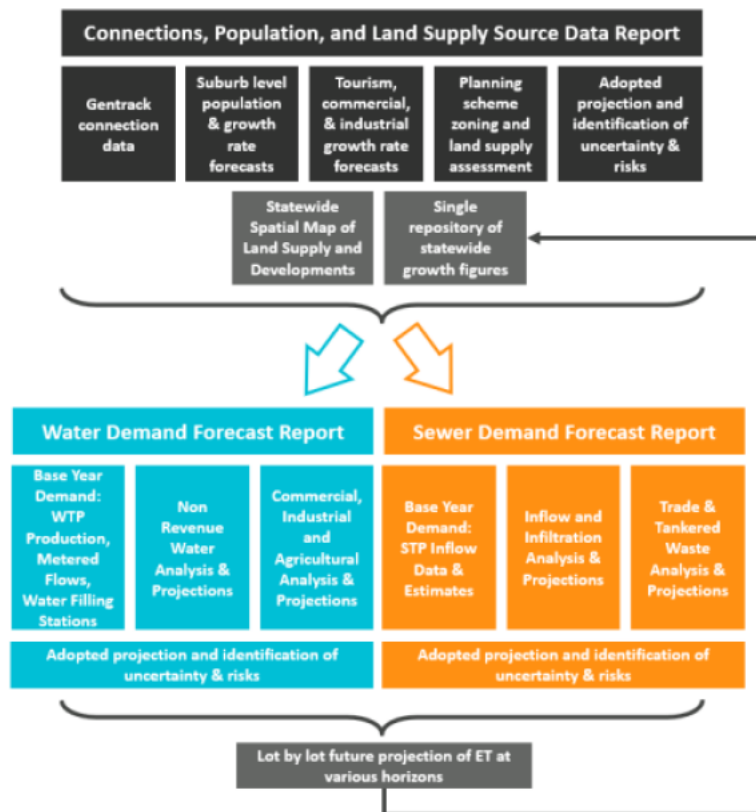
- Gentrack – TasWater’s software that stores property billing and metered data is used to identify the number of water and sewerage connected customers.



- ABS Census data, which shows population and household size by suburb, the most recent of which available was for 2021, with population growth rates from 2016-2021 also extracted.
- Tasmanian Treasury population projections from 2021-2042
- Council Structure Plans, reports and discussions with individual councils
- Regional land use strategies
- Development application data, including the number of approved large development applications (10 or more Equivalent Tenants) for each suburb from 2017-2023.
- TasWater held information on non-residential customers
- TasWater visitor survey data
- Analysis of land availability compared to projected dwelling growth rates from the census, to indicate suburbs in which projected demand exceeds land availability, resulting in potential rezoning of land.

TasWater reported in the interviews that forecasts are revisited every four years to incorporate new data and trends.

**Figure 4-7 - TasWater's growth and demand forecasting approach**



Source: TasWater's 2023 Connections, Population, and Land Supply Reports

TasWater provided the following figures illustrating the performance of TasWater's water and sewerage growth forecasts since FY23 alongside the Tasmanian Treasury forecasts. The figures show that both the Treasury's and



TasWater’s forecasts slightly underestimated growth in FY23 and FY24, but overestimated growth in FY25, with FY25 figures showing a decline in water connections. However, on average over the past three years growth has slightly exceeded both TasWater and the Treasury’s High forecasts. Conversely, TasWater reports in Section 10.3 of PSP5 that water consumption has on average from FY21 to FY24 been 2% lower than the approved forecast for those years.

TasWater is forecasting that for PSP5, the number of water connections serviced will increase by an average of 0.96% per year and the number of sewer connections serviced will increase by 0.88% per year on average, with a combined annual average growth forecast of 0.92% (see Table 4-4 below). TasWater reported that this overall forecast falls between the Medium and High Treasury forecasts for PSP5, and it appears in line with the PSP4 average trend.

**Table 4-3 - Performance of growth forecasts from FY23 to FY25**

	FY23	FY24	FY25	Average
<b>Water (TasWater)</b>				
Forecast	0.83%	0.83%	0.83%	0.83%
Actuals	1.62%	3.17%	-1.86%	0.98%
<b>Sewer (TasWater)</b>				
Forecast	1.10%	1.10%	1.11%	1.10%
Actuals	2.33%	1.61%	0.79%	1.58%
<b>Treasury forecast</b>				
Low	0.31%	0.20%	0.15%	0.22%
Medium	0.40%	0.45%	0.47%	0.44%
High	0.66%	0.91%	0.92%	0.83%

Source: TasWater response to additional RFI 9 within “RFI - From 06-10-2025 - Capex Investigations - Action List”

**Table 4-4 - TasWater water and sewer connections forecasts for PSP5**

	FY27	FY28	FY29	FY30	PSP5 annual average
<b>Water connections</b>	0.95%	0.96%	0.96%	0.96%	0.96%
<b>Sewer connections</b>	0.78%	0.92%	0.92%	0.92%	0.88%

Source: TasWater’s PSP5, Table 10.1

### 4.3.3 Specific projects/programs

Given the scale of spend on Growth only one project has been chosen for review. This relates to the Sorrell STP upgrade as presented below.

#### 4.3.3.1 Sorell - STP Upgrades for growth

The primary driver outlined for the upgrade at the Sorell STP is Growth. The township of Sorell is in TasWater’s words a “rapidly growing satellite town” with “numerous developments amounting to >400ET already approved”. The Sorell area growth rate is approximately 4%, which relative to the rest of Tasmania is high. There are also future plans for further expansion of the Sorell township, with rezoning discussions with the local council ongoing, which have the potential to open up another potential 2,000 Equivalent Tenants (ET) of residential land in the area. TasWater has noted that the plant is nearing capacity, and as a result it needs to upgrade the STP in order to cater for the planned growth.

TasWater has also outlined that compliance and improvement are secondary drivers for the planned works. The plant is located adjacent to one of the largest oyster growing regions in the state and when spills are noted from the



plant there is a need to shut-down the oyster farms for a period of 21 days, which impacts the local economy and the public perception of TasWater. The area is also a Ramsar<sup>24</sup> wetland (one of only a few in the state) and therefore a particularly sensitive environment.

TasWater currently avoids discharging into “the Pittwater” via a reuse scheme; however, in wet weather events the STP does discharge into the Pittwater. During the interviews TasWater noted that this discharge is non-compliant with the plant’s licence condition. By completing the planned upgrade the project seeks to ensure discharge will no longer be required under these conditions.

The existing plant was built in 1993 with limited upgrades since. Sorell is part of a longer term rationalisation plan in the area (not planned as part of PSP5). The upgrades proposed are therefore to enable the forecast short-medium term growth and ensure compliance, as an interim measure before rationalisation takes place (in 10-20 years) in the area and the site is rationalised to a plant at Penna.

The interim upgrades proposed as part of this project include the addition of a new clarifier and chlorine contact tank, upgrade of the sludge dewatering system and conversion of the existing sludge lagoon into a stormwater detention basin.

GHD were engaged by TasWater to complete an optioneering study. This considered four options:

- Option 1 - Base Case (Do Nothing)
- Option 2 – Interim Upgrades (selected option)
- Option 3 – Partial Upgrade
- Option 4 – Rationalisation to Penna with Sorell Decommissioning

Via a long consultative process with GHD, TasWater Operations (and other departments) and various detailed options development sessions, an STP optimisation report was produced in February 2024 outlining the available upgrade options. These options were assessed in a Multi-Criteria Analysis (MCA) which considered three broad scenarios – Cost Focussed, Environment Focussed and Equally Weighted. The outcome from the MCA process was that Option 2 performed better under the cost-focussed scenario. However, it did not perform well under the Environment focussed scenario as it would not achieve TasWater’s commitment to cease discharging to the Pittwater.

Due to the higher cost implications of Options 3 and 4, Option 2 was selected, as it was deemed by TasWater to still improve the effluent quality and provide required capacity to facilitate growth. However, it was conceded by TasWater that this will not cease discharging to the Pittwater under wet weather conditions so will continue to be non-compliant with licence conditions.

The project is currently at the Short-Form Strategic Business Case phase. This business case includes a Concept Design. It is anticipated that the final design will commence in FY29 and construction would commence in FY30.

Contradictory to TasWater’s statement that discharge to the Pittwater is non-compliant with the licence condition at the plant, they noted at interview that the project is only planned for the end of PSP5 as it is seen as a lower priority as there is no regulatory commitment to delivering the works.

TasWater forecast the project to have a capex of \$20.3M in PSP5, with \$5.0M forecast In FY29 and \$15.3M in FY30.

It is anticipated that the project will be procured and delivered via the Medium Project Framework that TasWater is establishing as part of their transition from the CDO to their Future Delivery Model. However, at interview TasWater

---

<sup>24</sup> Refers to a wetland designated under the Convention on Wetlands of International Importance (1971)



did note that although this is the expected mechanism of procurement and delivery, given the project isn't planned until later in PSP5, the exact details will be determined and recommended as part of the Detailed Business Case process.

From the perspective of growth as the primary driver for this project, in order to facilitate the planned growth in the region the upgrade at the plant, **appears prudent at some point**. However, the justification was not accompanied by a discussion or articulation of the timing requirement for the upgrade with quantifiable data (i.e., growth forecasts intersecting with plant capacity at the time of the required upgrade).

It is also noteworthy that the planned upgrade mentions environmental compliance as a secondary but important driver. However, the planned upgrade will not improve on the key issue at the plant with regards to discharge to the Pittwater in wet weather events. Although evidence of optioneering has been provided, **it is not clear that this is an efficient capex spend in PSP5. Given the gaps in the data provided and TasWater's own admission that the project is delayed to the end of PSP5 due to it being a lower priority, we do not consider this to be a project with a strong justification for inclusion in the PSP5 period. We have assumed that it is deferred to PSP6.**

**Table 4-5 – Sorell STP upgrade PSP5 forecast (\$M, nominal)**

	FY27	FY28	FY29	FY30	Total
<b>PSP5 proposed capex</b>	0.0	0.0	5.0	15.3	20.3
<b>PSP5 recommended capex</b>	0.0	0.0	0.0	0.0	0.0
<b>Recommended capex adjustment</b>			-5.0	-15.3	-20.3

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

## 4.4 Renewals

### 4.4.1 Overview

TasWater has proposed a significant increase in renewals capex compared to recent actuals, with the largest increase being in the water service as can be seen below.

**Table 4-6 – Renewals capex trends (\$FY25M p.a.)**

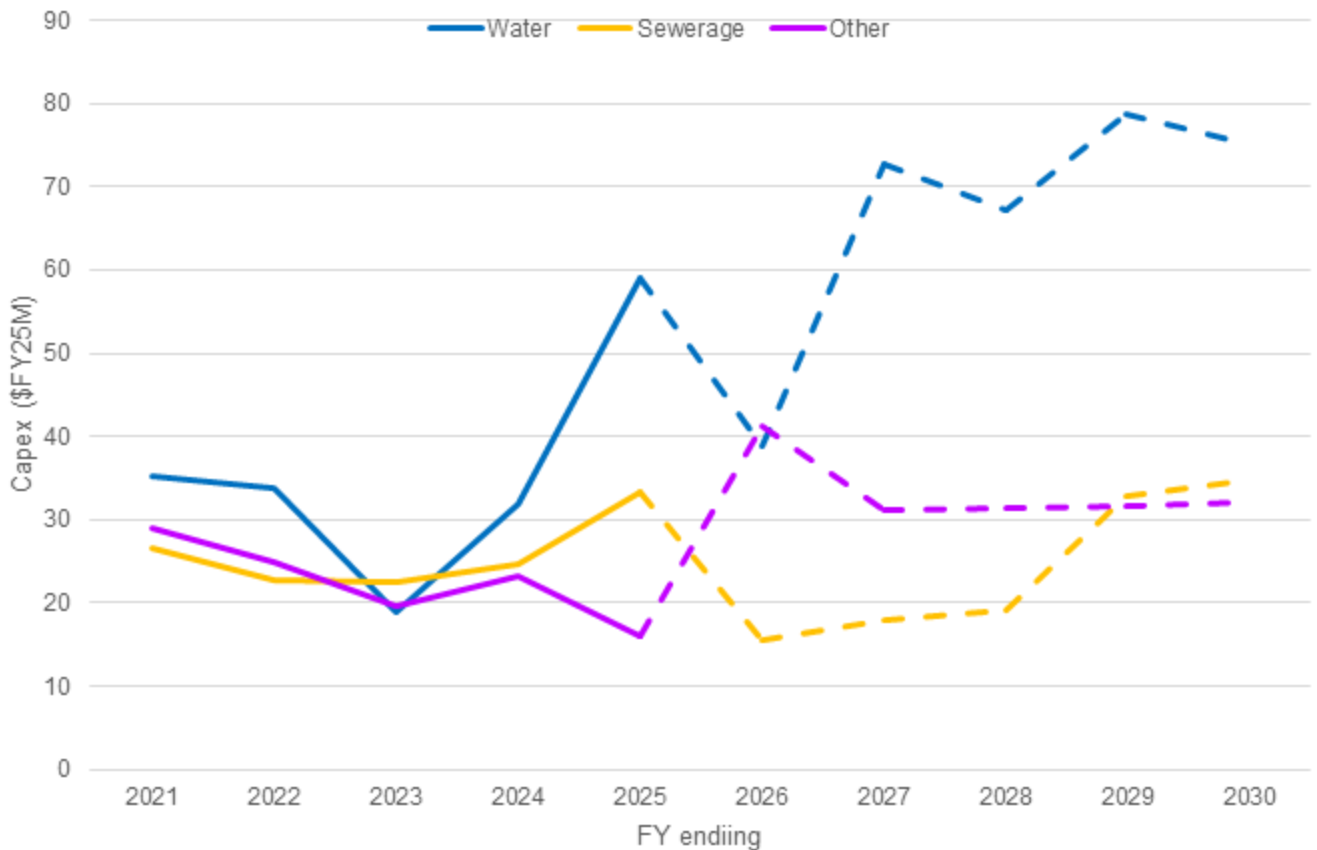
Service	FY21 to 24 actuals	PSP4 average	PSP5 average	Delta FY21-24 actuals to PSP5	Delta FY21-24 actuals to PSP5
				\$FY25M p.a.	%
<b>Water</b>	30	37	73	43	145%
<b>Sewerage</b>	24	24	26	2	9%
<b>Other</b>	24	25	32	7	30%
<b>Total</b>	78	86	131	53	67%

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast



**Figure 4-8 – Renewals capex trends (\$FY25M)**



Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast

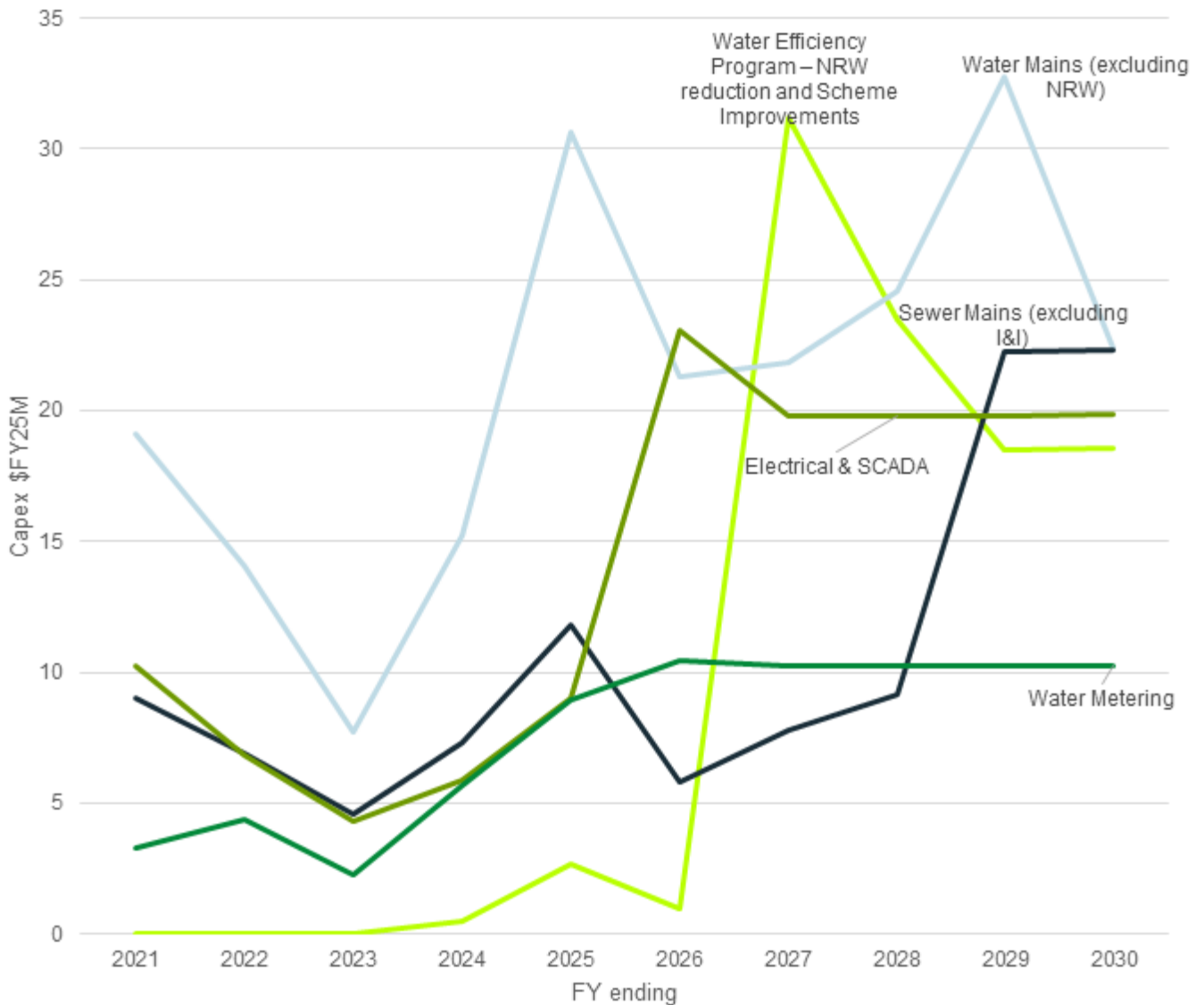
The largest proposed renewals programs are the water efficiency program (\$101M nominal), water mains renewals (\$95M) and “electrical and SCADA renewals” (\$87M).

We have mapped historical and proposed spend to the RAB categories used by TasWater in order to examine the trends over time for renewals sub-programs on a like-for-like basis<sup>25</sup>. The trends in a number of the largest programs are summarised graphically below.

<sup>25</sup> We have kept the water efficiency and inflow & infiltration programs separate to these categories to distinguish them from mains renewals.



Figure 4-9 - Trends in a number of renewals sub-programs



Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”. This includes \$10.5M of metering spend in FY26 which was coded as Improvement but appears to be Renewals

## 4.4.2 Water renewals

TasWater has provided a summary of the performance of its water system which is reproduced below. This suggests:

- Response and unplanned interruption supply restoration time performance appears generally positive with some narrow failures to meet the 5 hour unplanned restoration target in FY23 and FY24.
- Water mains breaks, burst & leaks and % unaccounted for water performance are less positive with consistent under-performance except for the measure of losses per km of main.

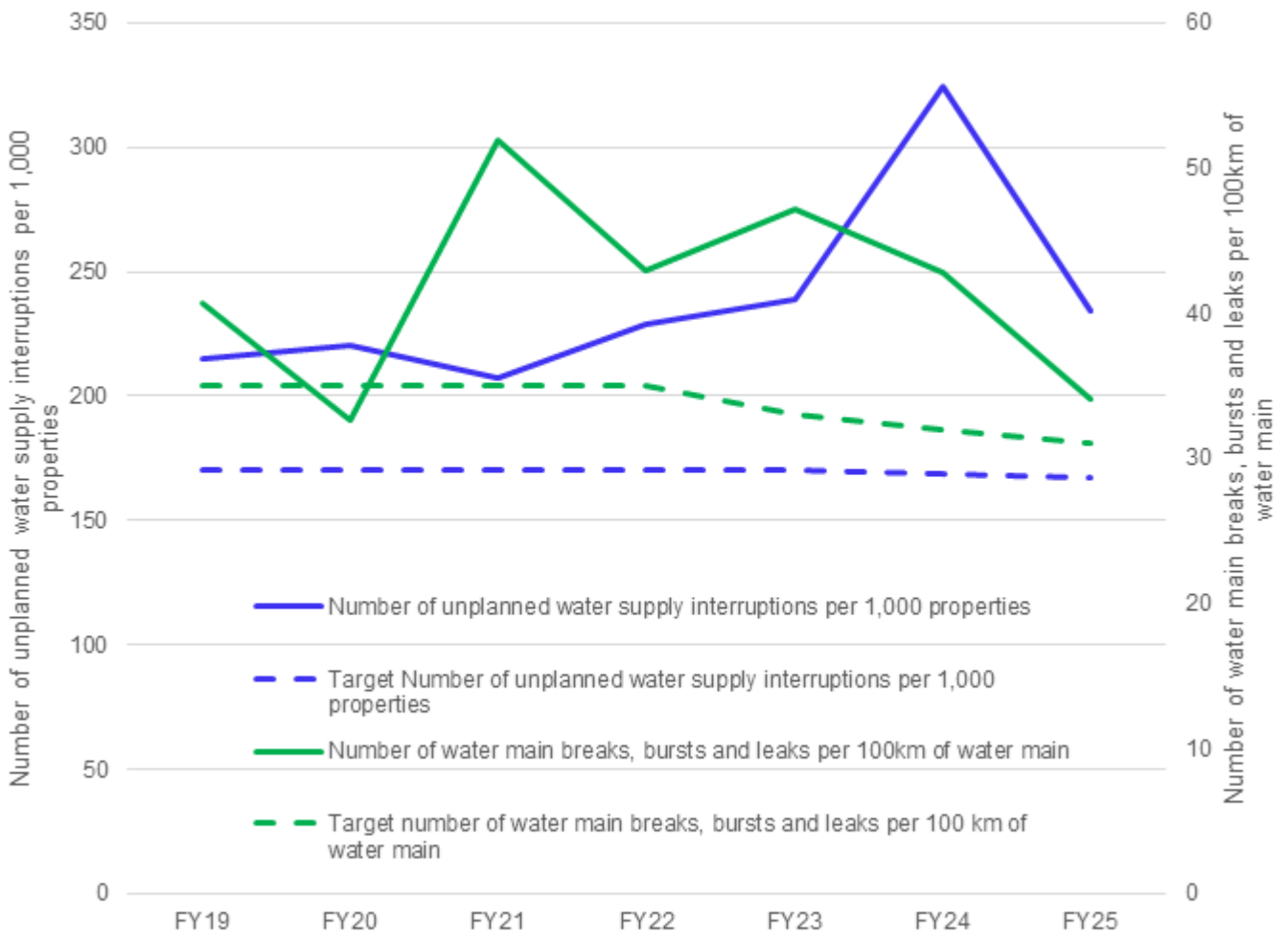


- Performance for restoration of supply after planned water interruptions is also consistently below the target.

In terms of the stability of system performance, there is some noise in the data, as would be expected, but there appears to be a generally improving trend in losses and main breaks in recent years. However, unplanned interruptions do appear to have worsened with a particular spike as can be seen in FY24.

Unplanned interruptions to supply performance can have many root causes and solutions. Root causes are not just related to pipe condition and can be linked to valve operations, pumping station performance, power supply, etc. Similarly, solutions to improve performance can including implementation of calm networks, strategic spares, valving, etc as well as asset renewals.

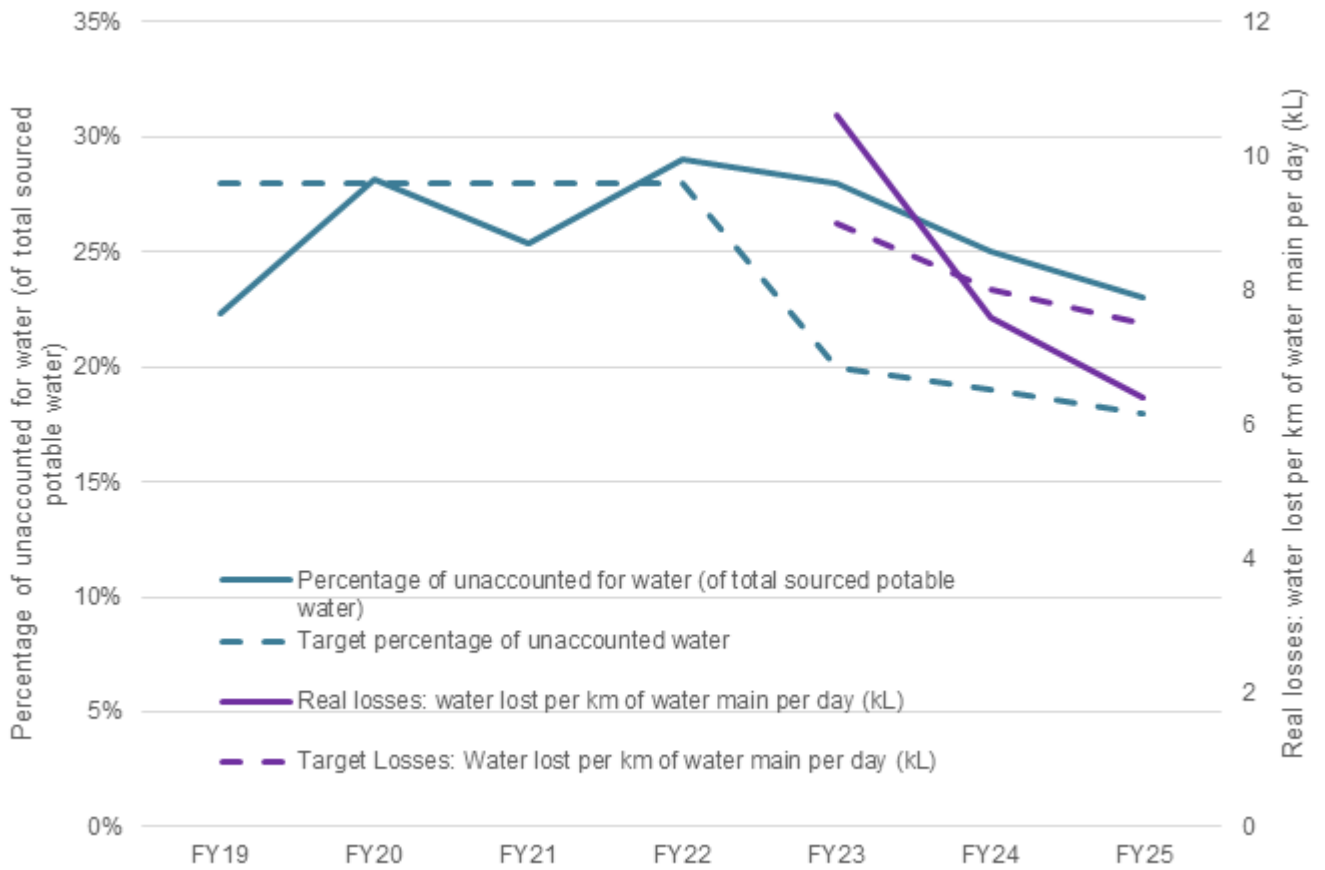
**Figure 4-10 – Interruptions and mains breaks performance trends**



Source: Analysis of TasWater spreadsheet “RFI - From 06-10-2025 - Question 5 - Spreadsheet of PSP3 and 4 performance v targets”



**Figure 4-11 – Water losses performance trends**



Source: Analysis of TasWater spreadsheet “RFI - From 06-10-2025 - Question 5 - Spreadsheet of PSP3 and 4 performance v targets”



**Table 4-7 – Water service performance data**

		PSP3				PSP4				
Water		FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	
1	Number of water main breaks, bursts and leaks per 100km of water main	Target	35	35	35	35	33	32	31	30
		Result	40.7	32.6	51.9	43	47.17	42.8	34.1	
2	Percentage of response times within 1 hour to attend Priority 1 bursts and leaks <sup>1</sup>	Target	90%	90%	90%	90%	90%	90%	90%	90%
		Result	97.4%	92.3%	90.0%	100%	100.0%	93.8%	96.6%	
3	Percentage of response times within 3 hours to attend Priority 2 bursts and leaks <sup>2</sup>	Target	90%	90%	90%	90%	90%	90%	90%	90%
		Result	96.2%	97.2%	93.2%	97%	92.6%	92.6%	95.7%	
4	Percentage of response times within 3 days to attend Priority 3 bursts and leaks <sup>3</sup>	Target	90%	90%	90%	90%	90%	90%	90%	90%
		Result	89.1%	94.5%	93.3%	94%	91.8%	90.9%	92.8%	
5	Number of unplanned water supply interruptions per 1,000 properties	Target	170	170	170	170	170	169	167	165
		Result	214.8	220.3	207.6	229	239.2	324.7	234.1	
6	Percentage of unplanned water supply interruptions restored within 3 hours	Target	80%	80%	80%	80%	80%	80%	80%	80%
		Result	86%	87%	84%	83%	84.3%	81.0%	87.7%	
7	Percentage of unplanned water supply interruptions restored within 5 hours	Target	94%	94%	94%	94%	94%	94%	94%	94%
		Result	96.0%	94.7%	94.3%	94%	93.6%	93.2%	97.9%	
8	Percentage of planned water supply interruptions restored within the time nominated to affected customers <sup>4</sup>	Target					90%	95%	95%	95%
		Result					88.4%	85.7%	89.8%	
9	Percentage of planned water supply interruptions restored within 5 hours	Target	90%	90%	90%	90%	90%	90%	90%	90%
		Result	59.5%	83.9%	54.5%	56%	58.0%	62.1%	68.7%	
10	Percentage of unaccounted for water (of total sourced potable water)	Target	28%	28%	28%	28%	20%	19%	18%	17%
		Result	22.3%	28.1%	25.4%	29%	28%	25%	23%	
11	Real losses: water lost per km of water main per day (kill)	Target					9.0	8.0	7.5	7.0
		Result					10.6	7.6	6.4	
<b>Customers</b>			<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>FY26</b>
16	Number of water complaints per 1,000 properties	Target					6.0	6.0	6.0	6.0
		Result					7.47	6.99	5.31	
18	Percentage of calls resolved upon first contact <sup>6</sup>	Target					90%	90%	90%	90%
		Result					95%	95%	94%	
19	Customer satisfaction score	Target					70%	72%	74%	75%
		Result					72.3%	72.4%	79.0%	

Source: TasWater spreadsheet “RFI - From 06-10-2025 - Question 5 - Spreadsheet of PSP3 and 4 performance v targets”

We now review the key renewals projects and programs TasWater has proposed.

#### 4.4.2.1 Water Efficiency Program

This is the largest water project in TasWater’s proposed PSP5 program. The PSP5 Outcome identified for the program is “reduced leakage in our system”.

In its major project summary TasWater identifies Compliance as the primary driver, with Renewals and Improvements as secondary drivers. It classifies it as a Compliance driver because:



the “State of the Water Industry Report 2023 stated that an estimated 28% of TasWater’s sourced potable water was unaccounted for, noting this was significantly higher than the prescribed standard for FY23 of 20% (TER 2023)”

We note that the State of the Water industry 2022-23 report highlights concerns about the reliability of the reported unaccounted for water figures:

*TasWater has had difficulty in obtaining reliable estimates of the volume of unaccounted for water. This is because TasWater has not had accurate information on the volumes of water supplied to the urban water supply system from its water treatment plants. As a result, TasWater has not been able to accurately report on its water losses within its water supply system. For some treatment plants, TasWater also does not have accurate information on the volume of sourced water that enters these plants.*

The Enterprise Full Business Case sets out the objective and proposed interventions within the water efficiency program. The proposed scope consists of six streams:

- Stream 1 – Monitoring / reporting accuracies (enabling works): water balance calcs and network meter verification
- Stream 2 – Apparent losses: customer meter replacements
- Stream 3 - Non-visible leakage: District Metered Areas (DMAs), active leakage detection, leak repairs and pressure management
- Stream 4 – Scheme & network asset management: pipe replacement new valves and hydrants, water carting audit, cathodic protection audit and repair. This is the highest cost stream.
- Stream 5 – Storage & distribution networks (enabling works): res tests, meter res flows, flow balances, transmission leak detection
- Stream 6 – Treatment and operational losses: WTP inlet metering, assess operational use.

The Enterprise Full Business Case presents three high level options:

- Option 1: Fast Start: Drive down non-revenue water (NRW) ASAP with immediate (or early) investment across all six streams of work.
- Option 2: Moderate Implementation: A blend of Options 1 and 3.
- Option 3: Gradual Build: Focus initial investment on enabling works which don’t directly reduce NRW but do provide more data for decision-making. With these insights, NRW reduction activities can be more targeted (allowing slightly less total uplift in investment).

All three options are designed to meet a target of reducing TasWater’s infrastructure leakage index (ILI)<sup>26</sup> to 1.0 by the end of FY31 with the main difference being how quickly interventions are ramped up at the beginning of the period.

The business case concludes that the preferred option is to Option 3 on the basis of the delivery risk for Option 1 and the flexibility Option 3 offers based on a yearly review of results.

---

<sup>26</sup> Defined as “a numerical indicator used to quantify and evaluate the level of real water losses in a distribution network”: <https://watergain.net/ili-explained/>



The major project business case and PSP5 spreadsheets set out a capital cost of \$101M in PSP5 in addition to \$5M in FY26. The spreadsheet provided with the business case provides an estimate of capex which does not match the total in the PSP5 submission but nonetheless gives an indication of the breakdown of costs by stream:

**Table 4-8 – Water efficiency capex by stream (\$FY25M total)**

Stream	Capex in years 2027 to 2030
STREAM 1 - Monitoring / reporting accuracies	6
STREAM 2 - Apparent losses	19
STREAM 3 - Non-visible leakage	27
STREAM 4 - Scheme & network asset management	71
STREAM 5 - Storage & distribution networks	4
STREAM 6 - Treatment and operational losses	4
<b>Total</b>	<b>131</b>
<i>PSP5 spreadsheet total (nominal)</i>	<i>101</i>
<i>PSP5 spreadsheet total (\$FY25)</i>	<i>92</i>

Source: Analysis of TasWater spreadsheets “D. 33 - TasWater NRW Econ Model 2025 Update - 2025-06-14” and “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

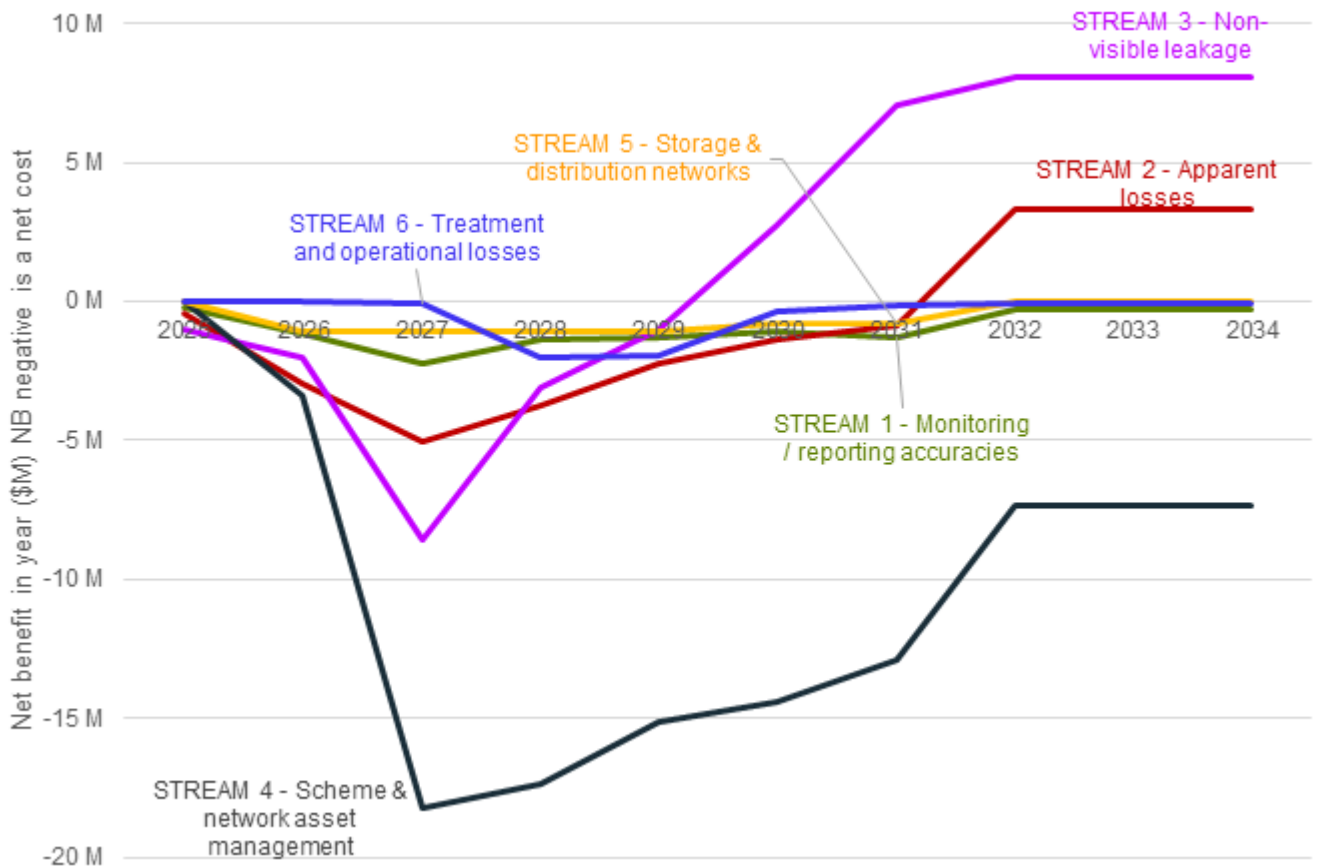
An economic analysis has been used to evaluate the impacts of the proposed interventions, including ongoing opex and the benefits of reduced real and apparent losses. The business case makes it clear that the costs of the proposed program outweigh the benefits, as summarised in the business case:

*...never brings the preferred option to a positive NPV, particularly when considering the time value of money*

Analysis of the economic model suggests that only Streams 2 and 3 generate net economic benefits in any year.



**Figure 4-12 – Net benefits of proposed water efficiency measures**



Source: Analysis of TasWater spreadsheet “D. 33 - TasWater NRW Econ Model 2025 Update - 2025-06-14”

**Our view**

Reducing losses can have beneficial effects on the costs of producing water and resilience to drought conditions. However, the costs of the program put forward by TasWater significantly outweigh the benefits. This is not surprising given that one of the largest elements of the program is mains replacement, which is generally a very costly way to reduce leakage.

Fixing an objective of achieving an ILI of 1.0 does not appear to be well justified. It does not take account of the economics (costs and benefits) of achieving the reduction.

The economic analysis provided with the business case suggests benefits of two of the streams may outweigh the costs. Stream 2 involves meter replacement and Stream 3 involves DMA establishment, active leakage detection and repair and pressure management.

However, the benefits of Stream 2 are based on a reduction in “apparent losses”, valued at \$1.22/kl to represent the average variable retail cost of water. We understand that this approach may be a reasonable proxy for the additional revenue TasWater would expect to generate. However, it is not clear to us that a reduction in apparent losses provides this scale of benefit to customers. It does not reduce expenditure (opex or capex), simply changes the denominator for volumetric billing, leaving the allowed revenue unchanged. Given that TasWater already has an ongoing meter replacement program (see below), it is not clear what meaningful benefit a step up in meter replacement would provide.



We summarise below our view of the case for each of the streams:

**Table 4-9 – Water efficiency capex by stream (\$FY25M total)**

Stream	Capex in years 2027 to 2030 (\$M)	Our view	Cost treatment adjustment	Recommended PSP5 capex
STREAM 1 - Monitoring / reporting accuracies	6	These are best practice enabling actions to better understand TasWater's losses	70% of proposed "capex" is expected to be capitalised based on proposed meter installation capex Much of the other work (meter testing, audit work) is more likely to be expensed	4
STREAM 2 - Apparent losses	19	TasWater has not demonstrated that this provides tangible benefits <b>for customers</b> beyond the meter renewals program	n/a	0
STREAM 3 - Non-visible leakage	27	These are best practice activities at the top of the loss management hierarchy and appear to be cost-beneficial. Given the lack of scope definition, however, it seems likely that this will proceed at a slower rate.	76% of proposed "capex" is expected to be capitalised as the analysis treated active leak control teams as capex	14
STREAM 4 - Scheme & network asset management	71	Extensive mains renewals (91% of the proposed capex) are rarely cost-beneficial. Only the non-pipe renewals part of this appears justified at this stage.	n/a	6
STREAM 5 - Storage & distribution networks	4	This is a best practice enabling activity. Given the lack of scope definition, however, it seems likely that this will proceed at a slower rate.		3
STREAM 6 - Treatment and operational losses	4	This is a best practice enabling activity		4
<b>Total</b>	<b>131</b>			<b>31</b>



Source: Analysis of TasWater spreadsheet "D. 33 - TasWater NRW Econ Model 2025 Update - 2025-06-14"

These measures should enable TasWater to gain a much better understanding of its losses in the PSP5 period. We consider it would be valuable for TasWater to develop economic level of leakage targets and a tailored losses management plan for each of its systems and to focus its efforts on reducing losses in systems where benefits are likely to be highest.

The amended recommendations are reflected in the table below. Note that the figures in this table are in \$FY25M terms so do not match the total nominal spend referenced above.

**Table 4-10 – Outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for the water efficiency program (in \$FY25M)**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	PSP4 /5 Total	Aver age
<b>Outturn/forecast capex</b>	0.0	0.0	0.0	0.5	2.7	0.9					4.1	0.7
<b>PSP5 proposed capex</b>							31.2	23.5	18.5	18.5	91.7	22.9
<b>PSP5 recommended capex</b>							5.7	7.8	9.3	8.6	31.4	7.8
<b>Recommended capex adjustment</b>							-25.5	-15.7	-9.2	-10.0	-60.4	-15.1

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

#### 4.4.2.2 Water Main Renewals

The principal driver identified by TasWater for this program is Renewals with a secondary driver of Compliance related to meeting standards for mains breaks. The explanation of the Renewals driver in the major program summary refers to the use of Pipeline Asset Risk Management System (PARMS) to inform prudent rates of asset renewals.

The major program summary sets out leaks & breaks performance data relative to the minimum service level target to make the case that TasWater should spend more on renewals.

Four main options have been considered in developing this program:

1. Base case (do nothing)
2. Manage risk aligned to Total Cost to Community (referred to as \$97M over PSP5)
3. Manage risk to maintain current level of service (referred to as \$128M over PSP5)
4. Manage risk to achieve target level of service (referred to as \$240M over PSP5)

Option 2 is adopted as the preferred approach because it "provides the lowest sustainable total cost to community". The total cost to the community (TCC) is based on opex + capex + "risk cost", where risk cost is generated by PARMS by multiplying the likelihood (failures per year) by the consequence of failure (\$/failure).

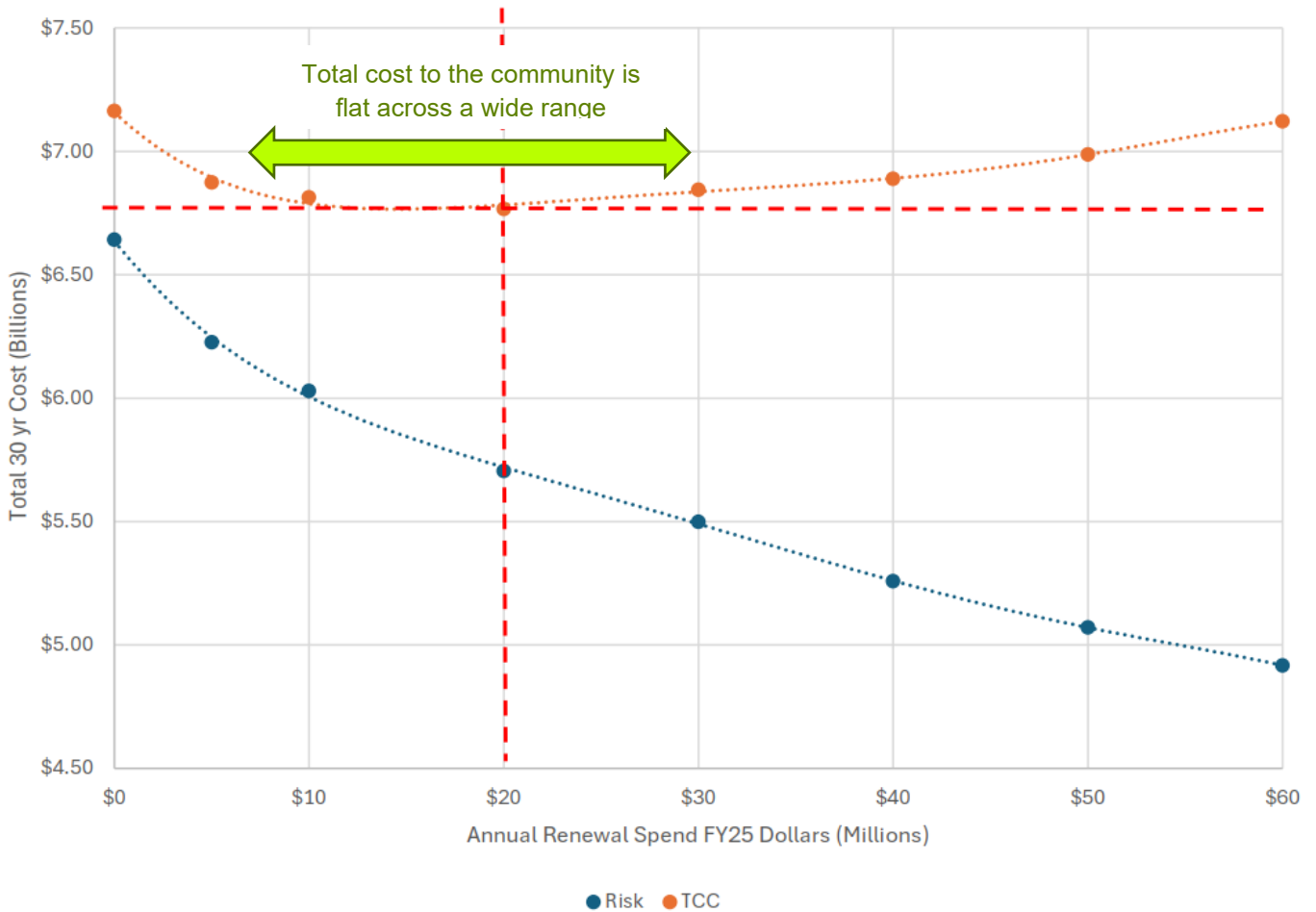
We note that whilst this optioneering suggests that the current and target levels of service will not be met, the PSP proposes significant reductions in the water main breaks, bursts and leaks target by 2030.



If we accept the WISER / PARMS analysis, it appears that the total cost to the community (TCC) for mains renewals spend is relatively flat between \$10M and \$30M p.a. as can be seen below. This is acknowledged in the WISER report:

*the curve is relatively flat implying that investment levels between \$10M and \$30M could be justified.*

**Figure 4-13 - PARMS modelled total cost to the community and mains renewals spend**



Source: Investment Planning for Water Reticulation Pipes in TasWater, WISER, January 2025

We note that no alternatives to mains renewals appear to have been considered. In general, approaches such as calm networks, pressure management (as envisaged as part of the water efficiency program) or relining provide more cost-effective alternatives or complements to mains renewals where they are feasible. At interview, TasWater also confirmed that it does not currently prioritise based on cost per risk reduction but that it would like to get to this position.

We understand from the interview that TasWater has identified a stock of approximately 100 “known” highest priority jobs in 2025 which it would like to complete. It provided examples for FY26 and 27 equal to \$34.5M for 64 jobs i.e. just over \$0.5M per job. This suggests that approximately \$11M p.a. would be required to deal with these known highest priority planned works between FY26 and FY30.

We consider that the business has **not justified a significant level of (and increase in) expenditure on mains renewal spend. It does not appear to have considered or built into its submission more cost-effective ways to reduce bursts and leaks (such as calm networks) or to prioritise customer impact.** Even without



considering more cost-effective solutions, the assessment provided suggests a broad range of efficient renewals between \$10M to \$30M p.a. The number of planned jobs identified is also supportive of approximately \$11M p.a. of known highest priority planned works, which we understand normally makes up 80% of its mains renewals program.

**We therefore recommend a level of spend of \$14M p.a. to make an allowance for reactive as well as planned works and strongly recommend that TasWater considers alternatives to straightforward replacement (calm networks, pressure management, relining etc).**

**Table 4-11 – PSP4 allowance, outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for water main renewals (in \$FY25M)**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	PSP4 /5 Total	Aver age
<b>PSP4 allowance</b>			2.5	2.6	2.7	3.8					11.6	2.9
<b>Outturn/forecast capex</b>	19.1	14.0	7.7	15.2	30.7	21.3					75.0	18.0
<b>PSP5 proposed capex</b>							21.9	24.6	32.8	22.4	101.6	25.4
<b>PSP5 recommended capex</b>							14.0	14.0	14.0	14.0	56.0	14.0
<b>Recommended capex adjustment</b>							-7.9	-10.6	-18.8	-8.4	-45.6	-11.4

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and TasWater q.27 response within "RFI - From 06-10-2025 - Capex Investigations - Action List"

#### 4.4.2.3 Metering Renewals

This is a cyclical replacement program and the stated reason for the proposed metering renewals program is to maintain required levels of service and meter registration accuracy.

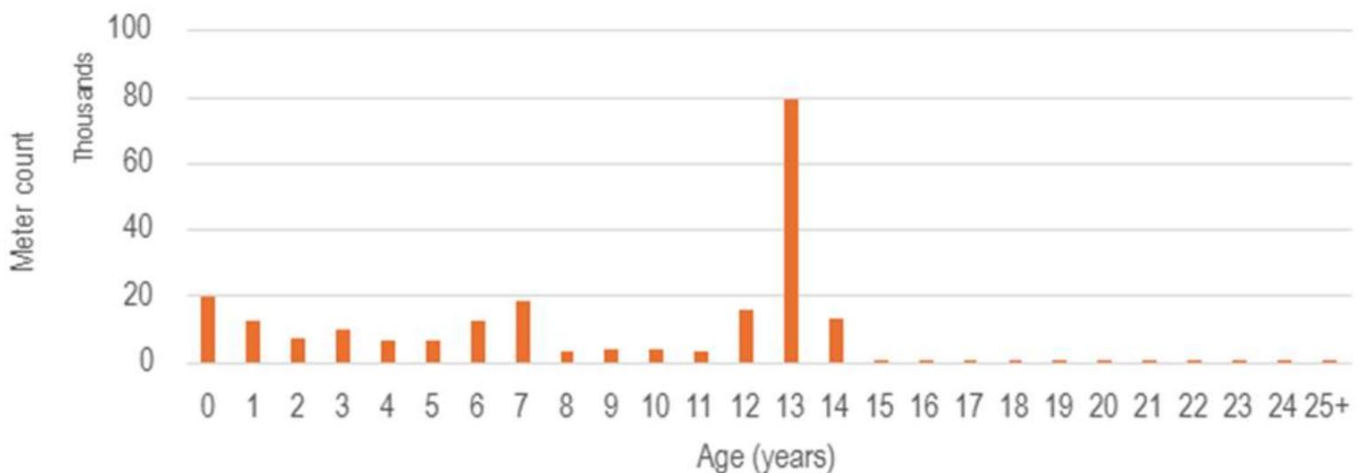
TasWater has 220,200 customer meters of which 3,085 are large and the remainder 'small'.

TasWater has considered three high level options for meter renewals: 'do nothing', a cyclic renewals approach and an increase to replace faulty remote read capability. Its preferred approach is the cyclic renewals program.

Proposed expenditure represents a real terms increase compared to both the allowance and TasWater's forecast PSP4 expenditure. We asked TasWater to explain why this was. It explained that many meters were installed in the early 2010s and that they have not therefore required significant lifecycle renewals until recently. This is supported by the age profile of meters shared with us see below for small meters which make up the vast majority of customer meters.



**Figure 4-14 – Small meter age profile**



Source: TasWater presentation on metering renewals

The proposed program envisages replacing c22k meters p.a. This includes an allowance for planned work of approximately 16.5k meters p.a., the majority of which are age-based but also replacement of failed meters. The remainder is an allowance for unplanned replacements of 4k p.a. for new meters and 1.5k p.a. of reactive customer-initiated works. We note that new meters are not strictly renewals but are included in this program.

Historical meter replacements and spend were tabled at interview but gave an unusual pattern of unit costs especially in FY23. The team were not sure why this would be but it appears likely to be a data integrity issue with either meter renewal numbers or expenditure in that year.

We consider that there is a strong case for a step up in meter renewal spend in PSP5 with many meters coming to their end of life having been installed in the early 2010s. The rate of renewals proposed appears reasonable and the level of expenditure is consistent with the historical level for this number of meters.

We have therefore recommended accepting TasWater’s proposed meter renewals expenditure.

**Table 4-12 – PSP4 allowance, outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for metering renewals (in \$FY25M).**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	PSP4 /5 Total	Average
<b>PSP4 allowance</b>			7.0	6.5	6.8	6.6					27.0	6.7
<b>Outturn/forecast capex</b>	3.3	4.4	2.3	5.7	8.9	10.4					27.3	5.8
<b>PSP5 proposed capex</b>							10.2	10.2	10.2	10.2	40.9	10.2
<b>PSP5 recommended capex</b>							10.2	10.2	10.2	10.2	40.9	10.2
<b>Recommended capex adjustment</b>							0.0	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and TasWater final PSP4 document

NB: we have included the \$10.5M spend on meter renewals in FY26 that TasWater has included in its forecast against the Compliance driver as we assume it should have been treated as Renewals.



#### 4.4.2.4 Reservoir Renewals

The stated aim of TasWater's statewide PSP5 water storage reservoir renewals program is to undertake renewal of TasWater's 284 operational water storage assets and 3,300 unit-level assets in order to maintain compliance and service standards relating to water quality and pressure. Inspections of all assets are undertaken on a periodic basis to assess condition and failure risk, with a risk level assigned to all assets (extreme, high, medium and low).

As with TasWater's other PSP5 renewal programs, TasWater's brief project summary document sets out four theoretical levels of intervention that have been considered:

- Option 1 – Base case (do nothing): Cease proactive inspection, maintenance repairs and renewals of water storage assets and manage risk via reactive maintenance repairs, and renewal upon functional failure of the asset.
- Option 2 – Manage extreme risk assets only: Continuation of the current proactive program to undertake minor works, renewal or refurbishment of assets identified as at extreme risk of failure identified through periodic physical inspection and by the Water Storage Asset Class Management Plan.
- Option 3 – Manage extreme and high risk assets only: As per Option 2, but also including high risk assets.
- Option 4 – Manage extreme, high and medium risk assets only: As per Option 3, but also including medium risk assets.

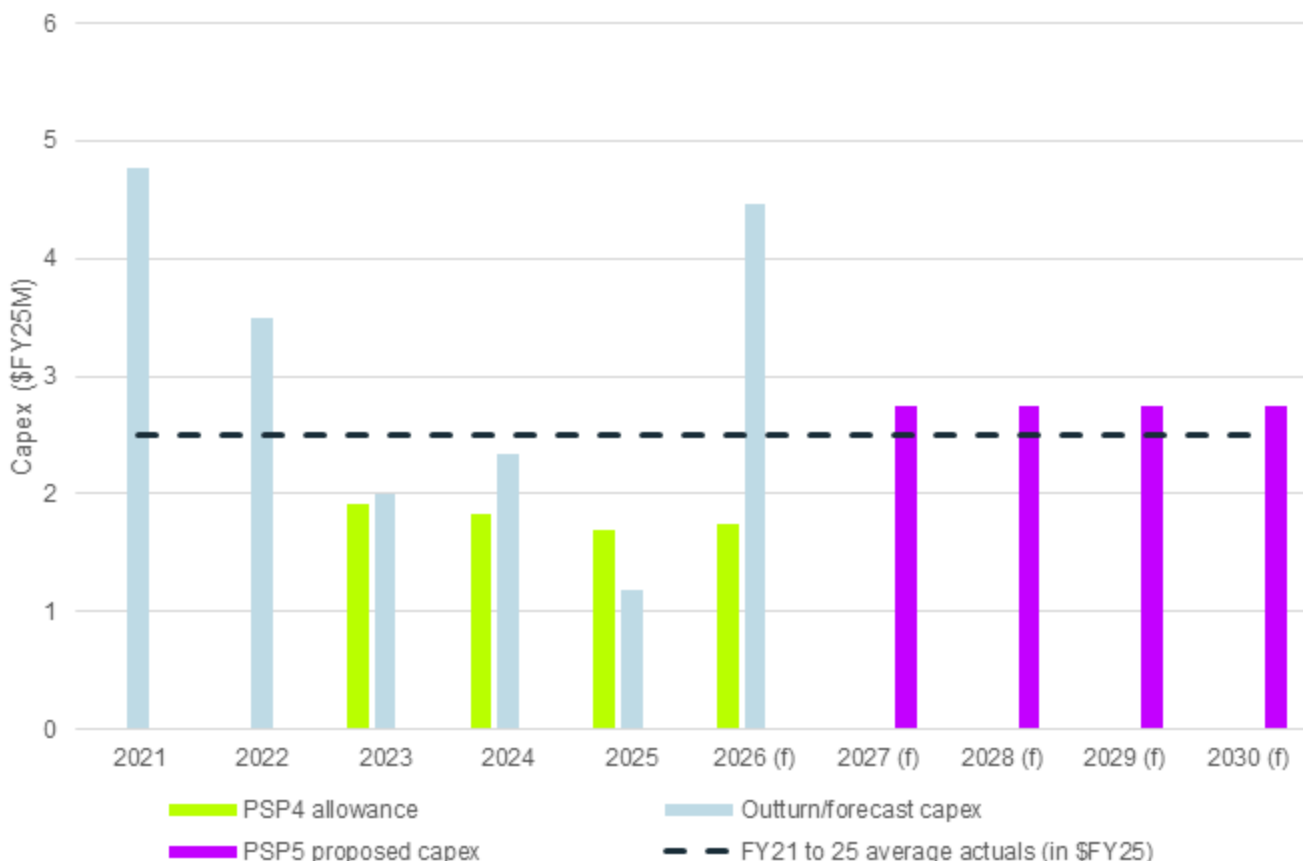
TasWater has selected Option 2 as its preferred option based on the lowest cost. However, this is not underpinned by financial modelling or scenario analysis to evaluate costs, benefits, or the impact on service levels and outcomes across different investment scenarios.

Our analysis of TasWater's reservoir renewals capex over PSP4 indicates that it is expected to be \$10.0M (\$FY25) or an average of \$2.5M p.a. This includes a forecast of \$4.5M in FY26. Spend is expected to be \$2.8M higher than the allowance of \$7.2M.

TasWater is seeking a modest increase for PSP5, with a proposed spend of \$2.7M p.a. as can be seen graphically below.



**Figure 4-15 – PSP4 capex allowance, PSP4 outturn capex and proposed PSP5 spend on the reservoir renewals program**



Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

TasWater stated during project interviews that its PSP5 costing approach combined bottom-up estimates for known projects with top-down assumptions. However, TasWater also stated that the known project list is neither fully costed nor scheduled, indicating that the approach is predominantly top-down. We requested further explanation of the cost build up and forecasting approach following the interviews, to which TasWater provided the following response:

*The PSP5 investment has been determined taking into account risk prioritisation, assessed condition and supply criticality. The age profile of water storage facilities is influencing the volume of defects, maintenance activities and required renewals with some reservoirs/tanks at mid service life and require significant civil renewal works such as concrete movement and poor joint sealing and internal lining replacement.*

*In PSP5 there are several reservoirs/tanks that require investment to address either or a combination of:*

- *Water leaks,*
- *Water quality issue – relining, roof/covers*
- *Personnel safety – access to, in and on structures.*

...

*During PSP5, 30 reservoirs sites have been identified from recent routine condition assessment that require more in-depth condition review and are expected to require substantial renewal works.*



The reservoir renewals program during PSP5 will be delivered by the new plant and stationary procurement framework, the contracts for which were executed in August 2025.

We recognise that investment in renewals is required to maintain the performance of reservoir assets. TasWater has asked for spend levels to be at a level which is very similar to PSP4 actuals which are not significantly in excess of the allowance on the scale of the capital program. **We have therefore recommended no adjustment to the proposed reservoir renewals program.**

**Table 4-13 – PSP4 allowance, outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for reservoir renewals (in \$FY25M)**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	PSP4 /5 Total	Aver age
<b>PSP4 allowance</b>			1.9	1.8	1.7	1.7					7.2	1.8
<b>Outturn/forecast capex</b>	4.8	3.5	2.0	2.3	1.2	4.5					10.0	2.5
<b>PSP5 proposed capex</b>							2.7	2.7	2.7	2.7	11.0	2.7
<b>PSP5 recommended capex</b>							2.7	2.7	2.7	2.7	11.0	2.7
<b>Recommended capex adjustment</b>							0.0	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and TasWater q.44 response from "RFI - From 06-10-2025 - Capex Investigations - Action List". Note that this table is based solely on the line "reservoir renewals" in the model.

### 4.4.3 Sewerage renewals

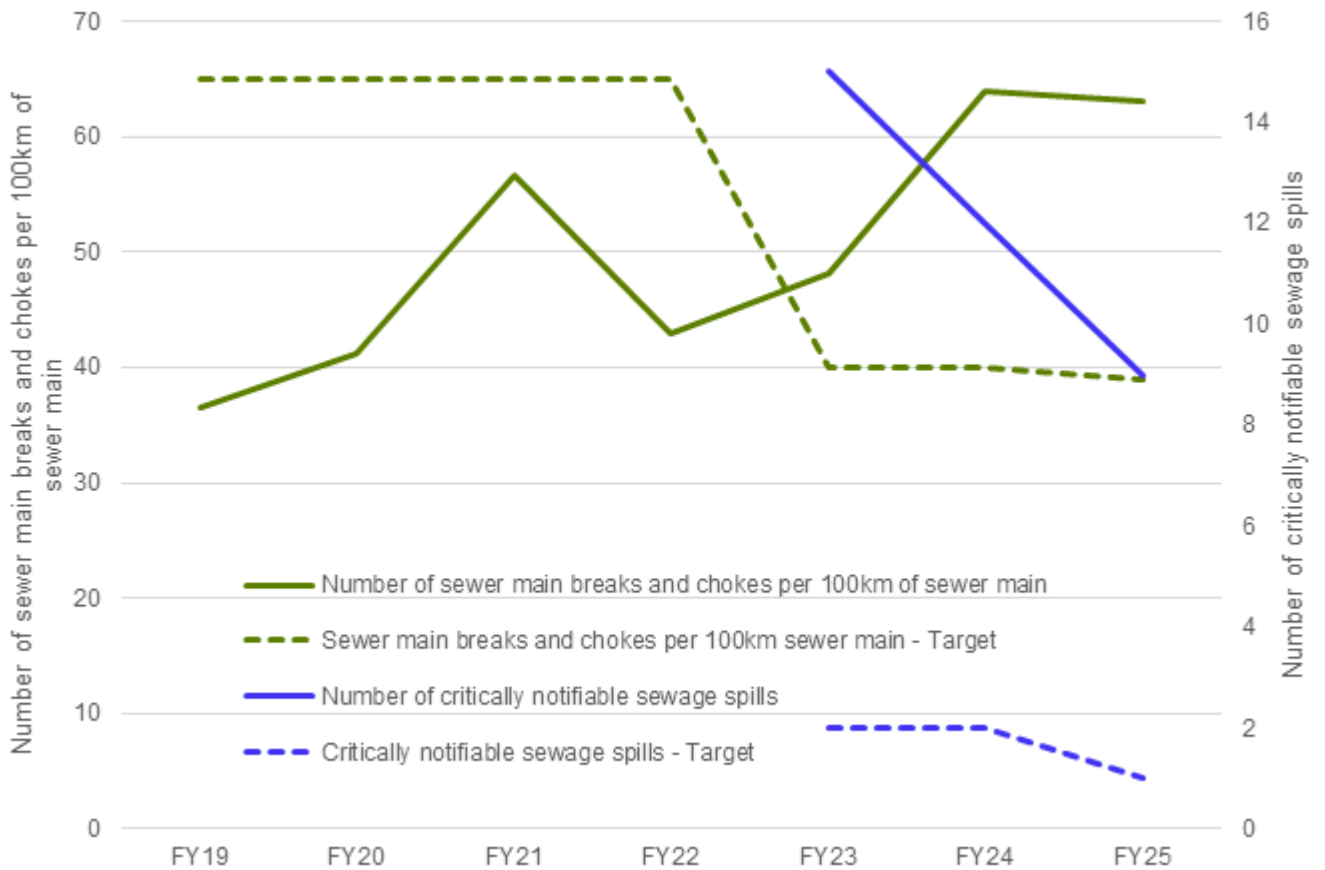
TasWater has provided a summary of the performance of its sewerage system which is reproduced below. We note that these are focused on the performance of the network rather than the treatment side of the sewerage services.

The performance data suggest that breaks and chokes appear to have been on a generally worsening trend. Timeliness of response performance appears to have followed the same trend.

Critical spills are higher than the target but appear to have been on an improving trend.



**Figure 4-16 – Sewer breaks and critical spill performance trends**



Source: Analysis of TasWater spreadsheet “RFI - From 06-10-2025 - Question 5 - Spreadsheet of PSP3 and 4 performance v targets”

**Table 4-14 - Sewerage service performance data**

			PSP3				PSP4			
12	Number of sewer main breaks and chokes per 100km of sewer main	Target	65	65	65	65	40	40	39	38
		Result	36.6	41.2	56.6	43	48.1	63.9	63.0	
13	Percentage of sewer spills, breaks and chokes responded to within 1 hour	Target	85%	85%	90%	90%	90%	90%	90%	90%
		Result	88.9%	91.5%	91.0%	83%	83.4%	79.8%	75.7%	
14	Percentage of sewage spills contained within 3 hours	Target					99%	99%	99%	99%
		Result					99.0%	92.7%	99.3%	
15	Number of critically notifiable sewage spills <sup>5</sup>	Target					2	2	1	1
		Result					15	12	9	
<b>Customers</b>			<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>FY26</b>
17	Number of sewerage complaints per 1,000 properties	Target					1.3	1.1	1.0	1.0
		Result					1.70	2.03	1.95	
18	Percentage of calls resolved upon first contact <sup>6</sup>	Target					90%	90%	90%	90%
		Result					95%	95%	94%	
19	Customer satisfaction score	Target					70%	72%	74%	75%
		Result					72.3%	72.4%	79.0%	



Source: TasWater spreadsheet “RFI - From 06-10-2025 - Question 5 - Spreadsheet of PSP3 and 4 performance v targets”

We now review the key renewals projects and programs TasWater has proposed.

#### 4.4.3.1 Sewer Main Renewals

The stated aim of TasWater’s statewide PSP5 sewer main renewals program is to undertake renewal of TasWater’s 4,981 km sewer network assets in order to maintain service standards and comply with EPA targets relating to spills into highly sensitive environments.

CCTV analysis is used to inspect sewer main interiors, with activities targeted to assets identified as being most susceptible to blockages. AI approaches are used to identify and categorise defects and assign a level of priority based on condition.

As described in Section 3.4.2.3 above, TasWater has recently established a new asset health assessment framework to manage renewals and maintenance. During the interviews TasWater explained that this new risk management system provides full visibility of the actions required to address issues across its asset base. All risks and issues are recorded in a central risk management spreadsheet, which is regularly updated to trigger timely interventions. This tool also helps assess whether operational measures, such as flushing, are sufficient to defer or avoid renewals, ensuring investment decisions are both cost-effective and risk-informed. TasWater’s view was that this marked a significant step in the business’s journey toward a more holistic approach to risk management. The system enables teams to determine how much time the business has to mitigate risks using interim measures and offers a structured mechanism to review the risk profile of every asset, including sewer mains. TasWater’s view is that by PSP6 they will have a much clearer view of asset requirements and associated costs, allowing them to calculate risk reduction per dollar spent.

Alongside this, TasWater is developing a Sewer Performance Improvement Plan aimed at reducing blockages and chokes per 100 km, wet and dry weather spills, odour complaints, and hazardous gases. The plan will eventually cover all catchments but is currently focused on the highest-risk areas. A discovery phase is underway to identify existing gaps and inform a detailed plan and business case.

TasWater intends to transition to a more predictive approach, such as forecasting spills before they occur. While the current understanding of the sewer network is less advanced than the water network, TasWater’s aim is to improve visibility and proactive management. By June 2026, TasWater intends to have a comprehensive plan in place, supported by technology rollouts for monitoring and reporting. However, no additional budget has been allocated for this initiative, as it is expected to be delivered through adjustments to business-as-usual processes.

The improvement program includes:

- Inflow and infiltration management
- Renewal and relining activities
- Long-term planning for capacity, storage, and network upgrades
- Maintenance effectiveness and adjustments (e.g., clearing and cleaning)
- Deployment of monitoring technology to enable predictive analytics

The intention is that this approach will provide TasWater with a clearer view of network hotspots by PSP6, enabling better prioritisation of investments and improved risk management.

TasWater’s brief project summary document sets out four theoretical levels of intervention that have been considered:



- Option 1 – Base case (do nothing): Cease proactive renewals of assets and manage risk via reactive renewal upon functional failure of the asset.
- Option 2 – Manage extreme risk assets only: Continuation of the current proactive program to renew or refurbish assets identified as at extreme risk of failure identified through physical asset inspection and by the Sewer Main Asset Class Management Plan.
- Option 3 – Manage extreme and high risk assets only: As per Option 2, but also including high risk assets.
- Option 4 – Manage extreme, high and medium risk assets only: As per Option 3, but also including medium risk assets.

TasWater has selected Option 2 as its preferred option based on the lowest cost. However, as with the majority of the other renewals programs, this is not underpinned by financial modelling or scenario analysis to evaluate costs, benefits, or the impact on service levels and outcomes across different investment scenarios.

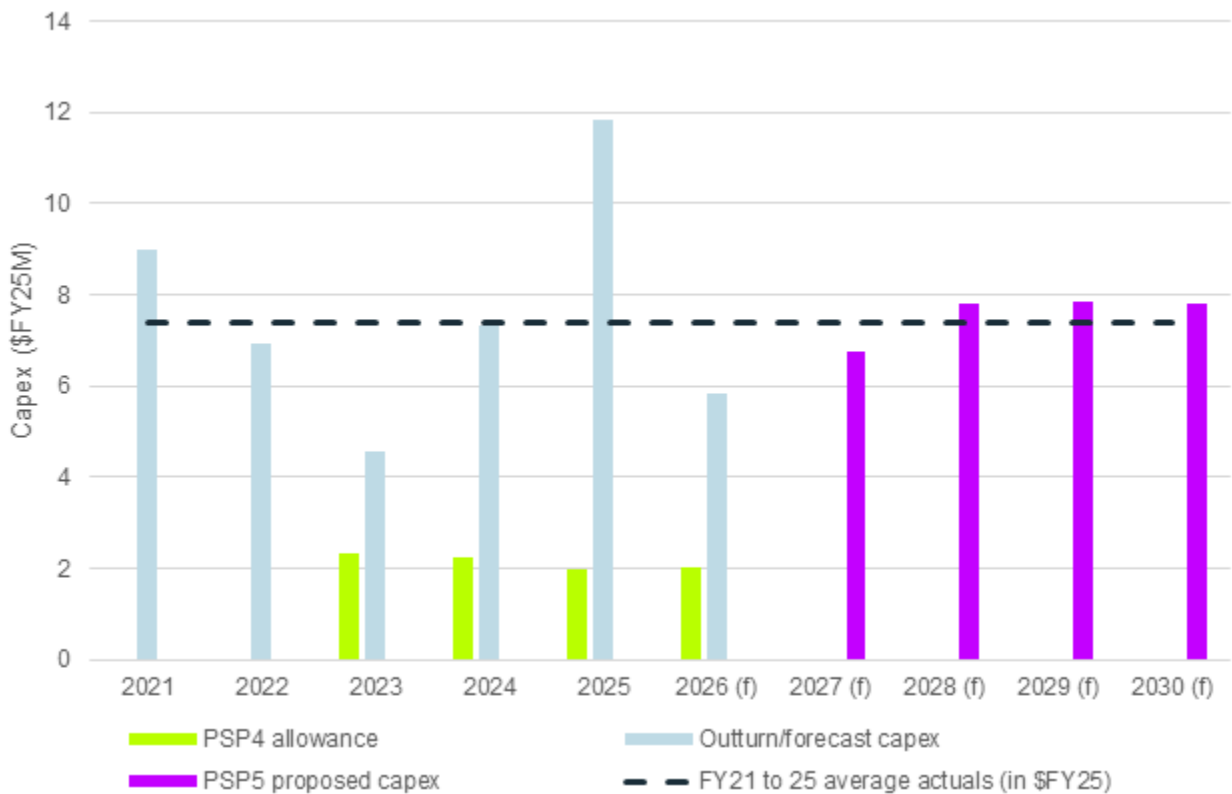
TasWater's sewer mains renewals program capex over PSP4, which was \$29.6M including a forecast spend of \$5.8M in FY26 (\$FY25), was significantly higher than TasWater's proposed level and allowance of \$8.6M (Figure 4-17). In Section 3.4.2.4 above we discuss the large increase in outturn spend in FY25, which TasWater has attributed to an increased sewer main break and choke rate, increased capacity and a top-down drive to increase renewals expenditure.

TasWater is seeking a 2% real terms increase in proposed capex for PSP5 compared to PSP4 forecast outturn spend, with a proposed spend of \$30.2M, including the 'Launceston - Combined System Renewal' project. Excluding this project, the proposed spend represents an 8% reduction compared to PSP4 forecast outturn.

During the interviews TasWater stated that there was no analysis underpinning the proposed renewals capex, and that it was based on previous spend and capacity.



**Figure 4-17 - PSP4 capex allowance, PSP4 outturn capex and proposed PSP5 spend on the sewer main renewals program**



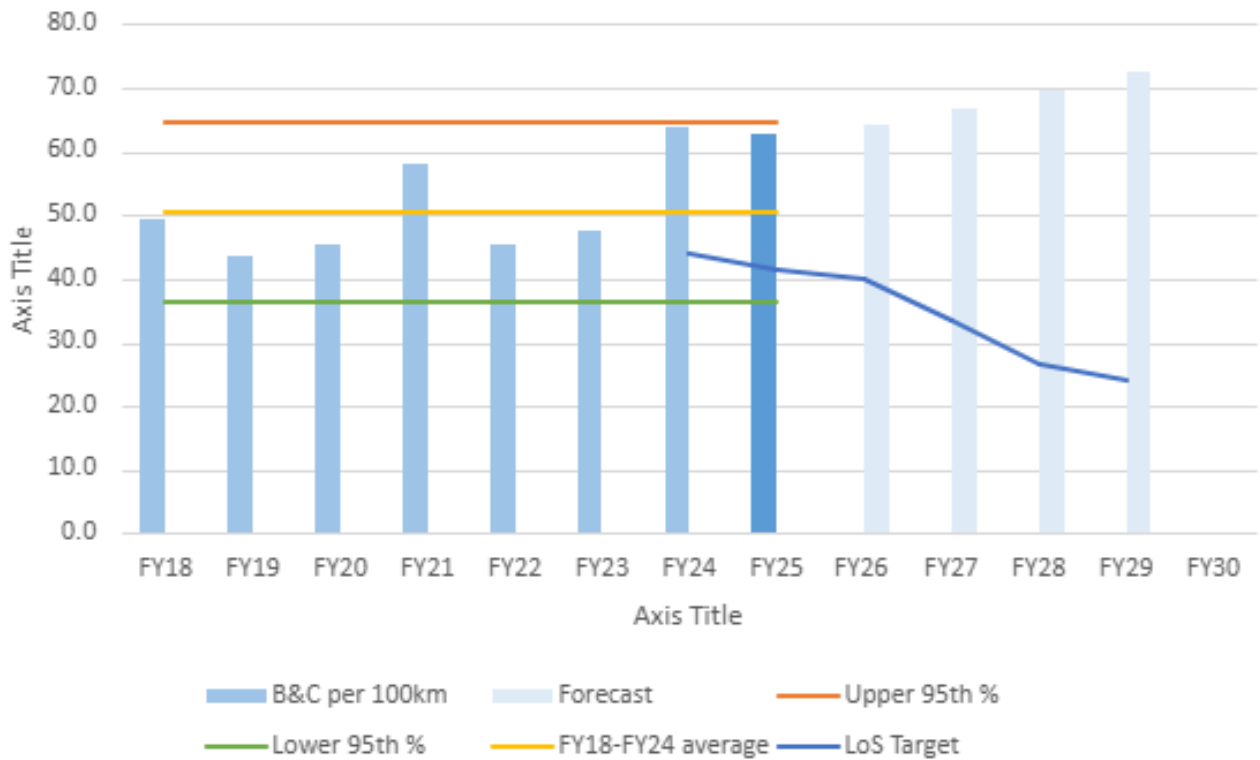
Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

Following the interviews we queried whether there was any evidence of worsening risk and an associated requirement for increasing spend (e.g. reactive work orders over time). TasWater provided the following response:

*Historical break and choke rate for sewer mains is shown below. Forecast based on historical performance is declining over PSP5, which assumes investment remains unchanged from PSP4 allowances. Significant increased investment is required to improve levels of service in accordance with target values over PSP5.*



**Figure 4-18 – Sewer main break and choke historical performance, FY18 to FY25, alongside forecast performance and TasWater’s proposed Level of Service target**



Source: TasWater response to additional query 2 within “RFI - From 06-10-2025 - Capex Investigations - Action List”

We do not have much confidence in the projected linear increase in sewer main and choke rate over PSP5 as it does not appear to be based on robust deterioration modelling or similar. Just as importantly it is not clear why TasWater is proposing a declining target for sewer main breaks and chokes over PSP5, given its proposed investment levels are similar to the PSP4 period which has not seen an improvement and during which period, as shown in Table 4-14 above, TasWater has not met its targets for this metric.

The sewer main renewals program will continue to be delivered through TasWater’s new linear renewals framework, which was launched in February 2024 and was one of the first to be established under its post-CDO future delivery model. Further information on this framework and its performance is included in Section 3.4.2.4 above.

Investment in sewer main renewals is required to maintain compliance and service standards in general. TasWater is requesting a small increase (2%) in proposed spend compared to forecast PSP4 outturn spend, and a 5% real terms reduction compared to the FY21 to FY25 average outturn spend despite the business’s forecast declining asset performance and more challenging target.

We consider there is actually **a case for increasing expenditure above that proposed** by TasWater and have recommended a slightly higher level of expenditure based on the average level of spend in FY21 to FY25, i.e. \$7.9M p.a. in \$FY25 terms.



**Table 4-15 – PSP4 allowance, outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for sewer main renewals (in \$FY25M)**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	PSP4 /5 Total	Average
<b>PSP4 allowance</b>			2.3	2.2	2.0	2.0					8.6	2.2
<b>Outturn/forecast capex</b>	9.0	6.9	4.6	7.3	11.8	5.8					29.6	7.4
<b>PSP5 proposed capex</b>							6.8	7.8	7.8	7.8	30.2	7.6
<b>PSP5 recommended capex</b>							7.1	8.2	8.2	8.2	31.7	7.9
<b>Recommended capex adjustment</b>							0.3	0.4	0.4	0.4	1.5	0.4

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and TasWater q.27 response within "RFI - From 06-10-2025 - Capex Investigations - Action List"

#### 4.4.3.2 Sewer Treatment Plant (STP) Renewals

The stated aim of TasWater’s statewide PSP5 STP renewals program is to undertake renewal of TasWater’s 110 operational STPs and 4,657 unit-level sewerage treatment assets based on condition assessments in order to maintain service standards. As described in Section 3.4.2.3 above, whilst there are no direct service targets for STP performance, the main consequences of asset failure are environmental spills and odour, which are reflected in several of the sewerage and customer complaint targets.

During the project interviews TasWater stated that the business now has good visibility of STP renewal priorities for PSP5, particularly for the first two years, and aims to achieve greater clarity for PSP6. TasWater has reasonable confidence in STP asset lives as the approximate asset ages are known, but there is limited information available on asset history. TasWater’s program involves an ongoing process of prioritisation and identifying opportunities to defer expenditure where appropriate. The STP renewals program is considered easier to manage in terms of risk and spend than sewer mains renewals because there is greater visibility of their condition and more options for intervention. TasWater is currently going through a process of assessing the condition of all STP assets and unit-level assets first through a desk-based assessment, followed by targeted inspections. Risk and actions are managed via the recently developed asset health risk framework described in Section 3.4.2.3.

TasWater’s brief project summary document sets out four theoretical levels of intervention that have been considered:

- Option 1 – Base case (do nothing): Cease proactive renewals of assets and manage risk via reactive renewal upon functional failure of the asset.
- Option 2 – Manage extreme risk assets only: Continuation of the current proactive program to renew or refurbish assets within the STPs identified as at extreme risk of failure identified through physical asset inspection, operational process monitoring, product quality and by the STP Asset Class Management Plan.
- Option 3 – Manage extreme and high risk assets only: As per Option 2, but also including high risk assets.
- Option 4 – Manage extreme, high and medium risk assets only: As per Option 3, but also including medium risk assets.

TasWater has selected Option 2 as its preferred option based on the lowest cost. However, as with the majority of the other renewals programs, this is not underpinned by financial modelling or scenario analysis to evaluate costs, benefits, or the impact on service levels and outcomes across different investment scenarios.

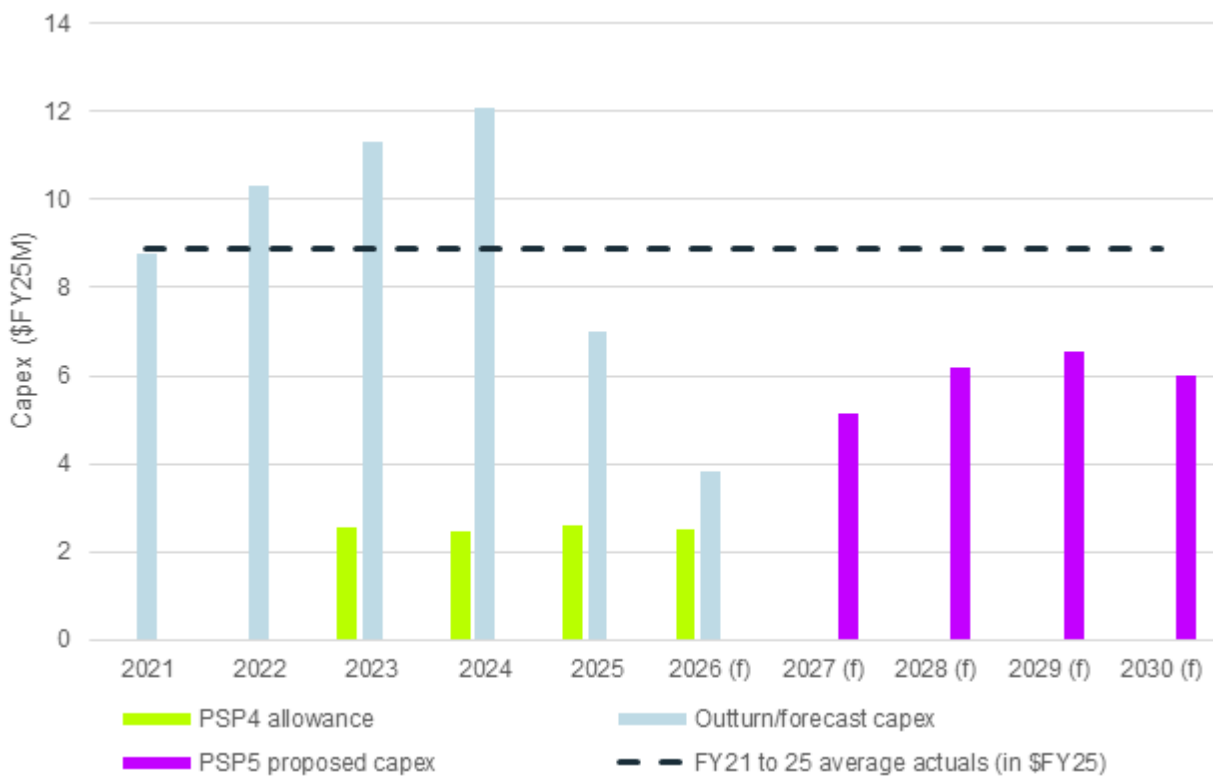


Our analysis of TasWater’s STP renewals program capex over PSP4 indicates that it was \$34.2M including a forecast spend of \$3.8M in FY26 (\$FY25), significantly higher than TasWater’s proposed level and allowance of \$10.1M.

**Our analysis indicates that TasWater is seeking a 30% reduction in proposed capex for PSP5 compared to PSP4 forecast outturn spend, with a proposed spend of \$23.9M.** During the interviews TasWater stated that the lower proposed spend was driven by both affordability considerations and the current STP rationalisation program. TasWater stated that FY27 forecast spend was known based on current programs of work, whereas FY28-FY30 were top-down estimates. TasWater anticipated that the number of extreme risk STP assets would increase over time, but that they would be able to manage spend better and select appropriate solutions in line with the budget. There was a view that TasWater had been underspending so far compared to need, but that visibility of risks is still limited.

Following the interviews, TasWater confirmed that proposed individual STP renewals projects for FY26, FY27 and FY28 are known. These are partially costed, with a current estimate of \$8.9M. However, we have not had sight of the full build up or approach used for forecasting the remainder of the costs across these years and the final two years of PSP5.

**Figure 4-19 - PSP4 capex allowance, PSP4 outturn capex and proposed PSP5 spend on the STP renewals program**



Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

During PSP5 the STP renewals program will be delivered via the new Treatment Plant and Pump Station Refurbishment Framework, which was launched in August 2025.



We accept that investment in STP renewals is required to maintain sewerage and customer service standards. **Based on TasWater’s proposed reduction in spend during PSP5 and justification, we have not proposed an adjustment.**

**Table 4-16 – PSP4 allowance, outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for STP renewals (in \$FY25M)**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	PSP4 /5 Total	Average
<b>PSP4 allowance</b>			2.5	2.5	2.6	2.5					10.1	2.5
<b>Outturn/forecast capex</b>	8.8	10.3	11.3	12.1	7.0	3.8					34.2	8.9
<b>PSP5 proposed capex</b>							5.2	6.2	6.6	6.0	23.9	6.0
<b>PSP5 recommended capex</b>							5.2	6.2	6.6	6.0	23.9	6.0
<b>Recommended capex adjustment</b>							0.0	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and TasWater q.30 response

### 4.4.3.3 Sewerage Pumping Station (SPS) Renewals

The aim of TasWater’s statewide PSP5 SPS renewals program is to undertake renewal of TasWater’s 705 operational SPS treatment assets and 6,765 unit-level assets based on condition assessments in order to maintain service standards.

TasWater’s brief project summary document sets out four theoretical levels of intervention that have been considered:

- Option 1 – Base case (do nothing): Cease proactive renewals of assets and manage risk via reactive renewal upon functional failure of the asset.
- Option 2 – Manage extreme risk assets only: Continuation of the current proactive program to renew or refurbish assets within the SPS identified as at extreme risk of failure identified through physical asset inspection and by the PSP4 SPS Asset Class Management Plan.
- Option 3 – Manage extreme and high risk assets only: As per Option 2, but also including high risk assets.
- Option 4 – Manage extreme, high and medium risk assets only: As per Option 3, but also including medium risk assets.

TasWater stated during the project interviews that the approach was to manage both extreme and high risk assets, i.e. Option 3. However, as with the majority of the other renewals programs, no financial modelling or scenario analysis has been undertaken to evaluate costs, benefits, or the impact on service levels and outcomes across different investment scenarios. There was no clear explanation as to why the SPS renewals program targeted both high and extreme risk assets, whereas some of the other asset classes focused only on extreme risk assets.

Our analysis indicates that TasWater’s SPS renewals program capex over PSP4 was \$23.7M including a forecast spend of \$4.4M in FY26 (\$FY25), was significantly higher than TasWater’s proposed level and allowance of \$8.5M. This is contrary to TasWater’s internal analysis of spend undertaken following the project interviews, as TasWater provided the following explanation of spend:

*Total spend to date (first three years) during PSP4 matches allowance. Investment for SPS renewals to address identified extreme and high-risk defects within SPSs is forecast to remain at levels consistent with FY25 and FY26 (with small increase to manage increasing risk profile of ageing fleet). Identified projects*

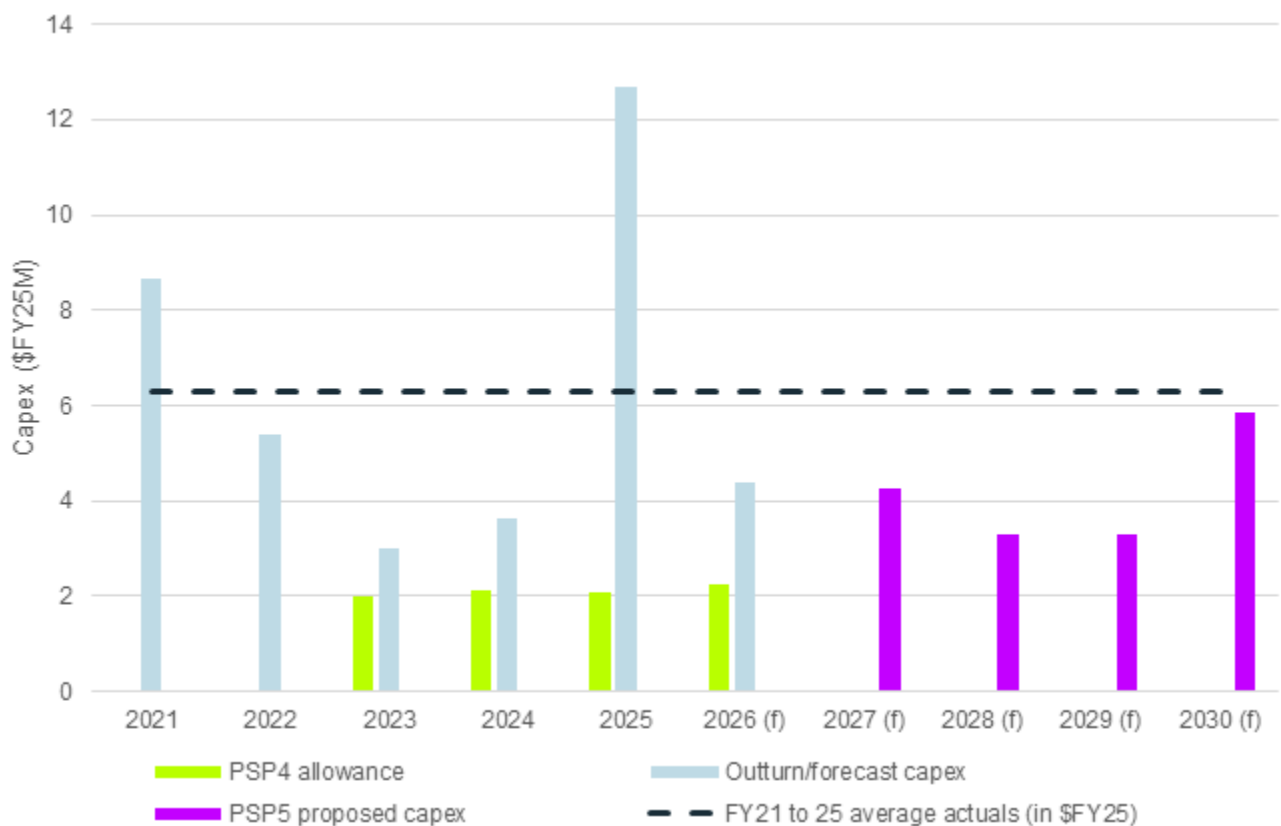


with cost estimates total \$7.6M with five additional projects with no cost estimate yet. Periodic condition and performance inspection and maintenance activities associated with SPSs provides forward forecasted investment projects for these assets.

This difference in historical analysis is likely to be because TasWater has not included SPS reactive renewals spend during PSP4, as these are broken down into different lines in TasWater's Capital Expenditure spreadsheet. In addition, outturn spend within our analysis includes \$7.9M spend on the Shellfish Mitigation project FY25, which has been assigned by TasWater to 'PUMP WASTE' Renewals.

Our analysis indicates that TasWater is seeking a 29% real terms reduction in proposed capex for PSP5 compared to PSP4 forecast outturn spend, with a proposed spend of \$16.7M. During the interviews, TasWater reported that unlike the other asset renewals programs, there are specific works programs planned for each year of PSP5, indicating better visibility of forecast costs, although the level of design reduces through the years. TasWater also reported that many of the planned projects end up being deferred due to budget pressures. However, TasWater also noted that there is a risk that Safe Work Australia could lower the hazardous gas exposure limit levels, resulting in additional requirements and costs for TasWater.

**Figure 4-20 - PSP4 capex allowance, PSP4 outturn capex and proposed PSP5 spend on the SPS renewals program**



Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and TasWater q.36 response

During PSP5 the SPS renewals program will be delivered via the new Plant and Station Refurbishment Framework, which was launched in August 2025 and includes three suppliers.



We accept that investment in SPS renewals is required to maintain sewerage and customer service standards. **Based on TasWater’s proposed reduction in spend during PSP5, and on the likelihood that many of the proposed projects will be deferred due to budget pressures - indicating that they are not all considered urgent - we have not proposed an adjustment.**

**Table 4-17 – PSP4 allowance, outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for SPS renewals (in \$FY25M)**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	PSP4 /5 Total	Average
<b>PSP4 allowance</b>			2.0	2.1	2.1	2.2					8.5	2.1
<b>Outturn/forecast capex</b>	8.7	5.4	3.0	3.6	12.7	4.4					23.7	6.3
<b>PSP5 proposed capex</b>							4.3	3.3	3.3	5.9	16.7	4.2
<b>PSP5 recommended capex</b>							4.3	3.3	3.3	5.9	16.7	4.2
<b>Recommended capex adjustment</b>							0.0	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and TasWater q.30 response within "RFI - From 06-10-2025 - Capex Investigations - Action List"

## 4.4.4 Other renewals

### 4.4.4.1 Electrical and SCADA Renewals

This program relates to renewal of Supervisory Control and Data Acquisition (SCADA) assets and electrical switchboards. It also includes wider instrumentation and control systems.

TasWater explains that the majority of its SCADA assets and a significant proportion (25%) of its electrical assets have passed the lifetime it expects of them. This is based on the assumption that automation controllers and telemetry equipment have a maximum expected lifespan of 15 years or less and electrical switchboards have an expected lifespan of 30 to 40 years. TasWater explains that these lifespan figures are based on industry standard practice, manufacturers’ recommendations and warranties and industry lifecycle data<sup>27</sup>.

It also sets out a number of regulatory drivers for investment including the Security of Critical Infrastructure (SOCl) Act 2018, amendments to SOCl in 2021 and 2022, and Enhanced Response and Prevention (ERP) Act 2024.

It sets out three broad options:

- Option 1: Do nothing
- Option 2: Limited-Scale SCADA Renewals (Based on Asset Criticality) and SCADA Amalgamation
- Option 3: Renewal and Standardisation of SCADA, Electrical, and Operational Technologies (SEOT)

It has chosen Option 3 because it is:

<sup>27</sup> TasWater document "Appendix 2 - Factual inaccuracies and omissions" provided by email on 23 January 2026



*A comprehensive, strategic, and future-proof approach to address critical infrastructure risks, meet legislative and regulatory obligations, and ensure service continuity for TasWater’s customers and communities*

TasWater proposes to deliver the program using its SEOT (SCADA, Electrical and Operational Technology) framework, which came into being in FY26 and will use a single program management contractor, Sage, for delivery of all SEOT works.

It proposes just under \$20M p.a. (in \$FY25) of expenditure in PSP5. Based on the interview we understand that this is based on combination of affordability considerations, a high level estimate of the delivery capacity of the SEOT framework provider and a plan to address all ‘high’ risks assets by 2030.

We recognise that assets need to be replaced and that electrical and SCADA assets play a key role in the functioning of TasWater’s system. However, we consider that the proposed rate of spend has not been clearly justified and we are concerned about the deliverability of a more than doubling of expenditure on complex but widely-spread assets across many sites.

Safety is a key concern and electrical renewals play a key role in ensuring that systems are safe. We recommend accepting the electrical renewals element of the program which appears<sup>28</sup> to be 26% of the program or \$5.1M p.a. of expenditure.

We consider that TasWater has not justified that the rate of renewals required for SCADA is significantly higher than in previous periods. The Statewide SCADA Business Case<sup>29</sup> provided sets out expenditure from FY23 to FY27 and proposes an average spend of \$6.8M p.a. (including 30% contingency) which is significantly lower than the level of SCADA renewals spend proposed for PSP5 (estimated to be \$14.7Mp.a.<sup>30</sup>).

The OT Framework<sup>31</sup> sets out a longer term estimate of \$5M p.a. for renewals with basic security improvements and a higher “desirable” level of OT spend of c\$12M p.a. (in the PSP5 period). The higher figure includes non-renewals spend on initiatives TasWater considers desirable and many of which are covered by other programs proposed by TasWater such as the “Cyber Security Uplift Program”, the “ICT Business Improvements Initiative” and the “ICT infrastructure and end user hardware” program (see also below). This is also therefore not supportive of \$14.7M p.a. spend on SCADA renewals.

We have assumed that spend on SCADA will be equal to the highest rate TasWater envisaged in its final PSP4 document i.e. \$7.5M p.a. in \$FY25 terms (based on spend in FY26), noting that this is similar to the level of spend envisaged in the Statewide SCADA Business Case and higher than the basic renewals figure in the OT Framework.

The recommended allowance is set out below.

**Table 4-18 – PSP4 allowance, outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for electrical and SCADA renewals (in \$FY25M)**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	PSP4 /5 Total	Aver age
<b>PSP4 allowance</b>			2.9	5.7	7.0	7.5					23.0	5.8

<sup>28</sup> Based on the totals in Table 3 of the Board Paper “Fast Tracking the SCADA and Electrical Programs”

<sup>29</sup> Statewide SCADA Improvement Program 2022 – 2027 Business Case, TasWater, February 2022

<sup>30</sup> i.e. the remainder of the proposed electrical and SCADA renewals spend

<sup>31</sup> TAMFRA07 Operational Technology (OT) Framework, TasWater, October 2023



<b>Outturn/forecast capex</b>	10.2	6.9	4.3	5.9	9.0	23.1		42.3	9.9
<b>PSP5 proposed capex</b>							19.8	19.8	19.8
<b>PSP5 recommended capex</b>							12.6	12.6	12.6
<b>Recommended capex adjustment</b>							-7.2	-7.2	-7.2

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and TasWater final PSP4 document

### TasWater material factual inaccuracies comments

TasWater provided a number of comments on the recommended SCADA renewals expenditure as part of its "factual inaccuracies and omissions" submission on 23 January 2026. These included comments related to:

- The use of the word 'assumption' for asset lives;
- The suggestion that it had not robustly justified the proposed rate of spend;
- Explanation for the approach of focusing on 'high' as well as 'extreme' risk assets; and
- The link between renewal rates and the organisation's target automation levels, stating that "renewal pace should be anchored to Automation targets the organisation has set".

We have added reference to TasWater's view about the basis of asset lives in the text above and have removed the comments about the level of risk being targeted, noting that neither of these points affect our recommendations.

For the other points, TasWater has referred us to two key documents:

- Statewide SCADA Improvement Program 2022 – 2027 Business Case; and
- TAMFRA07 Operational Technology (OT) Framework, including the Automation Framework in appendix.

The Statewide SCADA Business Case was drafted in 2021 and approved in early 2022. It recommended a capex program of \$34M or \$6.8M p.a. (including 30% contingency) over the five years from FY23 to FY27. The aim was to renew obsolete SCADA at criticality level 4/5 facilities and consolidate SCADA systems.

The OT framework was prepared in 2022 and finalised in 2023. It set out a 15 year framework "to provide direction on the management and governance of Operational Technology (OT) assets ...as a reference tool to help improve OT Management in the organisation, allow consistency and control over activities and guide appropriate behaviour and work practices". The document set out two levels of capex spend:

- A "minimum acceptable" level of spend "based upon the replacement of obsolete technology with a currently supported version of the technology that will have a lifespan of a minimum of fifteen years and will be capable of supporting basic cyber-security improvements". This involved an estimate \$75M of expenditure to 2037 i.e. an average of c\$5M p.a.
- A "desirable (improved efficiency and customer outcomes)" level of spend aligned with the corporate strategic objective of becoming a smart operator. This involved spend estimated at between \$150-\$280M to 2037 with an approximate average of \$12M p.a. for the PSP5 period. This proposed capex includes non-



renewals spend such as spend on growth, efficiency and “regulatory”<sup>32</sup> in order to deliver initiatives which TasWater considers desirable such as an integrated monitoring and control system, optimum level of automation, integration with corporate systems, smart networks and plants, data driven decisions capability and improved cyber-security posture.

Our response to these points is as follows:

- We can confirm that we had read and taken these documents into account in making our recommendations. We have amended the text above to make this clearer.
- The Statewide SCADA Business Case only covers the period to FY27 and proposes a level of spend which is similar to that which we have recommended i.e. \$6.8M p.a. in \$FY22, including 30% contingency, compared to our recommendation of \$7.5M p.a. for PSP5 in \$FY25.
- The OT framework sets out a high level estimate of c\$5M p.a. for renewals with basic cyber security improvements. It sets out a higher level of spend of c\$12M p.a. including a number of improvements TasWater considers desirable. However, many of these improvements are built into other programs of spend proposed by TasWater and reviewed separately such as the OT/SCADA Security component of the “Cyber Security Uplift Program”<sup>33</sup>, the SCADA change management project in the “ICT Business Improvements Initiative”<sup>34</sup>, and renewal and uplift of SCADA as one of the outcomes supported by the “ICT infrastructure and end user hardware” business case<sup>35</sup>.

We therefore consider that the points made in the responses and the details in the referenced documents are not inconsistent with our recommendations and do not consider that there are any material factual inaccuracies or errors in our findings. We have not therefore amended our recommended expenditure.

#### 4.4.4.2 ICT Infrastructure and end-user hardware

This program relates to maintaining and enhancing data centre and network infrastructure and end-user hardware. It covers seven investment categories:

- Infrastructure renewal
- Network renewal
- End-user hardware renewal
- Enhanced network segmentation and management
- Digital backup
- Infrastructure-as-Code (IaC)
- Private cloud

---

<sup>32</sup> See page 91 of the document for example.

<sup>33</sup> See for example “Att. D.14 - PSP5 Major Project Summary - Cyber Security Uplift Program”

<sup>34</sup> See for example “Att. H.1 - ICT Business Improvement Initiatives - Business Case”

<sup>35</sup> See for example “Att. H.2 - ICT Infrastructure and end-user hardware - Business Case”



It provides a breakdown of capex as below. We note that the largest element relates to end-user hardware, there is no line for Infrastructure-as-Code (IaC) and that contingency equal to 38% of other costs has been included.

The business case explains the contingency:

*Since COVID-19 IT hardware and software price volatility has seen annual increases ranging from 10% to 90% (in some instances Broadcom, the IT company that supports VMWare – a product TasWater utilises, has seen up to 1,500% price increase).*

*US tariffs may have an unanticipated or considered impact. This indicates up to 46% price increases on laptops and tablets as a result. The contingency allocation has been included in manage some of these risks for key items.*

It goes on to say that “the forecasts accommodate for a standard degree of this volatility, however, significant increases will have a negative and unaccounted impact to the projections.”

**Table 4-19 – TasWater proposed ICT infrastructure and end user hardware capex (assumed \$M nominal)**

Financial year In \$FY25M	2027 (f)	2028 (f)	2029 (f)	2030 (f)	Total
<b>Infrastructure</b>	0.4	1.3	1.3	0.0	3.0
<b>Network</b>	0.8	0.0	0.8	0.9	2.5
<b>End-User hardware</b>	1.8	1.7	1.8	1.8	7.1
<b>Enhanced network</b>	0.3	0.3	0.3	0.3	1.3
<b>Digital backup</b>	0.8	0.0	0.0	0.1	0.9
<b>Private cloud</b>	0.0	0.0	0.5	0.3	0.8
<b>Labour</b>	0.8	0.7	0.9	0.7	3.1
<b>Contingency</b>	0.8	2.2	1.1	3.1	7.2
<b>Net capital cost (\$M)</b>	5.7	6.2	6.7	7.2	25.8

Source: Table 7-2, PSP5 Capital and Operational Expenditure D&T Infrastructure and End-User Hardware Business Case for Tasmanian Economic Regulator

In its business case TasWater sets out the asset lives it assumes for hardware lifecycles, ranging from 3 years for phones and tablets to 4 years for laptops, 5 years for desktop workstations, infrastructure and network assets and run-to-fail for monitors.

TasWater has examined three investment options to maintain and enhance its foundational technology:

- minimal investment
- essential investment
- extended investment.

It concluded that the ‘essential investment’ approach is preferable, having the highest score across cost, reliability, compatibility, supportability, scalability and customer service stability.



We raised an RFI with TasWater to explain why proposed end user hardware replacement costs were projected to be \$7.1M when there are c950 full-time-equivalents (FTEs) i.e. a cost of c\$7.4k per FTE, as this seems high to us. The response received is reproduced below:

**Follow up on why end-user hardware is c\$7-8k per person**

- The figure presented (\$6-7K based upon CapEx costs only and approximately 950 employees) is unlikely to represent a true total cost per user as it discounts OpEx and total users (including contractors etc.)
- Costs for IT users should include both employees and contractors as they're utilising both physical and virtual resources (networking, underlying infrastructure etc.) to perform services to TasWater
- For PSP4 preparation in FY20 benchmarking indicated a cost of \$9,018 per IT user with industry median being around \$15,700 – this included OpEx and CapEx
- COVID-19 placed upwards pressure on per user IT costs ([McKinsey Digital: A practical way for CIOs to manage IT costs through the COVID-19 crisis](#)).
- Benchmark figures using Gartner's IT Key Metrics Data (2023, 2024 and 2025) and scale adjusting this for Asia Pacific region based upon indices of the North America Utilities sector (adjusted for AUD) indicates:

Financial Year	Gartner Adjusted Per User IT Cost	TasWater (OpEx and CapEx)	Variance
FY23	\$24,357	\$18,406	-\$5,951 (-24.4%)
FY24	\$20,489	\$18,176	-\$2,313 (-11.3%)
FY25	\$25,248	\$23,592	-\$1,656 (-6.6%)
FY26*	\$26,359	\$25,526	-\$833 (-3.2%)

\* Based upon forecast for Gartner Adjusted Per User IT Cost (4.4% increase) and full-year budget as opposed to actuals for TasWater costs

- TasWater has historically been lower than the benchmarks provided
- As further market information (Gartner's IT Key Metrics Data) is published, Per User IT Costs will continue to be benchmarked

Source: TasWater document "RFI - From 06-10-2025 - Capex Investigations - Action List"

We recognise that ICT assets are key enablers to the successful running of the business and need to be replaced. However, the expenditure on end-user hardware appears high. The benchmarking presented in support of this appears to be a review of broad IT costs rather than specifically addressing what appears to be high end-user capex. Given PSP5 lasts four years and TasWater's assumed asset lives for end user hardware are in the range of three to five years, with capex of roughly \$3k per laptop, iphone SEs at c\$1k and monitors at c\$0.5k, it is not clear that spend of c\$7k per head would be required. We have recommended an adjustment to reflect an estimate of c\$5k per head over PSP5 for one thousand heads i.e. \$5M for end user hardware replacement.

We understand that there is some risk. However, we consider that adding 38% contingency is hard to justify, especially as there is some discretion in things like hardware specification. We have assumed a contingency of 10% of costs.

Our recommended allowance is set out below, noting that these figures are in \$FY25M.

**Table 4-20 – PSP5 proposed and recommended capex adjustment for ICT Infrastructure and end-user hardware renewals (in \$FY25M)**



Financial year In \$FY25M	27 (f)	28 (f)	29 (f)	30 (f)	PSP4/5 Total	Average
<b>PSP5 proposed capex</b>	5.4	5.7	6.0	6.3	23.3	5.8
<b>PSP5 recommended capex</b>	4.5	3.6	5.1	3.4	16.5	4.1
<b>Recommended capex adjustment</b>	-0.9	-2.1	-0.9	-2.9	-6.8	-1.7

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and TasWater final PSP4 document

NB: historical outturn figures are not included here as they cannot be readily identified with different names being used for these items.

#### 4.4.4.3 Fleet Replacement

As described above in Section 3.4.2.2, the driver for TasWater's fleet replacement program is the need to regularly replace TasWater's owned fleet, which is currently 750 vehicles, as operational costs and vehicle age increase, or due to specific operational needs. These vehicles are needed to enable TasWater staff to deliver water and sewerage services across Tasmania. Due to the remote nature of many of TasWater's operational sites, many operational staff are provided with their own take-home vehicle, rather than using pooled vehicles. In addition, TasWater also has a number of pool vehicles for use by staff.

Light vehicles and cars are renewed when they reach five years old or 150,000 km, whilst heavy vehicles are renewed at 10 years old or at 250,000 km intervals. TasWater's major project summary states that TasWater's renewal intervals exceed the current Tasmanian Government Motor Vehicle Allocation and Use Policy, which is renewals every three years or at 60,000 km, with approval.

TasWater explained several improvement initiatives underway which will be in place for PSP5:

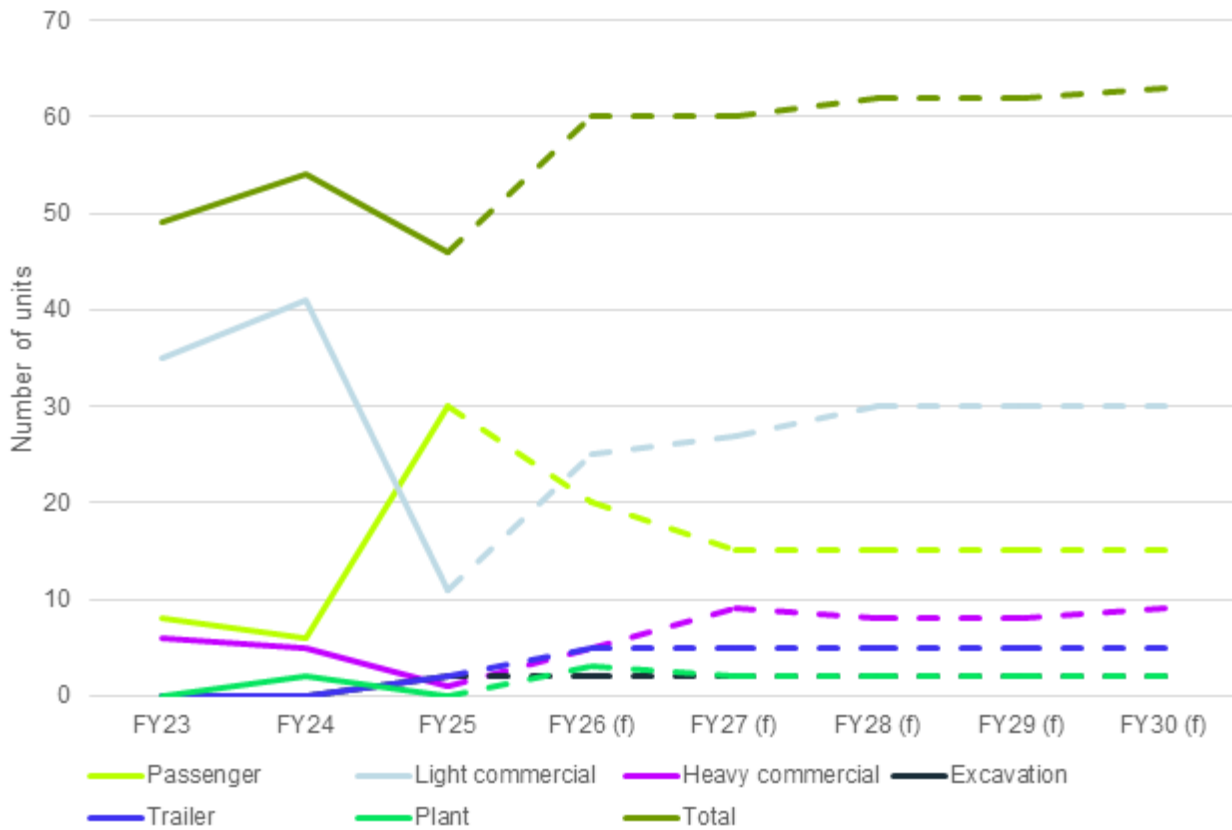
- Fleet standardisation and gradual electrification.
- Implementation of a new in-vehicle monitoring system to help monitor and rationalise fleet car usage. This includes, for example, monitoring the number of vehicle occupants and the ability to request operational incident support from the nearest staff member to a particular site.
- Formalisation of the pool car booking system to support more efficient use of pool cars, avoiding multiple staff members booking pool cars to travel to the same location.

In their major project summary TasWater states that *"While these initiatives are expected to improve operational efficiency, they remain at an early stage, and it would be premature to quantify their financial impact at this time."* We note that as a result, TasWater's expenditure forecast for PSP5 remains flat.

Following the interviews, TasWater provided a breakdown of its forecast of fleet purchases for PSP5 (Figure 4-21). Following a reduction in FY25, this shows a planned increase in purchases of most vehicle types during FY26 (excluding passenger cars), and a further smaller increase in light commercial, trailer, plant and heavy commercial vehicles for FY27, after which the forecast is relatively flat. We note that this aligns with the forecast increase in capex during FY27.



**Figure 4-21 – TasWater’s actual fleet purchases for PSP4 and forecast for PSP5 by vehicle type**



Source: TasWater response to additional query 34 from “RFI - From 06-10-2025 - Capex Investigations - Action List”

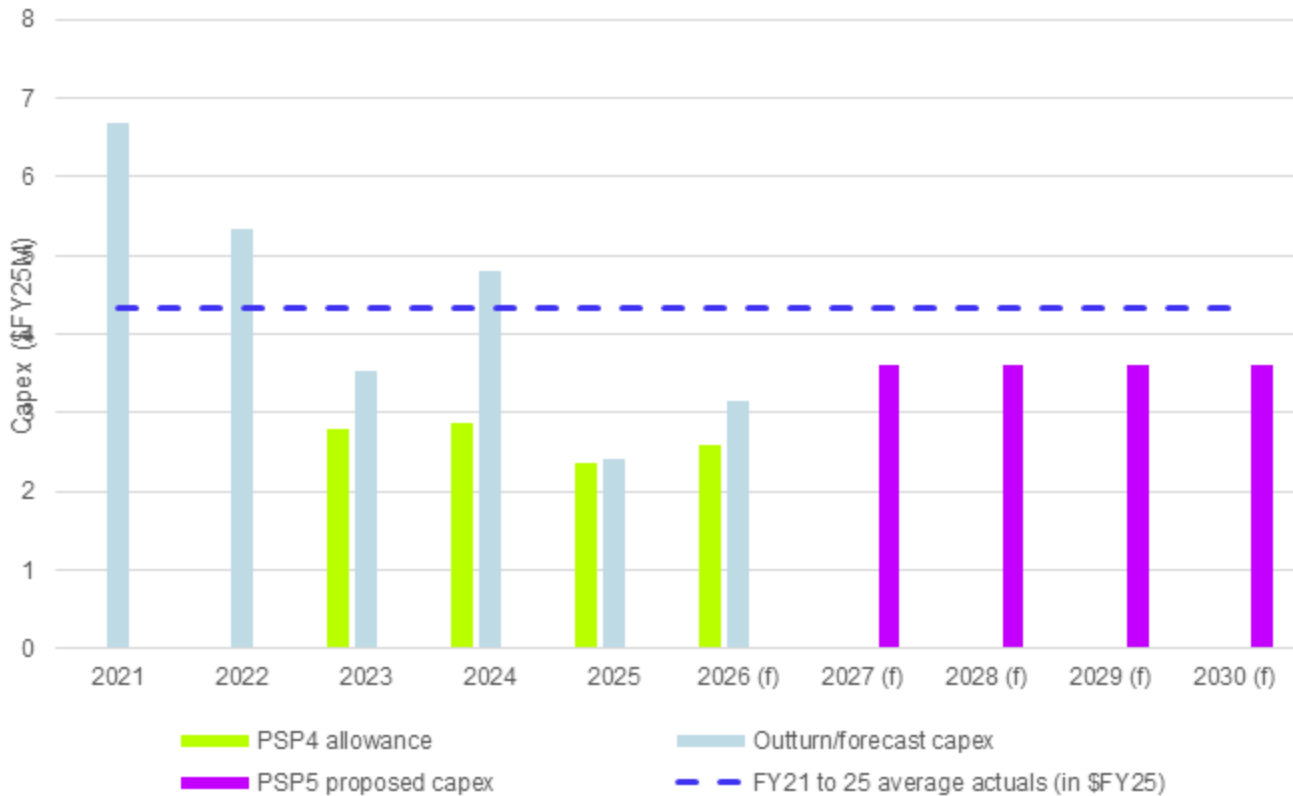
During the interviews TasWater reported that it has previously investigated lease versus ownership options. Whilst full ownership was considered to provide a number of benefits to the business, other options were still under consideration. TasWater therefore plans to continue using a full ownership model for PSP5.

TasWater’s fleet replacement capex over PSP4 was \$13.9M including a forecast spend of \$3.2M in FY26 (\$FY25), significantly higher than TasWater’s allowance of \$10.6M although similar to the business’s originally proposed capex for PSP4.

Our analysis indicates that TasWater is seeking a 4% real terms increase in proposed capex for PSP5 compared to PSP4 forecast outturn spend, with a proposed spend of \$14.4M.



**Figure 4-22 - PSP4 capex allowance, PSP4 outturn capex and proposed PSP5 spend on the fleet replacement program**



Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and CCGUS PSP4 investigation report (2022).

As described above TasWater has provided a breakdown of the forecast spend across PSP5 by vehicle type. The major project summary elaborates on the basis of this forecast, stating that the forecast is based on past fleet renewal spending patterns and an assumption of 20-25 vehicle replacements per year. TasWater also states that fewer vehicles are expected to be purchased post-PSP5, although there is no further explanation for this. TasWater also acknowledges uncertainty in future costs due to potential changes to the current ownership model, fluctuations in the unit cost per vehicle and the planned fleet electrification program.

At this stage TasWater plans to continue managing fleet purchasing and disposal in house with operational expenses (including fuel, maintenance, tyres, windscreens and roadside assist) managed by an external company, LeasePlan.

We accept that TasWater is required to periodically replace fleet units to comply with government vehicle guidelines, in addition to more ad hoc purchases of specialist vehicles due to specific operational needs. TasWater has provided a bottom up forecast of proposed PSP5 capex on fleet replacement, which remains flat for FY28-FY30, and is based on historical spend patterns. Whilst TasWater has proposed a marginal (4%) real terms increase in spend compared to PSP4 forecast outturn, the forecast represents a 21% reduction compared to the longer-term trend, which we assume to be due to better management of fleet post-CDO. We note that there should be potential efficiencies from the ongoing rationalisation and improvement plan but no efficiency allowance has been included for this on a project level; rather, a small increase in capex is proposed, for which we have not seen an explanation.



On balance, recognising the cyclical nature of some of the costs and with a potential increase in purchase costs due to a shift to electric vehicles, we consider the proposed expenditure to be reasonable and have not recommended any adjustments.

**Table 4-21 – PSP4 allowance, outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for fleet replacement (in \$FY25M)**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	PSP4 /5 Total	Aver age
<b>PSP4 allowance</b>			2.8	2.9	2.4	2.6					10.6	2.6
<b>Outturn/forecast capex</b>	6.7	5.3	3.5	4.8	2.4	3.2					13.9	4.3
<b>PSP5 proposed capex</b>							3.6	3.6	3.6	3.6	14.4	3.6
<b>PSP5 recommended capex</b>							3.6	3.6	3.6	3.6	14.4	3.6
<b>Recommended capex adjustment</b>							0.0	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

## 4.5 Compliance

### 4.5.1 Overview

TasWater has proposed a significant increase in compliance capex compared to recent actuals, with the largest increase being in the sewerage service as can be seen in the table.

**Table 4-22 – Compliance capex trends (\$FY25M p.a.)**

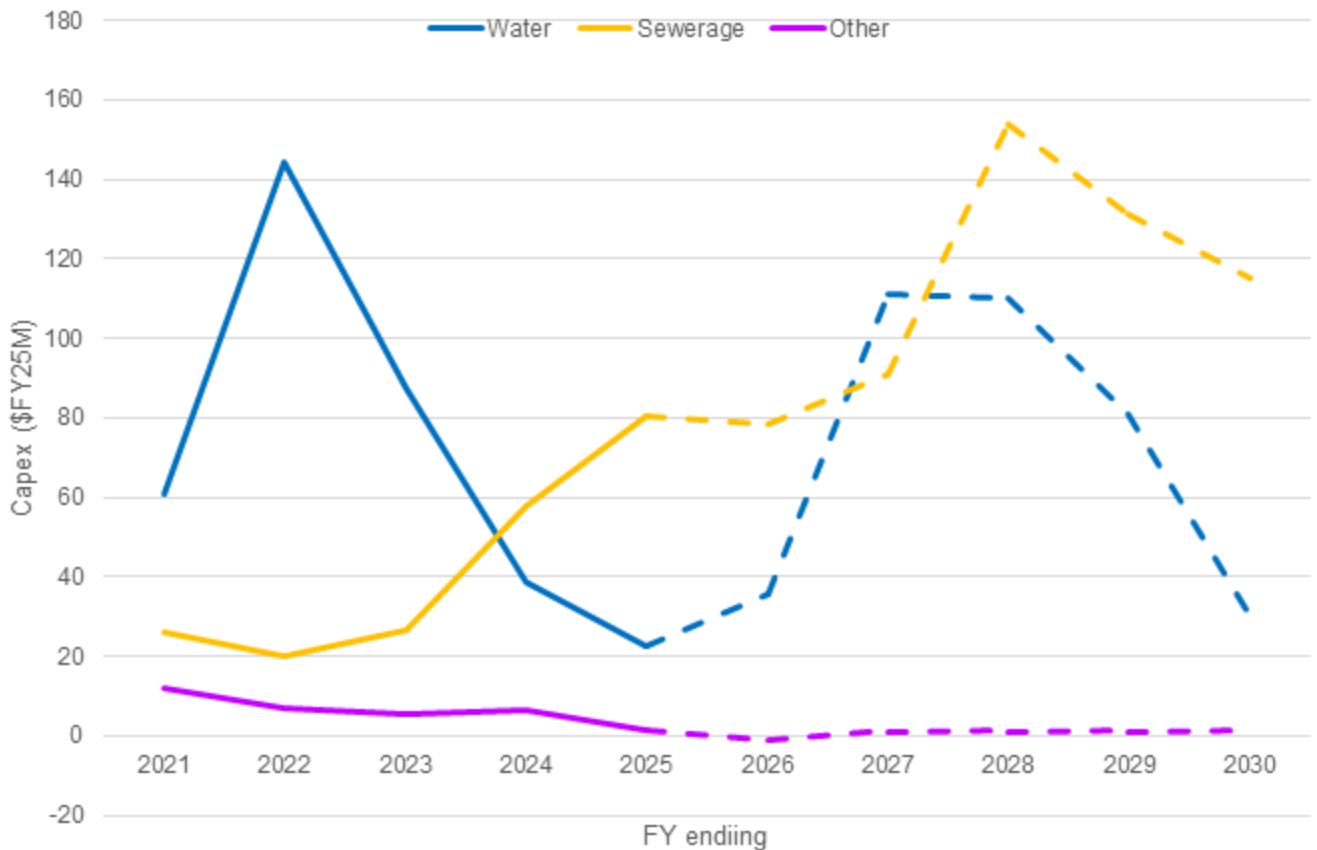
Service	FY21 to 24 actuals	PSP4 average	PSP5 average	Delta FY21-24 actuals to PSP5	Delta FY21-24 actuals to PSP5
				\$FY25M p.a.	%
<b>Water</b>	83	46	83	0	0%
<b>Sewerage</b>	33	61	123	90	277%
<b>Other</b>	8	3	2	-6	-79%
<b>Total</b>	123	110	208	84	68%

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast



**Figure 4-23 – Compliance capex trends (\$FY25M)**



Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast

The largest proposed compliance project in PSP5 is the Ti Tree Bend STP Transformation project which makes up \$355.5M (nominal) or 39% of the compliance program. The highest rate of spend for this project is expected in FY28 and FY29 which a key factor behind the profile of TasWater’s proposed sewerage compliance spend. We discuss this and two other large Launceston Sewerage Transformation (LST) projects below.

The ramp up in water compliance spend in FY27 is largely due to two dam projects: Ridgeway and Pet Dam Ridgley which we discuss below. This represents a shift from historical water compliance spend since FY21 when the largest project was the WTP upgrade at Bryn Estyn.

## 4.5.2 Water compliance

### 4.5.2.1 Hobart - Ridgeway Dam Upgrade

Ridgeway Dam is a 923 Ml, 59m high concrete arch dam with gravity abutments which acts as a low-cost supply for Hobart. It was constructed between 1911 and 1918. The proposed capex makes it the second largest project in PSP5.



The dam has been assessed as having an “Extreme” consequence category based on the ANCOLD<sup>36</sup> Guidelines on the Consequence Categories for Dams. Risk assessments have found the dam to exceed the ANCOLD Limit of Tolerability. It was first assessed to exceed the Limit of Tolerability in 2012 and is the second highest (most intolerable) risk dam within TasWater’s portfolio after Pet Dam in Burnie.

TasWater has considered the following options:

- Option 0: Base case (do nothing)
- Option 1A: Maintain dam at Current Height
- Option 1B: Maintain dam at Current Height with additional Improvements
- Option 2: Raise the Dam to FSL (full supply level) +4m
- Option 3A: Lower the Dam to FSL -8m by partial removal of the arch
- Option 3B: Lower the Dam to FSL -8m by construction of a new spillway
- Option 4: Construct alternative dam
- Option 5: Decommission the Dam

It has carried out multi-criteria assessment and found that Option 1B is currently the most likely option but is subject to further investigations and that if these are not positive it may need to adopt Option 4, i.e. an alternative dam:

*Option 1B... is therefore currently considered the most likely solution to be implemented, as:*

*1) It is a technically feasible methodology that may be implemented to achieve ALARP.*

*2) It most likely satisfy water supply requirements under the Greater Hobart Water Strategy and does not require material modification to the existing network.*

*3) The option is broadly considered to provide the best cost-benefit outcome for the project; with potential for optimisation.*

*TasWater states “Most Likely Solution”, as there are currently ongoing investigations to address identified uncertainties which may impact on the viability of the current preferred solution, Including:*

*Completion of additional materials testing ....Confirmation of geotechnical conditions and parameters of arch/abutment foundation.. Revision of hydrological studies and inclusion of climate change impacts... Completion of an updated probabilistic seismic hazard study ...*

*...In the event that these studies return unfavourable results (i.e. existing concrete has less capacity to transfer stress, seismic loading is higher than previously assessed), it may result in TasWater adopting the identified preferred alternative option (Option 4)*

The July 2025 Options Evaluation Report presents the following summary of costs:

---

<sup>36</sup> Australian National Committee on Large Dams



**Table 4-23 – Ridgeway Dam capex estimates**

Option	Ranking by Cost	CAPEX (P50)	CAPEX (P90)	NPV <sup>ii</sup>
Option 1A – Maintain dam at current height	5	\$205,111,626	\$283,969,379	\$292,993,010
Option 1B – Maintain dam at current height with strength improvements	1	\$97,088,228	\$134,472,590	\$116,403,135
Option 2 – Raise dam to FSL+4 m	6	\$290,415,151	\$402,085,592	\$260,397,488
Option 3A – Lower dam to FSL-8 m, with crest overflow	2	\$97,291,288	\$134,726,424	\$86,808,225
Option 3B – Lower dam to FSL-8 m, with side channel spillway	3	\$125,485,567	\$174,103,596	\$145,271,829
Option 4 – Alternate dam located downstream	4	\$191,417,423	\$265,444,344	\$228,402,760
Option 5 – Decommission structure and supply water through other means	N/A	\$34,022,783	\$47,099,203	\$48,374,740

Source: Ridgeway Dam Options Evaluation Report, July 2025

We understand that the costs have been informed by prices from the contractor who has delivered all similar projects across Australia.

It is clear that this project is still at an early stage of development, with TasWater classifying the project definition deliverables as being at 0-2% maturity, that significant investigations are still to be carried out in order to confirm the solution is feasible and that there exists the possibility that the preferred approach may be the construction of an alternative dam rather than the currently envisaged strength improvements.

We note that the dam was first classified as being beyond the limit of tolerability in 2012 and that TasWater envisaged delivering the works in PSP2<sup>37</sup>, then in PSP4 but has now deferred them to PSP5.

With:

- the project being at an early stage of maturity;
- significant uncertainty about the feasibility of the proposed solution;
- the proposed works being complex to deliver;
- no fixed deadline for delivery; and
- previous experience of the works being planned in PSP2 and PSP4 but then deferred.

We consider there is a **reasonable likelihood the project is not completed in PSP5.**

<sup>37</sup> Source: Table page 260 of final PSP3 document “Top 10 highest individual capex projects allowed for PSP2”



We also note that the costs in the PSP5 submission are higher than the P50<sup>38</sup> estimate presented in the July 2025 Options Report which envisaged capex of \$97.3M.

We have therefore recommended an adjustment to the total cost and to the profile of expenditure, assuming delivery is complete by FY31. We consider this represents a reasonable balance between the need to address the risk and the very real possibility that the preferred solution changes or delivery is delayed.

**Table 4-24 – Outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for Ridgeway Dam upgrade (in \$FY25M)**

Financial year In \$FY25M	21	22	23	24	25	26 (f)	27 (f)	28 (f)	29 (f)	30 (f)	31 (f)	PSP4/ 5 Total	Average
<b>PSP4 allowance</b>			1.3	1.8	24.2	23.6						51.0	12.7
<b>Outturn/forecast capex</b>	0.1	0.0	0.1	0.9	0.7	1.1						2.9	0.5
<b>PSP5 proposed capex</b>							20.0	47.0	58.0	2.0	0.0	127.0	31.8
<b>PSP5 recommended capex</b>							3.0	5.0	29.3	29.3	29.3	66.6	16.7
<b>Recommended capex adjustment</b>							-17.0	-42.0	-28.7	27.3	29.3	-60.4	-15.1

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

#### 4.5.2.2 Pet Dam Ridgley Safety Upgrade

Pet Dam is a 16.8m high earthfill embankment dam with a storage capacity of 4,210 ML. It was constructed in 1956 and upgraded in 1966 to increase its storage capacity. Risk assessments have found the dam to exceed the ANCOLD Limit of Tolerability.

A detailed business case was initially prepared in 2016 to assess the available options. A further options study was undertaken in 2024 followed by a TOC report in 2025.

Three high level options have been considered:

- Option 1: Do nothing
- Option 2: Maintain full supply level (FSL) and upgrade Dam
- Option 3: Lower FSL and supplement storage from Guide Dam

This is in addition to six spillway upgrade options, two filter patch options, two dam crest raising options and two scour upgrade options.

TasWater undertook an MCA exercise and selected Option 2 with sub-options such as the Northern Bay Permanent Spillway. The proposed works are to raise the dam crest, install a filter patch around the outlet tunnel and upgrade the dam spillway to increase capacity and hydraulic performance.

<sup>38</sup> P50 refers to the 50<sup>th</sup> percentile in a probability distribution of outcomes, i.e. there is a 50% probability that the cost will be less than or equal to this value.



The works are at detailed design phase with Board approval having been received in June 2025 for a TOC of \$69.7M and total project budget of \$77.8M, noting that this includes a TasWater owned risk allowance of \$7.1M.

The dam is classified as being beyond the limit of tolerability and we understand from TasWater that the proposed works will address this risk. We consider that the project has reasonable justification and that it should be deliverable in the timescales proposed by TasWater.

We have therefore recommended only two amendments to the proposed costs:

- The cost has been amended to reflect the June 2025 approved project budget of \$77.8M noting that this incorporates “costs to date”.
- We have removed escalation from the costs as inflation should already be reflected in the TOC.

The resulting recommended capex profile is set out below.

**Table 4-25 – PSP5 proposed and recommended capex adjustment for Pet Dam safety upgrade (\$M nominal)**

	FY26	FY27	FY28	FY29	FY30	Total
<b>PSP4 outturn/forecast capex</b>	8.4	-	-	-	-	8.4
<b>PSP5 proposed capex</b>		60.1	37.0	0.0	0.0	97.1
<b>PSP5 recommended capex</b>	-	43.2	26.6	0.0	0.0	69.8
<b>Recommended capex adjustment</b>	-	-16.9	-10.4	0.0	0.0	-27.3

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

#### 4.5.2.3 Oatlands - Blackman River Dams Upgrades

The project relates to Blackman River Dam No.2 (Dam 2). Dam 2 is a 7m high earthfill dam with a broad crested spillway located on the left abutment.

It is immediately upstream of Blackman River Dam No.1 (Dam 1) in the headwaters of Blackman River in central Tasmania. Water is released from Dam 2 into Dam 1. Both Dam 1 and Dam 2 are the primary source of water supply to Oatlands.

TasWater completed a Dam Safety Review in 2023 which indicated that the risk for Blackman Dam No. 2 exceeded the ANCOLD Limit of Tolerability.

TasWater has included \$17.6M (in \$FY25) for works in PSP5. However, it has not yet carried out optioneering so the costs are considered to be an order of magnitude estimate only.

We also note that there is no clear deadline in PSP5. This means that there is currently significant uncertainty in the timing and scope of these works.

We recognise that Dam 2 is beyond the limit of tolerability and that works should be progressed to address this. We have therefore made only one simple adjustment which is to assume that the project is completed by FY31 rather than FY30, reflecting the uncertainty in the project timing and solution.

The resulting capex recommendation is summarised below.



**Table 4-26 – PSP5 proposed and recommended capex adjustment for Blackman Dam 2 safety upgrade (\$FY25M)**

	FY26	FY27	FY28	FY29	FY30	FY31	PSP5 Total
<b>PSP4 outturn/forecast capex</b>	0.5						0.5
<b>PSP5 proposed capex</b>		0.8	1.6	4.0	11.2	0.0	17.6
<b>PSP5 recommended capex</b>		0.5	0.8	1.6	3.2	11.2	6.1
<b>Recommended capex adjustment</b>		-0.3	-0.8	-2.4	-8.0	11.2	-11.5

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

#### 4.5.2.4 Regional Towns Stage 4 - WTP's - St Marys- Bothwell- Tullah- Oatlands- Yolla- Ellendale- Dover

This project forms part of TasWater’s cross-PSP Regional Towns Water Supply Improvement Program (RTWSIP) to achieve compliance with drinking water standards. It also includes the upgrade of water storage infrastructure to comply with TasWater’s design standard, and to meet current and future demands with the aim of reducing the likelihood of supply interruptions. Whilst **compliance** is cited as the primary driver, growth, renewals and improvement are also cited as secondary drivers.

It has been challenging to obtain a clear scope from TasWater for delivery in the current phase of the project, which includes a proposed investment of \$12.9M in FY26 and \$13.5M in FY27, due to inconsistent information between the documents received and provided at interview. However, our understanding is that this stage of the project is intended to deliver the following:

##### Regional Towns Stage 4 – Phase 1 (PSP4)

- Construction of a pipeline between Fentonbury WTP and Ellendale reservoir to address water security at Ellendale in the remainder of PSP4 (FY26).
- Upgrades of clear water storage at Bothwell, Dover, Tullah and St Mary’s during the remainder of PSP4 (FY26).

##### Regional Towns Stage 4 – Phase 2 (PSP5)

- WTP replacement at Bothwell and Oatlands across both PSP4 and PSP5 due to drinking water standards non-compliance (Log Reduction Deficit or LRV) and a Ministerial Direction to add fluoride treatment at Bothwell, in addition to poor WTP performance at Oatlands.
- Extension of raw water pipeline and replacement of raw water storage at Bothwell.
- Connection of the new Oatlands WTP to the existing raw water pipeline.

We note that Oatlands is showing as having no LRV deficit (i.e. compliant with drinking water guidelines) based on TasWater’s most recent analysis whilst Bothwell is showing a 1.5 LRV deficit as presented during the project interview. However, TasWater advised during the project interview that maintaining this compliance requires backwashing of the filters every 4-6 hours which reduces capacity, and that performance is also inconsistent. Monitoring is also not continuous so TasWater does not have a complete view of compliance. Growth was also reported to be a significant secondary driver, with water supply deficits for Oatlands and Bothwell forecast from 2032 onwards.

The wider Stage 4 program includes the following elements:



**Table 4-27 – Regional Towns Stage 4 drivers and scope**

<b>Town</b>	<b>Water security issues</b>	<b>Water quality issues</b>	<b>Proposed solutions</b>
<b>Bothwell</b>	Current raw water security shortfall identified due to potential for low summer lake levels and releases by the NRE*. Insufficient storage based on expected treated water demands.	Log Reduction Value (LRV) deficit that does not achieve the Drinking Water Guidelines best practice mitigation approach	Raw water security: Connection to TasIrrigation Midlands Irrigation Scheme  Water quality and growth: Replacement of existing WTP, ultrafiltration (UF) Membrane Process Additional 1.0 ML clear water storage
<b>Ellendale</b>	Requires raw water carting most summers due to current plant constraints and insufficient yield from the Jones River raw water source	LRV deficit that does not achieve the Drinking Water Guidelines best practice mitigation approach	Pipeline between nearby Fentonbury WTP and Ellendale reservoir, plus upgrades at Fentonbury WTP
<b>Tullah</b>	Existing WTP does not have the capacity to meet future demand. Insufficient storage based on expected treated water demands.	LRV deficit that does not achieve the Drinking Water Guidelines best practice mitigation approach	Water quality and growth: Replacement of existing WTP, Nano Membrane Process Additional 0.25 ML clear water storage and reticulation pipework
<b>Oatlands</b>	Existing WTP does not have the capacity to meet future demand	LRV deficit that does not achieve the Drinking Water Guidelines best practice mitigation approach	Water quality and growth: Replacement of existing WTP, Conventional Process
<b>Yolla</b>	Existing WTP does not have the capacity to meet future demand	LRV deficit that does not achieve the Drinking Water Guidelines best practice mitigation approach	Water quality: Additional GAC & UV processes
<b>St Mary's</b>	Existing WTP does not have the capacity to meet future demand. Insufficient storage based on expected treated water demands.	LRV deficit that does not achieve the Drinking Water Guidelines best practice mitigation approach	Water quality: Nano Membrane Process
<b>Dover</b>	Existing WTP does not have the capacity to meet future demand. Insufficient storage based on expected treated water demands.	LRV deficit that does not achieve the Drinking Water Guidelines best practice mitigation approach	Additional 1.5 ML clear water storage Water quality: Conventional Process

\*Department of Natural Resources and Environment Tasmania



Source: "Att. D.22 - PSP5 Major Project Summary - Regional Towns Stage 4 – WTPs", D. 22 - 0172-REP-PV-0008\_1 Detailed Business Case - Regional Towns Stage 4 WTPs

An options analysis was conducted for each regional town within the program's scope to address the water security and water quality issues outlined above. This process involved developing a long list of potential options, evaluating them through MCA, and then assessing a short list against both cost and non-cost factors. Stakeholder input was incorporated through internal workshops. Options were selected based on lowest cost including NPV, lowest environmental and safety risk and highest MCA score.

The Stage 4 Phase 1 components are currently under construction or complete, with the final elements forecast for completion in early 2026.

Detailed design for the Bothwell and Oatlands upgrades (Phase 2) is currently being completed. TasWater stated that it has committed to constructing the new Bothwell WTP by the end of 2026, i.e. FY27.

The project has a forecast cost of \$12.9M in 2026 (PSP4) and \$13.5M in 2027 (PSP5). There is no outturn spend included under this project in TasWater's capex spreadsheet prior to the FY26 forecast.

TasWater has forecast that \$4.7M of the PSP5 Phase 2 project will be provided via external funding, which we understand to be from the WISER (Water Infrastructure for Sustainable and Efficient Regions) fund which is part of the National Water Grid Fund. We understand that TOCs have not been developed for the Phase 2 elements of this project (Oatlands and Bothwell).

The DBC (2022) reports that Direct Cost estimates were built up by the CDO using a range of approaches including supplier quotations, historical project costs and bottom-up assumptions, e.g. based on panel day rates. The estimated project total under the DBC was \$45M. We have not had sight of the TOCs for the Phase 1 elements (if these exist) so have not been able to confirm the proposed \$10M forecast for FY26.

The current scope is being delivered under the CDO, as one of its final projects, with construction being undertaken by specialist sub-contractors.

On the basis of the information provided we are satisfied as to the prudence of the proposed investments to address current water security within Ellendale, achieve water storage compliance within four of the regional towns and resolve drinking water non-compliance and WTP performance at Oatlands and Bothwell. TasWater appears to have conducted a detailed options assessment process to select the preferred option.

However, we have been unable to undertake a full assessment of efficiency due to the limited information provided on the cost forecast, and cost and schedule performance. We are unsighted as to whether the current program to be completed by the end of FY26 is on track and whether there may be some slippage of program and spend into FY27. We understand that detailed design and construction of the Phase 2 components is scheduled to be completed within the next 12 months. Considering the scope to be delivered in FY27 it therefore appears to be more realistic to profile spend beyond FY27. We have proposed a reprofiling to this effect as set out below.



**Table 4-28 – PSP4 outturn/forecast capex, PSP5 proposed capex and recommended capex adjustment for Regional Towns Stage 4 WTPs project (\$M nominal)**

	FY25	FY26	FY27	FY28	FY29	FY30	Total
<b>PSP4</b>							
<b>outturn/forecast capex</b>		12.9					12.9
<b>PSP5 proposed capex (net of external funding)</b>			13.5				13.5
<b>Forecast external funding</b>	-5.6	-4.7	-4.7				
<b>PSP5 recommended capex</b>			10.1	3.4	0.0	0.0	13.5
<b>Recommended capex adjustment</b>			-3.4	3.4	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

### 4.5.3 Sewerage compliance

#### 4.5.3.1 Environmental compliance approach

TasWater operates 110 STPs, each of which is subject to an EPN that includes a series of compliance conditions relating to discharge (effluent or reuse) quality, operational conditions, management/improvement planning, monitoring and reporting or other administrative conditions. Compliance is assessed using monitoring data, feedback from the Environmental Protection Agency (EPA), and internal audits. Each EPN includes around 40 conditions.

In 2020 TasWater developed an Environmental Risk Assessment (ERA) framework for STP discharges to waterways. The ERA was originally developed to inform the PSP4 Wastewater Risk Management Plan (WWRMP) and projects for prioritisation. The ERA approach includes a series of assessment criteria relating to effluent quality, dilution, discharge management, and receiving environment characteristics. Each criterion is scored out of either 5, 10, 15 or 20, and combined scores determine an overall risk category (high, medium, or low) for each STP.

The scoring is based on the judgement of TasWater’s internal subject matter experts, drawing on a combination of professional knowledge and expertise and from ambient monitoring studies. The ERA is reviewed annually in October to incorporate updated flow and water quality data.

The ERA was presented to and reviewed by the EPA in 2020, with specific feedback provided to TasWater on particular scores, which was subsequently addressed. TasWater has reported that the EPA was generally supportive of the approach, stating:

*EPA considers the ERA is a good initiative that will help to improve clarity and agreement about environmental risk factors and prioritisation processes. Generally, it provides a good framework to integrate historical assessments and newer information.*

TasWater reported that the EPA endorsed the WWRMP, which was underpinned by the ERA, in 2022.

For PSP5, TasWater’s proposed investment has been prioritised for high-risk sites unless other factors warrant action. TasWater considers this approach more aligned with customer priorities to “*protect our environment and waterways*”, one of the customer feedback themes generated through TasWater’s PSP5 customer engagement, as EPN compliance does not always correlate with actual risk to the receiving water body based on TasWater’s assessment. We note that the category thresholds have been defined as **High** > 12, **Medium** between 4 and 8, and



**Low** < 4. Whilst these thresholds are somewhat arbitrary, TasWater has emphasised that the scoring is a sliding scale. We also note that whilst the banding is not the sole determinant of investment, TasWater considers it a useful prioritisation tool and cites EPA support for the banding approach.

In response to OTTER's request for feedback from the EPA in relation to the use of the ERA to justify environmental compliance investment for PSP5, the EPA in its letter dated 22 September 2025 provided the following response:

*EPA endorses the ERA as a mechanism to prioritise limited capital funding in the context of decades of underinvestment in sewage infrastructure. Given that required infrastructure upgrades will realistically take many decades, prioritisation based on risk to the environment provides a mechanism for improving environmental outcomes and compliance in a proportional manner, particularly when balancing compliance outcomes with ageing public sewerage infrastructure across the state, and existing economic constraints.*

*EPA has not had direct involvement in the development of the framework, however, has been provided with the opportunity to review the methodology used. The EPA are satisfied that the methodology used to develop the ERA is reasonable for its purpose.*

*Without significant upgrades at the majority of wastewater treatment plants (WWTPs) state-wide, it will be challenging for TasWater to make significant improvements to overall compliance obligations. Given the decades-long under-investment in infrastructure upgrades, a risk-based prioritisation framework (based on risk to the environment) and specific commitments regarding infrastructure maintenance and upgrades is viewed as an adequate method for guiding planning and assisting in the determination of upgrade prioritisation.*

*As mentioned previously, the majority of non-compliances cannot be resolved until treatment plants undergo significant upgrades. It is acknowledged that due to numerous complexities and economic constraints, many plants will not undergo significant upgrades for at least 20 – 30 years. Therefore, EPA acknowledge that many compliance obligations cannot be met in the near term. However, the ERA should assist in ensuring that discharges with the largest risk to the environment are prioritised for capital expenditure first. While it would be preferable if all non-compliance were resolved quickly, the reality is that non-compliances at WWTPs with a lower discharge risk will remain non-compliant for the foreseeable future.*

Following a letter from TasWater requesting the EPA's endorsement of TasWater's PSP5, the EPA provided the following response (3 October 2025):

*While the site-by-site nature of EPA's regulatory framework means there is not an immediate alignment between TasWater's PSP proposal and an improvement in environmental compliance when assessed against regulatory notice conditions, the value of a co-ordinated and methodical approach to management of the environmental aspects of sewage treatment is recognised as leading to a reduction in environmental risk...I endorse the activities in the PSP5 Proposal as they relate to EPA's areas of regulation.*

Aligned with this, TasWater reported that the EPA's enforcement approach is to avoid imposing penalties unless TasWater has made an operational error, due to the inherited nature of the asset condition issues.

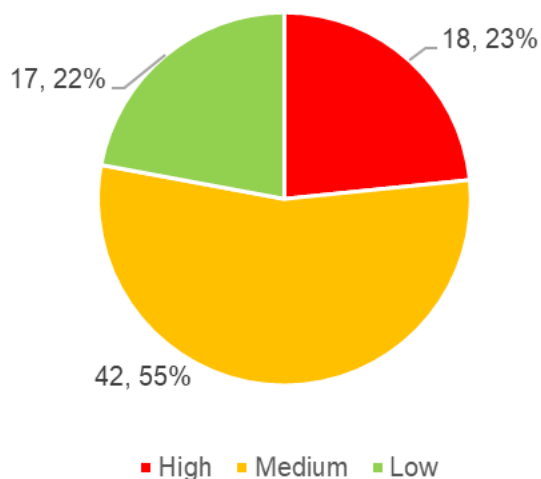
TasWater has classified 18, or 23% of its Level 2 STPs as high risk, 42 or 55% as medium risk and 17 or 22% as low risk (Figure 4-24). Of the 18 high risk STPs, our analysis using TasWater's spreadsheet "20250812 - RFI 30 - Question a & c - PSP5 RFI 30" suggests that 67% of these are non-compliant or substantially non-compliant against at least one EPN effluent quality limit (ammonia, biochemical oxygen demand, chlorine, E.coli, total suspended solids, nitrogen or phosphorus), as shown in Figure 4-25, with the remaining 33% either compliant or substantially compliant against all effluent quality limits.



We mapped proposed PSP5 wastewater capex projects where compliance is identified as the primary driver against Level 2 STPs to assess alignment against environmental risk and compliance against effluent quality limits as set out in TasWater’s Environmental Risk Assessment. Our analysis indicates that 90% of the proposed compliance-driven capex by for these STPs is for high risk STPs, with 4% for medium risk and 6% for low risk (Figure 4-26).

However, when this expenditure is mapped against EPN effluent quality limit compliance status in the Environmental Risk Assessment, 73% of proposed capex relates to STPs currently assessed as compliant, with the remaining 24% relating to non-compliant or substantially non-compliant STPs (Figure 4-27). This difference is largely attributable to the Ti Tree Bend STP Transformation project, which accounts for \$355.5M or 59% of this proposed STP compliance capex in PSP5. This is further discussed below. There are five other high risk STPs not currently assessed as non-compliant or substantially non-compliant with PSP5 compliance-related expenditure including Sheffield, Cameron Bay, Norwood, Hoblers Bridge and Bicheno. Of these, Norwood, Hoblers Bridge and Bicheno are also further discussed below.

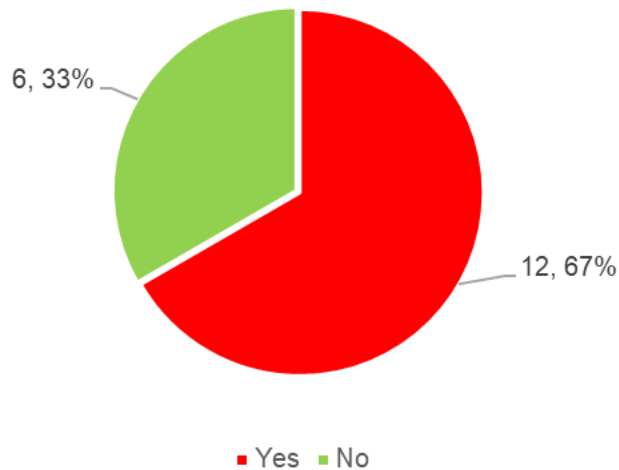
**Figure 4-24 - TasWater Level 2 STP classification based on 2024 ERA**



Source: Analysis of TasWater spreadsheet “Copy of 20250812 - RFI30 - Question b - Copy of 24 76147 Environmental Risk Assessment (Discharge to Water) 2024”

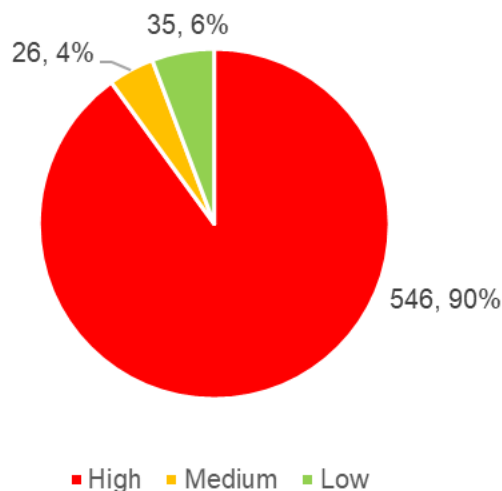


**Figure 4-25 - TasWater EPN compliance status of high risk Level 2 STPs**



Source: Analysis of TasWater’s spreadsheets “20250812 - RFI 30 - Question a & c - PSP5 RFI 30” and “Copy of 20250812 - RFI30 - Question b - Copy of 24 76147 Environmental Risk Assessment (Discharge to Water) 2024”. Note that compliance refers to numerical compliance status against the key wastewater parameters in the TasWater spreadsheet “20250812 - RFI 30 - Question a & c - PSP5 RFI 30” provided as part of the review.

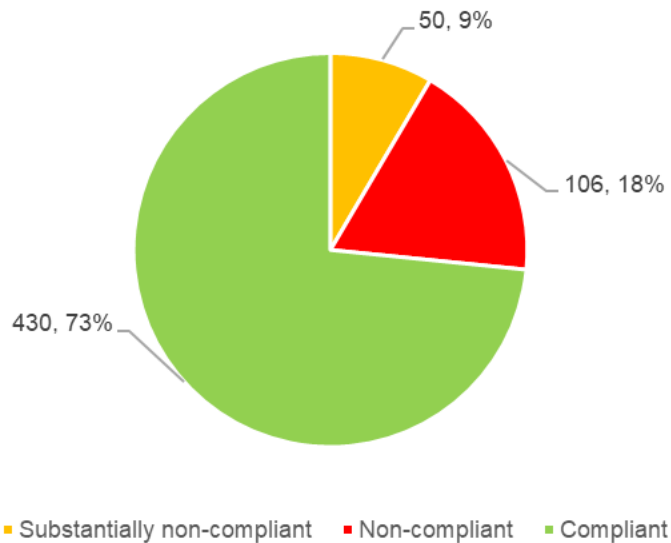
**Figure 4-26 – TasWater proposed PSP5 capex on environmental compliance by Level 2 STP ERA risk classification (\$M, nominal)**



Source: Analysis of TasWater’s spreadsheets “20250812 - RFI 30 - Question a & c - PSP5 RFI 30”, “Copy of 20250812 - RFI30 - Question b - Copy of 24 76147 Environmental Risk Assessment (Discharge to Water) 2024” and TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”



**Figure 4-27 - TasWater proposed PSP5 capex on environmental compliance by Level 2 STP EPN compliance status**



Source: Analysis of TasWater’s spreadsheets “20250812 - RFI 30 - Question a & c - PSP5 RFI 30”, “Copy of 20250812 - RFI30 - Question b - Copy of 24 76147 Environmental Risk Assessment (Discharge to Water) 2024” and TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”. Note that compliance refers to numerical compliance status against the key wastewater parameters in the TasWater spreadsheet “20250812 - RFI 30 - Question a & c - PSP5 RFI 30” provided as part of the review.

When asked to justify the overall wastewater compliance budget in PSP5, TasWater provided the following explanation:

...While we cannot achieve compliance in one regulatory period, within PSP5 explicitly commits to:

- Maintaining treatment standards at medium and low-risk sites.
- Addressing non-compliant conditions identified in the Environmental Risk Assessment (ERA).
- Reducing the number of sewage treatment plants (STPs) posing high environmental risk from 18 to 9 by the end of PSP5.
- Lay the foundation for further investment (including rationalisation) in PSP6 and beyond.

Customer engagement during PSP5 strongly supported environmental improvements. Environmental compliance demonstrates TasWater’s commitment to:

- Protect and improve the environment and water security
- Meeting community expectations for sustainable water and wastewater management. This aligns with broader sustainability goals and regulatory frameworks like the Water Management Act 1999.

TasWater’s community engagement results have been provided as part of PSP5 Proposal.

The priority placed on Environmental compliance reflects TasWater’s Wastewater Risk Management Plan [WWRMP], which has been endorsed by the EPA. The WWRMP outlines how TasWater identifies, assesses, and mitigates risks related to wastewater discharges, odour, trade waste, and asset performance. It forms as the regulatory commitment to the EPA that guides TasWater’s investment prioritisation.

Based on the above and the wider evidence provided at interview we note that:



- TasWater’s ERA-driven investment approach has been endorsed in general by the EPA; however, the EPA expects non-compliance issues to be resolved as a priority through investment.
- EPA has not provided endorsement for any specific wastewater compliance-driven investment schemes.
- Whilst TasWater undertook customer consultation and indicated support for environmental protection, customers have not been consulted on specific schemes.

Below we outline our analysis of TasWater’s most significant wastewater environmental compliance projects within PSP5.

#### 4.5.3.2 LST #1 – Ti Tree Bend STP Transformation

The primary driver articulated by TasWater for the Ti Tree Bend STP Transformation project is Compliance. However, through review of documentation related to the proposed project, two key observations have been made relating to the drivers for the project:

1. TasWater has made reference to the overall need and strategic alignment of rationalisation of the seven STPs in the Launceston area into a single, new STP at Ti Tree Bend.
2. The existing Ti Tree Bend STP **is** largely compliant with its effluent quality limits<sup>39</sup> and has significant headroom against its permitted average dry weather flow (ADWF) within the EPN<sup>40</sup>.

The key justification for the Ti Tree Bend STP upgrade project is tied to TasWater’s desire to complete the Launceston Sewerage Improvement Program (LSIP), which would rationalise all flows to a new Ti Tree Bend STP (see figure below for LSIP rationalisation plan):

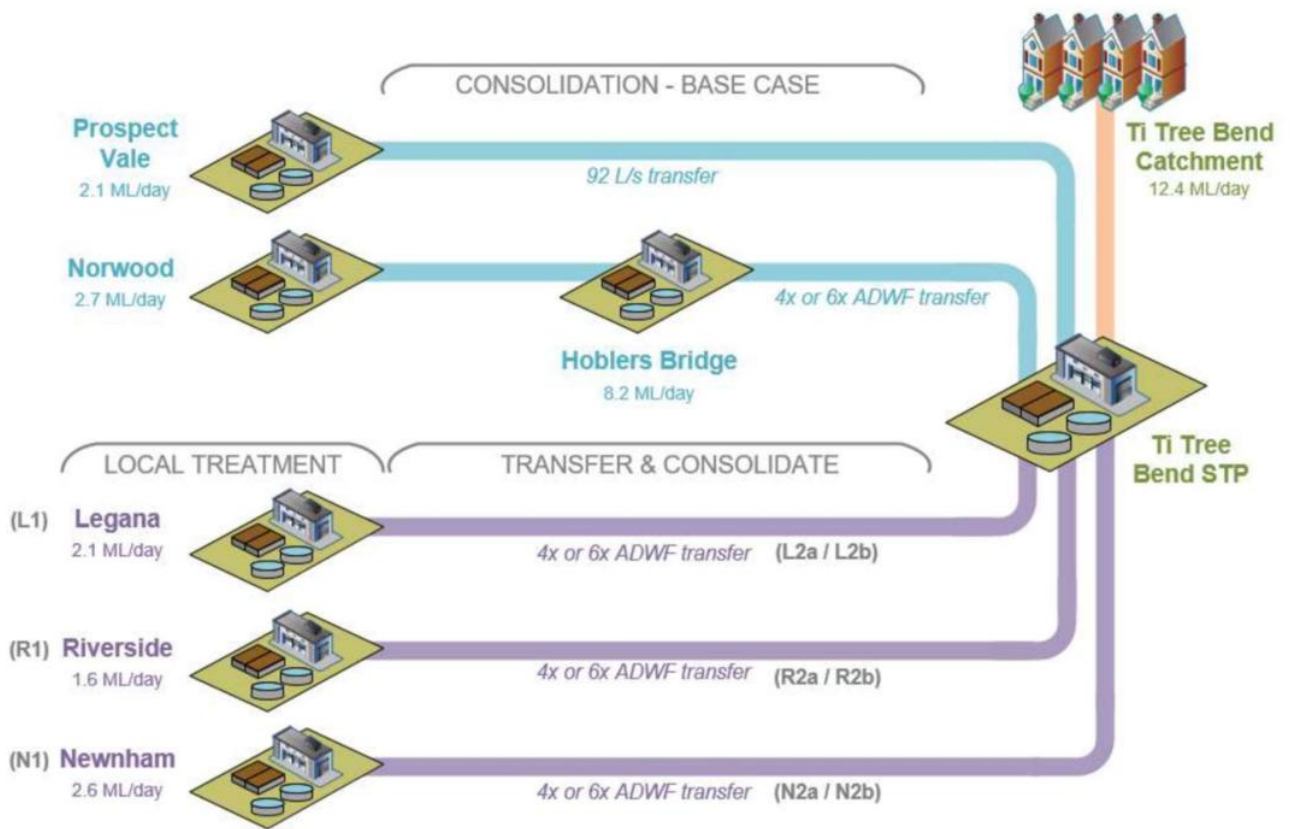
---

<sup>39</sup> Compliance was 100% for the effluent quality limits in 2024-25 except for nitrogen and chlorine which were 98% compliant according to document “T18/74-008-00006”. For nitrogen the document suggests “*non-compliance likely corresponds with elevated loading events and spring temperatures*”. For chlorine, the document highlights an incident during upgrade works which resulted in a “*temporary loss of Chlorine dosing control*” resulting in chlorine levels being over-dosed.

<sup>40</sup> The licence limit for average dry weather flow (ADWF) is 25 ML/d which is the same as the current combined ADWF from all the Launceston STPs according to the Meander Tamar Sewerage Regional Masterplan Summary



Figure 4-28 – The LSIP Rationalisation Plan



Source: Att. D.17 - PSP5 Major Project Summary – LSIP #1 – Ti Tree Bend STP Transformation

Our understanding of TasWater’s proposed scheduling of different elements of LSIP is set out below. The timings of proposed capex are based on TasWater’s capex spreadsheet<sup>41</sup>.

This suggests that TasWater’s plan is to complete the Ti Tree Bend project years before the other STPs are able to discharge to it (except for Prospect Vale which TasWater proposes to connect before the new Ti Tree Bend STP is built). It is not immediately clear that this is prudent given it involves delivering capacity years before it can be used and it would be difficult to commission a large new STP without these inflows. The Masterplan acknowledges this issue and raises the potential approach of building the transfers first:

*The new Ti Tree Bend STP is a large and complex part of the project, and ideally would be commenced before the transfer infrastructure and commissioned together as a whole system. However, if STP costs escalate or budget is cut in future this approach runs the risk of an STP without the transfer infrastructure in place to supply it.*

*To mitigate this risk the transfer infrastructure can be constructed in advance of the STP. The transfer infrastructure is then in place before the big spend on the STP and can be used to transfer treated effluent from the existing STPs to the better outfall location at Ti Tree Bend. This would remove effluent outfalls from the North Esk River*

<sup>41</sup> Tab “CWP” in spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”



We also note that the proposed capex schedule suggests that Hoblers Bridge and Norwood, two (largely) compliant STPs with spare volumetric capacity, would be transferred to Ti Tree Bend before Newnham, Legana and Riverside which are more clearly non-compliant but classified as lower risk by the ERA exercise.

**Table 4-29 – Program of LSIP works**

STP	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Ti Tree Bend	Minor								
Prospect Vale									
Hoblers Bridge	Minor	Minor							
Norwood				Minor					
Newnham				Minor					
Legana									
Riverside					Minor				

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

When challenged on the need to deploy the proposed \$355.5M capex on an STP that is largely compliant with the effluent quality limits in its EPN, TasWater referenced that fact that the ERA listed Ti Tree Bend as a “high-risk” site. Upon review of the ERA for the site we found that:

- The ERA overall score is driven largely by the “near field<sup>42</sup> mixing zone” score with key risks referenced being chlorine, NHx and pathogen indicators. However, we note that current NH<sub>3</sub> and E.coli (pathogen) performance looks good when reviewing the performance against the EPN limits and the issues with chlorine, which reduced compliance to 98% in 2024-25, appear to be driven by a temporary incident affecting dosing control during upgrade works.
- Nitrogen and phosphorus are listed as key “far field<sup>43</sup> risks. However, the STP appears to be performing very well on phosphorus discharge<sup>44</sup> and largely within its limit on nitrogen<sup>45</sup>. As a result, it is not clear that these constitute high risks.

Whilst there appears to be spare ADWF capacity and reasonable performance against effluent quality limits in the existing plant we do note that some of the Launceston STPs are clearly non-compliant with their effluent quality limits and high-risk and therefore interventions to improve performance are likely to be required. As mentioned above, this is the key justification TasWater has referenced for the Ti Tree Bend project.

TasWater has provided a number of optioneering studies as part of the development of the project. These are tied to the broader LSIP program, rather than appearing to focus on the Ti Tree Bend upgrade requirement in isolation.

<sup>42</sup> Our understanding from TasWater’s ERA spreadsheet is that this relates to the immediate mixing zone and performance in relation to key toxicants (ammonia, chlorine, pathogens, blue-green algae).

<sup>43</sup> Our understanding from TasWater’s ERA spreadsheet is that this relates to the wider environment / receiving waters and performance in relating to nutrients.

<sup>44</sup> Maximum level of 2.8 mg/L against an EPN maximum of 10 mg/L in 2024-25 according to TasWater document T18/74-008-00006.

<sup>45</sup> Maximum level of 40.5 mg/L and 90%ile of 34.4 mg/L against an EPN maximum of 40 mg/L in 2024-25 according to TasWater document T18/74-008-00006.



The strategic options put forward include:

- Option 1 – Base Case (Do Minimum). This presents the option of maintaining the existing STPs in the Launceston area at their current capacity by only renewing assets like-for-like at the end of their useful life.
- Option 2 – Partial Consolidation. This presents the option of only rationalising four of the STPs at an updated (but not new) Ti Tree Bend, with individual strategies for the remaining three STPs to be developed.
- Option 3 – Full Consolidation. This presents the option of a new Ti Tree Bend STP, treating flows from all seven Launceston STPs.

Option 3 was selected based on lower lifecycle cost, reduced risks from operating a single facility, removing multiple point source discharges, enhanced river quality and improved adaptability and flexibility for future changes.

Regarding the technical / process selection optioneering for the proposed upgrade, given that the project is only at the strategic business case stage, the final process configuration has not yet been selected. However, an initial optioneering was completed which considered four different treatment options, with two preferred but to be confirmed at later stages of the project development.

TasWater's plan is for an ECI phase to commence in early 2026, which will enable the development of a TOC price, to be confirmed as part of the detailed business case. The D&C phase is then forecast to commence in FY27 with the project being completed in FY30.

TasWater forecasts the project to have a capex of **\$355.5M in PSP5 (note this is a P50 estimate)**. This is the largest capex item proposed by TasWater for PSP5.

The project is planned to be delivered via the Major Projects Framework as part of the Future Delivery Model. It is expected that two contractors will be engaged as part of the ECI process, with a Best and Final Offer (BAFO) provided at the end of the ECI phase, enabling selection of the appropriate D&C contractor for completion of the works.

We have considered the potential benefits and disadvantages of deferral/reconsideration of the project below:

Potential Benefits:

- Customer benefits:
  - The STP upgrade would provide significant additional treatment capacity years before it can be used because the transfers are not yet in place. This would also make it difficult to commission the full STP capacity. There are significant customer affordability benefits associated with deferring the largest proposed PSP5 capex project to a time when it can be used.
  - Where a project is not driven by strict regulatory or compliance requirements, it is important to demonstrate that customers are willing to pay the costs for the benefits the project will bring. It has not been demonstrated that the significant investment is cost-beneficial for customers (i.e. that they are willing to pay the cost).
  - In the Strategic Business Case (SBC) TasWater has identified a risk that the project may be seen to be an over-investment. A key mitigation listed in the risk assessment in the SBC is for benefits to be quantified. No Cost-Benefit Analysis or clear benefits quantification has been presented.



- Deferral would give an opportunity to fully investigate alternative approaches:
  - The licence volume limit at Ti Tree Bend (25 ML/d at average dry weather flow, ADWF) appears to be sufficient to take current flows from all of the Launceston STPs (ADWF also estimated to be 25 ML/d). Whilst it may not be feasible to transfer all untreated STP flows to Ti Tree Bend without some form of upgrade (the process capacity, as separate from the licence volume, would need to be confirmed and there would be no headroom for growth), consideration could be given to:
    - a partial rationalisation of Launceston STPs: transfer of either untreated or treated effluent from a number of STPs. It is possible this could be done either without major upgrade works at Ti Tree Bend STP or with a more limited upgrade to improve plant performance.
    - staged rationalisation of Launceston STPs with upgrade works deferred until the increased capacity can be used. This is effectively extending the approach TasWater is already envisaging by transferring flows from Prospect Vale before the Ti Tree Bend STP upgrade works are complete.
    - rationalisation with partial upgrade: addition of a parallel more advanced treatment stream at Ti Tree Bend STP to treat some of the influent to a higher standard. Whilst this may be more complex to operate than a fully new STP, the potential capex savings could be significant.
    - it may be possible to take treated (rather than raw) effluent from Prospect Vale STP given it has significantly lower TN concentrations than the effluent quality limit at Ti Tree Bend. This could further improve the performance at the current Ti Tree Bend STP if flows from Prospect Vale were to be diverted to the site whilst still delivering the benefits of reduced discharge from Prospect Vale.
  - These would all need to be thoroughly appraised and tested against the benefits they would provide.

Potential Disadvantages:

- The proposed upgrade would reduce pollutant loads discharged to the Tamar.
- The upgrade is a key element of the proposed rationalisation of Launceston STPs. If this rationalisation goes ahead AND growth happens a treatment upgrade will be necessary at some point.
- There is an increased nitrogen performance risk against the EPN if additional untreated flows from other STPs are received.
- The proposed upgrade would increase the capacity to treat all additional flows collected as a result of the TERHAP sewer improvement project.

**Overall, our view is that there is a reasonable case for this project to be deferred and investigated further. Construction is envisaged to be completed years before the other Launceston STPs are connected to the system, the STP is largely compliant with the effluent quality limits in its EPN and TasWater has not demonstrated that customers are willing to pay the considerable costs of this scheme. Further consideration of strategic options would be useful including the potential for transfer of treated rather than raw effluent from Prospect Vale and staged or partial rationalisation or upgrade works.**



This view is reflected in the expenditure recommendation below. We have not recommended any allowance for delivery of an alternative solution such as a treated effluent transfer from Prospect Vale as this is assumed to be broadly similar to the costs of delivering the raw effluent transfer discussed below.

**Table 4-30 - Ti Tree Bend STP upgrade PSP5 forecast (\$M, nominal)**

\$M nominal	FY27	FY28	FY29	FY30	Total
<b>PSP5 proposed capex</b>	50.1	138.4	121.0	46.0	355.5
<b>PSP5 recommended capex</b>	0	0	0	0	0
<b>Recommended capex adjustment</b>	-50.1	-138.4	-121.0	-46.0	-355.5

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

**TasWater material factual inaccuracies comments**

TasWater provided a number of comments on the recommended Ti Tree Bend STP upgrade expenditure as part of its "factual inaccuracies and omissions" submission on 23 January 2026. These included comments related to:

- Compliance with EPNs;
- Whether other STPs could be accommodated at Ti Tree Bend STP (including the 25 Ml/d licence limit);
- Statements about optioneering (including cost-effectiveness); and
- Whether the Masterplan suggests building the transfers first.

We address each of these below.

- Compliance with EPNs: we agree with TasWater that the wording about the compliance of the STPs was focused on the performance presented in the Masterplan. We have amended the text to make it clearer that we are referring to performance against effluent quality limits in the EPN.
- Accommodating flows from other STPs at Ti Tree Bend STP: TasWater makes the point that if flows from other STPs are taken to Ti Tree Bend STP "This activity would trigger need for revised licence conditions and STP upgrade". We have amended our text to acknowledge this point. However, we do not consider that the potential need to revise licence conditions is sufficient justification in itself to spend \$355.5M on upgrading the STP, especially if the environmental benefits of redirecting some flows from non-compliant STPs to the existing Ti Tree Bend STP outweigh the costs.
- Optioneering: we have simplified our comments on the approach to optioneering.
- Masterplan: we have amended the wording to reflect that the approach of building the transfers first is raised as a potential approach in the Masterplan.

Addressing these comments has not materially affected our recommendation and, as such, no change has been made to the recommended expenditure.

**4.5.3.3 LST #2 – Prospect Vale STP Transformation**

The primary driver articulated by TasWater for the Prospect Vale STP Transformation project is **Compliance**. TasWater has noted that the current STP is non-compliant with its EPN discharge limits, as well as having an ERA rating of high-risk. Upon review of the EPN and the EPA assessment we found that this is the case, in contrast to



our findings for Ti Tree Bend. The current Prospect Vale STP has compliance issues related to BOD, Total Suspended Solids (TSS) and E.coli discharges, with the immediate discharge from the STP into a small creek where often 100% of the flow in the creek comes from the STP effluent. This creek ultimately discharges downstream into a river that is used for swimming and recreation; therefore, the discharge poses risk to the community as well as amenity as the specific site of the discharge is to one of the most visited locations in Tasmania (according to TasWater).

The transformation at the Prospect Vale STP is part of the LSIP. The proposed plan is to decommission the STP and convert the site to a pump station and storage tank and construct a pipeline from the new pumping station to the Ti Tree Bend network, with the cut-in to the network taking place nearby (i.e., the pipeline will only be a few kilometres long and there is no need to build a dedicated pipeline all the way to the Ti Tree Bend STP).

A number of options were considered for this project:

- Option 0 – Base Case (Do Nothing)
- Option 1 – Full Reuse
- Option 2 – Partial Reuse and Ground Infiltration
- Option 3 – Bypass Wetland and Outfall to Dalrymple Creek or South Esk
- Option 4 – Various sub-options associated with upgrading Prospect Vale STP
- Option 5 – Chlorination and Partial Transfer to Ti Tree Bend
- Option 6 – Transfer to Carrick
- Option 7 – Transfer to Ti Tree Bend

Option 7 was selected via MCA, Life Cycle Cost Assessments and an Investment Logic Mapping (ILM) process, which found that this option was the most suitable on balance of both cost and non-cost factors.

We note that an option of continuing to operate the Prospect Vale STP and then transfer flows to Ti Tree Bend (i.e., to send treated rather than raw sewerage) was not presented. Although this would potentially have a higher opex and similar capex to the option selected when considering Prospect Vale STP on its own, there could be overall efficiencies in capex across the full LSIP program if this option were explored, as it could negate the need for an upgrade at Ti Tree Bend to receive the flows from Prospect Vale.

The project is currently at 30% design and approaching 70%. It is expected that the design will be complete in early 2026, enabling construction in FY27, with completion in FY27.

TasWater forecast the project to have a capex of \$20.7M in PSP5, with this to be delivered in FY27. The overall capex for the project is estimated to be approximately \$40M, with an element of the capex spent in PSP4. As this project has gone through the detailed business case phase, the costs have been developed using a bill of quantities for component details, the CDO NPV methodology used to define delivery related costs and probabilistic modelling completed using these component cost elements to generate P50/P90 estimates.

The project is planned to be delivered via the Medium Projects Framework and will be issued as a Construct-only contract.

Based on the fact that the existing STP is both non-compliant and high-risk, with a review of details provided by TasWater aligning to this assessment, **the proposed Prospect Vale STP Transformation appears prudent.** There has been a detailed level of optioneering and development of costs such that the investment also seems efficient when assessed as a stand-alone project. However, as previously noted, there could be efficiency gains overall for TasWater and their LSIP delivery if treated rather than raw sewage was sent to Ti Tree Bend from this site. This option has not been provided for review and it is therefore difficult to comment on the overall efficiency of the proposed capex in the context of the broader LSIP.



We have accepted the proposed capex on the assumption that any efficiencies may be offset by the costs of amending the project design to transfer treated rather raw effluent.

Table 4-31 – Prospect Vale STP upgrade PSP5 forecast (\$M, nominal)

\$M nominal	FY27	FY28	FY29	FY30	Total
PSP5 proposed capex	20.7	0.0	0.0	0.0	20.7
PSP5 recommended capex	20.7	0.0	0.0	0.0	20.7
Recommended capex adjustment	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

#### 4.5.3.4 LST #3 – Hoblers Bridge STP Transformation

The primary driver articulated by TasWater for the Hoblers Bridge STP Transformation project is **Compliance**. However, similar to the Ti Tree Bend STP project, this Compliance driver does not align with what is being seen at the STP in terms of performance against the EPN. When reviewing the details of the discharge compliance, the STP is **compliant or significantly compliant** with its EPN. During the interview, when we asked TasWater how the site could be classified as non-compliant and the project justified on the basis of environmental non-compliance, TasWater was unable to provide an answer and acknowledged uncertainty in relation to this.

Following this discussion on the compliance justification, it appeared to be the case that the justification for the project is that it is part of the overall LSIP and therefore decommissioning of the Hobler’s Bridge site was aligned to TasWater’s strategic imperative to rationalise the seven STPs in Launceston down to a single, new site at Ti Tree Bend. It was also noted that the site is prone to flooding and at times this has resulted in biosolids from the site being found outside the site boundaries (examples given being the local caravan park and playgrounds), which has resulted in shutting down of amenities.

The scope of the project is similar to that outlined for Prospect Vale STP above, whereby the existing site will be decommissioned and replaced with a pump station and pipeline such that raw sewage from the Hoblers Bridge catchment can be sent to Ti Tree Bend STP. This transformation project at Hoblers Bridge was noted by TasWater to be required in order to enable the decommissioning of the upstream Norwood STP, also part of the overall LSIP project.

Five options were presented:

- Option 0 – Base Case (Do Nothing)
- Option 1 – Retain existing Hoblers Bridge and Norwood STPs
- Option 2 – Consolidate Hoblers Bridge and Norwood STPs to Ti Tree Bend
- Option 3 – Consolidate Hoblers Bridge and Norwood STPs to a single, combined site
- Option 4 – Retain Norwood STP and Consolidate Hoblers Bridge to Ti Tree Bend

It is worth noting that as part of the optioneering process, Option 1 rather than Option 0 was referenced as the base case, as it was deemed inappropriate that Option 0 be considered the base case due to the non-compliance of the site. However, as noted previously, the site is compliant against its EPN. As a result, only Option 1 (as the base case) and Option 2 were taken forward as part of the shortlisting exercise, and only these two options assessed via the development of capex and opex estimates, NPV analysis and an MCA with stakeholders. Option 2 was then selected based on better performance on the MCA, a lower risk profile and a superior NPV (by 4%).

A strategic business case has been completed for the project, with delivery planned across PSP5. Preliminary design is expected to take place in FY27, with more detailed design in FY29 and construction in FY30.



TasWater forecasts the project to have a capex of \$24.8M. The spend in PSP5 is forecast to commence in FY27 with some early design works. Following this TasWater noted it will shift its attention to the design of the Norwood STP transformation project, hence the reason that there is no forecast spend in FY28, before spend begins again in FY29. This explanation by TasWater aligns with the forecast capex profile; however, in our view it is a somewhat unusual approach.

The project is planned to be delivered via the Medium Projects Framework.

As per our view for the Ti Tree Bend STP Upgrade, based on the drivers, justifications and information provided by TasWater, it is difficult to deem the Hoblers Bridge Transformation project prudent in PSP5. There has been insufficient justification for the project based on the referencing of environmental compliance as the driver, when the site is showing compliance against its EPN. Although an optioneering process has been undertaken, this appears to have been predicated on the fact that the site is non-compliant, and therefore is lacking in a robust assessment of an option that considers the “do nothing” scenario, which against the compliance driver, may warrant consideration.

**In view of this, we have recommended not making any allowance for capex on this project in PSP5.**

**Table 4-32 – Hobler’s Bridge STP upgrade PSP5 forecast (\$M, nominal)**

\$M nominal	FY27	FY28	FY29	FY30	Total
<b>PSP5 proposed capex</b>	0.5	0.0	3.0	21.3	24.8
<b>PSP5 recommended capex</b>	0.0	0.0	0.0	0.0	0.0
<b>Recommended capex adjustment</b>	-0.5	0.0	-3.0	-21.3	-24.8

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

#### 4.5.3.5 Smithton - STP Recycled Water Scheme

Smithton STP in the northwest of the state is currently ranked as the third highest risk STP within TasWater’s ERA due to a non-compliant discharge to Kemps Bay in relation to ammonia toxicity, BOD and E.coli in particular (see below table). TasWater has identified the Smithton STP discharge as posing a high risk to the recreational, commercial and ecological values of Duck Bay, within which Kemps Bay is located, and which is home to multiple shellfisheries in addition to being an important area for migrating birds. Smithton STP was previously identified by the EPA as one of TasWater’s top 13 sites requiring improvement and was included in a Memorandum of Understanding (MoU) between TasWater and the EPA which expired in 2019 without the required improvements to the STP having been achieved.

Currently summer flows from the STP have been managed since 2017 via an existing recycled water scheme and used for irrigation for a dairy farm. During winter, flows are discharged to Kemps Bay due to lack of demand for irrigation and insufficient storage. The STP processes large volumes of wastewater from three trade waste customers, including a large potato processing customer. TasWater noted that this trade waste customer’s current operations discharge a significant volume of solids due to the washing of potatoes prior to processing. This causes TasWater’s lagoons to fill up with solids, which decreases process performance and operational costs. TasWater also highlighted that this trade waste customer has committed to significant investment (\$20M-\$30M by mid-2027) in upgrading their water treatment facilities, providing a long-term commitment to continue operations.

The scope of this PSP5 project is to improve compliance and reduce environmental risk associated with the Smithton STP discharge. To achieve this, TasWater is proposing to develop a full recycled water scheme, with TasWater funding construction of the required pipeline infrastructure, including a pump station, 12 km pipeline, customer connections and a disinfection system. TasWater has proposed that the required storage dam is funded by recycled water customers. TasWater released a public Expression of Interest for recycled water customers and through this a cooperative of four farms have offered to construct an 800 Ml/d storage dam, to which TasWater



would connect. TasWater are also planning to apply for National Water Grid funding to support the scheme with potential for additional funding from the federal government.

**Table 4-33 – TasWater's latest compliance data and ERA for Smithton STP**

Site	Key Wastewater Parameters							Discharge Risk	Risk Score - FY24
	NH3	BOD	Cl	E. coli	TSS	N	P		
Smithton (Pelican Point) STP	52% - substantially non-compliant	18% - non-compliant	100% - compliant	70% - substantially non-compliant	97% - compliant	97% - compliant	97% - compliant	High	11.8

Source: TasWater spreadsheet titled "20250812 - RFI 30 - Question a & c - PSP5 RFI 30"

TasWater has assessed four strategic options:

- Base Case – do nothing: continue to discharge effluent that presents a high risk to recreational commercial and ecological values in the receiving environment. TasWater considers this an unacceptable option given the commitments made to customers.
- Option 1 - Full Reuse: Expansion of the current reuse scheme to provide full reuse of treated effluent, with renegotiated limits to discharge of effluent during winter.
- Option 2 - Marine Discharge: Upgrade of the STP to add an additional process unit for phosphorus removal and construction of an outfall to Perkins Bay in Bass Strait to discharge at approximately 10m deep.
- Option 3 - Estuarine Discharge into Duck Bay Estuary, which would require additional nutrient removal processes requiring a new STP or additional process units.

Options 1 to 3 were evaluated in the 2021 SBC, with **Option 1 selected as the preferred solution**. This decision was based on its combination of lowest capital and operating costs, highest MCA score, minimal risk profile, technical feasibility, and alignment with both state water management policy and TasWater’s corporate objectives.

We note that there is a TasIrrigation pipeline approximately 400m from Smithton STP. However, TasWater has advised that this was not considered a feasible option at SBC stage as it was rejected by TasIrrigation due to the environmental controls required from the subsequent classification of all customers as recycled water users.

The project is currently proposed for delivery between FY28 and FY30, with the main construction and commissioning in FY30. Construction of the pipeline is considered to be low complexity due to the open land route.

TasWater’s proposed total capex for the full reuse option is **\$23.2M** including the pipeline infrastructure required but excluding the required 800 ML storage as it has been assumed that this would be funded by the recycled water customer. TasWater noted that any external funding received would be unlikely to reduce the capex for customers as this would be used for other improvements. During the interviews TasWater advised that this capex is based on concept design and will be refined during the DBC phase. However, TasWater expressed confidence in the cost given the relatively simple nature of the required infrastructure.

Construction of the pipeline and associated infrastructure is planned to be delivered through the Medium Projects framework. TasWater noted that the business has limited recent experience in multi-customer recycled water schemes although it has extensive experience in single customer schemes.

While agricultural activities are the primary source of nutrients entering Ducks Bay, consideration of catchment management approaches for nutrient reduction appears limited to date. Nevertheless, the STP discharge remains



non-compliant due to other parameters. The EPA considers this a high-risk STP requiring improvements, noting multiple serious water quality incidents linked to the discharge, which have resulted in closures of the local oyster industry. **We accept the proposed capex. However, we would strongly encourage TasWater to seek and use external funding to reduce costs to its sewerage customers rather than spending it on additional improvements to other STP assets. Given the lack of certainty in additional contributions we have not made an adjustment for these at this stage.**

**Table 4-34 – Smithton STP Recycled Water Scheme PSP5 capex forecast and recommended capex (\$M, nominal)**

\$M nominal	FY27	FY28	FY29	FY30	Total
<b>PSP5 proposed capex</b>	0.0	0.9	3.7	18.6	23.2
<b>PSP5 recommended capex</b>	0.0	0.9	3.7	18.6	23.2
<b>Recommended capex adjustment</b>	0.0	0.0	0.0	0.0	0.0

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

### 4.5.3.6 Bicheno Recycled Water Scheme

Bicheno STP, located on the central east coast of Tasmania, is currently ranked as the 10<sup>th</sup> highest risk STP within TasWater’s ERA due to the discharge impacts within Old Mines Lagoon, with ammonia, blue-green algae and pathogens as nearfield key risks and nitrogen and phosphorus as far field key risks. TasWater reported during the interviews that during wet weather the lagoon discharges to the beach, which is a sensitive location, particularly because it is a popular holiday destination. We note, however, that Bicheno is one of several of TasWater’s STPs that is currently showing as compliant or substantially compliant with its EPN despite being classified as high risk (see below table).

TasWater made commitments to the EPA in 2021 to improve the STP to address ongoing compliance issues, including developing and commissioning a recycled water expansion project, reducing STP effluent discharges to Old Mines Lagoon to a sustainable level and to sustainably discharge to the existing Bicheno Golf Club scheme. A new environmental licence was issued to Bicheno STP in 2024 (due to an administrative error resulting in no licence being applied prior to this) which specifies that the discharge to Old Mines Lagoon should cease through expansion of the recycled water scheme. TasWater has sought an Extension of Time to resolve the discharge issues and is awaiting confirmation from the EPA as to whether this will be granted.

The objective of the project is to address non-compliance of the Bicheno STP EPN through expansion of the existing recycled water scheme (RWS). The STP currently discharges treated effluent to a partial RWS at Bicheno Gold Club; however, due to limited irrigation demand it frequently discharges to Old Mines Lagoon to the north. The planned solution is to construct a new recycled water pump station, recycled water storage, customer connections and up to 5km in recycled water transfer infrastructure. The scheme aligns with TasWater’s commitment to 100% reuse by 2050.

The project was awarded \$5M federal funding support via the National Water Grid Authority in 2022 with a DBC prepared in 2023, but the proposed customer for the recycled water was confirmed to be no longer viable in June 2024. Following this, a re-analysis of the options was undertaken (see below), with a Gate 1 Options Analysis report delivered in August 2025. Currently, there is no confirmed funding agreement in place and uncertainty as to whether this funding would be granted, although the scope of the preferred option aligns with the original National Water Grid Authority proposal that was granted funding in principle. If this funding were not to be granted, TasWater is likely to stage the scheme by deferring the storage development.

TasWater has not yet undertaken consultation with the local community regarding the different options, including an outfall option, due to concerns that this could jeopardise land ownership discussions.



**Table 4-35 – TasWater's latest compliance data and ERA for Bicheno STP**

Site	Key Wastewater Parameters							Discharge Risk	Risk Score - FY24
	NH3	BOD	CI	E. coli	TSS	N	P		
Bicheno STP	100% - compliant	83% - substantially compliant	-	83% - substantially compliant	83% - substantially compliant	92% - substantially compliant	75% - substantially compliant	High	10.1

Source: TasWater spreadsheet titled "20250812 - RFI 30 - Question a & c - PSP5 RFI 30"

The DBC for the scheme was previously approved in 2023 but had to be abandoned in 2024 shortly before construction was planned to start, due to the preferred customer withdrawing. A long list of options was subsequently reviewed and shortlist of options reassessed which included the following:

- Option 0 – Base case (do nothing): Maintain the existing recycled water scheme with the golf club as the sole customer, but with a reduction in the discharge to ensure sustainability, with a resultant increase to the Old Mines Lagoon discharge.
- Option 1 – TasWater-owned RWS expansion: Acquisition of a property near the STP, construction of a new recycled water pump station and transfer pipeline to this property, in addition to 80 ML storage and irrigation pumping station. Undertake EOI process to confirm the ongoing commercial management arrangements for the site, once constructed. Continue to discharge to the golf course.
- Option 2 – Effluent Discharge Outfall Pipe: Construct a new outfall pipe from the STP to the ocean, requiring a new pumping station and UV disinfection to address pathogen risk. Continue to discharge to the golf course.
- Option 3 – Staged RWS Expansion: Expand the scheme through addition of one new customer to the north of the STP, but without any storage capacity at this property, requiring continued discharge to Old Mines Lagoon.

The options have been analysed through a Social Impact Evaluation, Environmental Consequence Assessment, Sustainability Assessment and financial analysis including NPV. Whilst Option 2 has the lowest capex, Option 1 was identified as the preferred option based on a range of factors including achievement of environmental objectives, highest social, environmental and sustainability scores and avoiding reliance on a single private landowner. TasWater's view is that the approval pathway for a new long ocean outfall (Option 2) would be long and complex and is unlikely to receive council approval or be an acceptable option to the local community.

Four alternative pathways with a range of different NPVs have been developed for Option 1. Following discussions with local landowners, TasWater's view is that despite the lack of demand in the local area for irrigation water, once an irrigation supply is developed, the site would be attractive as a potential winery and would sell very quickly. Furthermore, TasWater reported during the interview that they have been in discussions with a landowner close to the STP that is open to selling their land for the scheme.

TasWater's current forecast shows construction starting in FY27 with completion in FY28.

Considering the currently uncertainty surrounding the scheme, TasWater has included a nominal **\$16.6M allowance** for the scheme, to be refined following landowner discussions. This does not include any allowance for external funding. Costs have been classified as P50 Class 4 level within the American Association of Cost Estimators cost classification system (equivalent to a 1%-15% design maturity). A new DBC is to be prepared which will improve the cost definition to Class 3.



As with the Smithton STP scheme, construction of the pipeline and associated infrastructure is planned to be delivered through the Medium Projects framework.

We accept that investment to mitigate impacts of the STP discharge and reduce environmental risk in order to meet EPA and licence commitments is prudent. However, there are significant uncertainties regarding the deliverability of this scheme. These stem from its reliance on securing a suitable foundation site for the RWS expansion, as well as unknowns around land acquisition costs, the likelihood of external funding, community consultation and the program timeline (including whether the scheme would need to be staged).

TasWater has indicated a strong expectation of obtaining funding, contingent on developing a viable solution. Accordingly, we have proposed reprofiling the planned expenditure to FY28 and FY29 (instead of FY27 and FY28).



**Table 4-36 – Bicheno STP Recycled Water Scheme PSP5 capex forecast and recommended capex (\$M, nominal)**

\$M nominal	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Outturn/forecast capex	0.7	0.5	0.5	0.0					
PSP5 proposed gross capex					7.6	9.0	0.0	0.0	16.6
TasWater assumed external funding		-0.5	-0.4	-1.9	-2.2	0.0	0.0	0.0	-2.2*
PSP5 proposed capex (net of external funding)					5.4	9.0	0.0	0.0	14.4
PSP5 recommended gross capex				0.0	0.0	7.8	9.1	0.0	16.9
Assumed external funding		-0.5	-0.4	0.0	0.0	-1.9	-2.2	0.0	-4.2
PSP5 recommended capex (net of external funding)				0.0	0.0	5.8	6.9	0.0	12.7
Recommended capex adjustment				0.0	-5.4	-3.1	6.9	0.0	-1.7

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

\*PSP5 only

## 4.6 Improvement

### 4.6.1 Overview

TasWater has proposed a significant increase in improvement capex compared to recent actuals, with the largest increase being in the water service as can be seen below.

The largest improvement project is "ICT Major system upgrades and enhancements" which we have allocated to water and sewerage pro-rata based on water/sewerage-specific improvement spend. All other project projects are below \$10M with the largest related to PFAS compliance (sewerage) or other ICT spend. We review the ICT major system upgrades and enhancements below.

**Table 4-37 – Improvement capex trends (\$FY25M p.a.)**

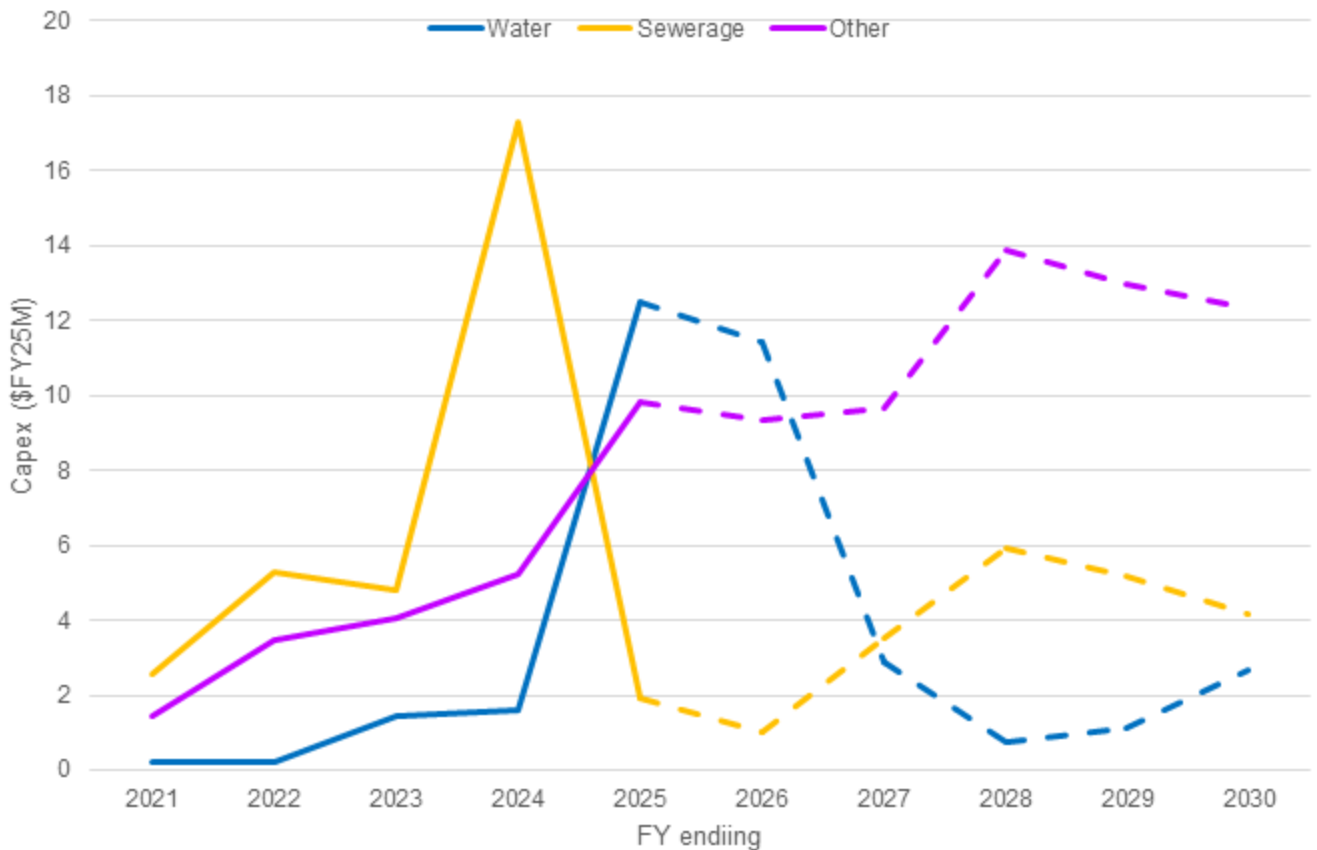
Service	FY21 to 24 actuals	PSP4 average	PSP5 average	Delta FY21-24 actuals to PSP5	Delta FY21-24 actuals to PSP5
				\$FY25M p.a.	%
Water	1	7	2	1	115%
Sewerage	7	6	5	-3	-37%
Other	4	7	12	9	244%
Total	12	20	19	7	58%

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025"

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast



**Figure 4-29 – Improvement capex trends (\$FY25M)**



Source: Analysis of TasWater spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025”

Note: FY25 and 26 are based on the initial forecasts provided in the June 2025 PSP5 as the driver data are not available for the FY25 actuals and FY26 reforecast

## 4.6.2 ICT Major system upgrades and enhancements

The ICT Major System Upgrades and Enhancements project is proposed to renew and modernise four TasWater systems:

- Finance Management;
- Asset and Operations Management;
- Customer Management; and
- Human Resources.

TasWater’s view is these key systems are at or near end-of-life, with significant operational, compliance, and efficiency risks if left unaddressed. It plans to replace platforms with modern, cloud-based solutions, improving integration, reducing manual workarounds, and enabling better service delivery.



It also envisages that the upgrades will support regulatory obligations such as the SoCI Act, enhance internal capability, and address customer expectations for digital self-service.

TasWater has only presented two options for this program: do nothing or 'prioritised system upgrades'.

The costs have been built up using vendor quotes and experience from other Tasmanian enterprises. The include implementation opex of \$5.2M in FY27 followed by \$2.7M pa. from FY28 to FY30. It has also identified "target operational savings" of \$3.4M p.a. which it expects once implementation is complete.

Our view is that there is a **strong case for replacing the current Navision (Finance) and Maximo (Asset Management) systems in PSP5** as they are likely to become unsupported in the coming few years. However, we consider that **TasWater has not provided strong justification for the replacement of the customer management (Gentrack) and human resources systems in PSP5.**

Replacing four critical systems in four years appears to be ambitious and would requiring a lot of management focus and change management. Given the lack of an urgent driver for replacing the customer management and human resources systems suggests that a **more progressive approach would be more prudent.**

Based on the business case<sup>46</sup>, we understand that funding for the finance management system is expected to come from the business improvement program discussed below or through rationalisation of existing software licences, with zero net expenditure from the major systems upgrade program.

The business case sets out<sup>47</sup> an expected cost of \$15.3M (nominal) to implement the asset & operations system. We note that it is not clear whether this system would be procured as an on premises solution or SaaS. For simplicity we have adopted the assumption that it will be 33% opex (as per the overall ratio for system upgrades proposed by TasWater<sup>48</sup>) with the remainder being capex. Readers should refer to the TasWater opex review report for recommended ICT opex.

These assumptions are set out below.

**Table 4-38 – PSP5 proposed and recommended expenditure for ICT major system upgrades (\$M nominal)**

	FY27	FY28	FY29	FY30	PSP5 Total
<b>TasWater proposal (4 systems)</b>					
Opex	5.2	2.7	2.7	2.7	13.3
Capex	4.7	7.1	7.3	7.5	26.5
Sum	9.9	9.8	10.0	10.2	39.8
<b>Our recommendation (2 systems)</b>					
Capex	2.5	2.5	2.5	2.6	10.2

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" and Major Project Business Case "ICT Major System Upgrades and Enhancements"

<sup>46</sup> Page 23, Attachment H.3 - ICT Major Systems Upgrade and Enhancements, June 2025

<sup>47</sup> Table 6-3 of Attachment H.3

<sup>48</sup> In Table 6-2 of Attachment H.3



### 4.6.3 Other ICT costs

TasWater has also proposed more modest investment in three other ICT programs which we have reviewed and present at a higher level below given the lower level of proposed capex. We have not recommended any adjustment to the proposed capex for these programs.

**Table 4-39 – PSP5 proposed and recommended expenditure for other ICT programs (\$M nominal)**

Program	Proposed spend	Our view	Opex/capex treatment
Business Improvement Initiatives	\$1.3M p.a. capex + \$1.2M opex	We recommend including this capex.  Whilst there may be potential to defer elements data migration to cloud may require more investment than indicated and some investments are hard to identify ex-ante	No adjustment. The proposed mix does not seem unreasonable
ICT cyber security	\$2.1M p.a. capex + \$1.2M opex	We recommend including this capex. The investments are well justified.  We queried the inclusion of “remaining IT uplift works (FY25 and FY26)”. However, TasWater has provided explanation that this relates to works being continued from FY25 and FY26 but occurring in PSP5.	No adjustment. The proposed mix does not seem unreasonable
Data governance	\$0.6M p.a. capex + \$0.5M opex	We recommend including this capex. Improvements in data governance likely beneficial.	These costs appear likely to be purely opex. However, given the uncertainty and low materiality we have not applied an adjustment.

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025" Att. D.11 – PSP5 Major Project Summary - ICT Business Improvement Initiatives, "Att. H.1 - ICT Business Improvement Initiatives - Business Case", Att. D.14 - PSP5 Major Project Summary - Cyber Security Uplift Program, Att. H.4 - ICT Cyber Security Uplift Program - Enterprise Full Business Case Presentation, Att. H.5 - Addendum to Enterprise Full Business Case - Cyber Security Uplift Program, Att. D.15 - PSP5 Major Project Summary - Data Governance, Att. H.6 - ICT Data Governance - Business Case

## 4.7 Recommended efficient and prudent capex

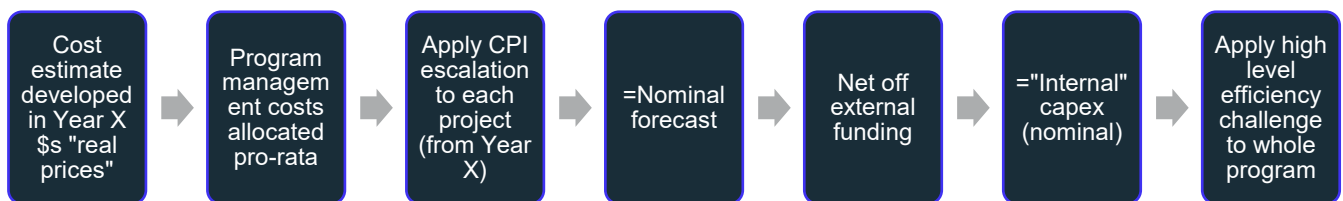
In addition to the project / program level adjustments set out above, we have made a number of other adjustments as set out below:



- Two of the projects have TOCs in place already: Pet Dam and Selfs Point. We consider it is reasonable to assume that a TOC incorporates inflation as it is agreed in nominal terms. We have therefore removed the escalation that TasWater has applied to these figures and treat them as nominal.
- We have also applied an adjustment for typical TOC outperformance rates. This has been applied at 2% of the value of spend for the lines with TOCs currently in place.
- We have considered the level of efficiency which could be achievable and are of the view that the 5.9% efficiency adjustment proposed by TasWater is reasonable given where the business is on its asset management maturity journey. We have therefore retained TasWater's proposed efficiency challenge in % (not \$) terms.
- We have made a small number of adjustments to the price base for the cost estimates from which escalation commences ("Estimate Year" in TasWater's model). For example, we have amended the Estimate Year to be 2025 where it is based on a business case prepared in FY25 or FY26 as is the case for Ridgeway Dam for example.
- Rather than allocating program management costs to each project/program pro-rata, we have kept program management as a separate cost line. This leads to slightly lower costs for each project/program than those proposed by TasWater.

We show the way in which these adjustments have been applied against TasWater's approach (with the changes highlighted in light blue) below:

#### TasWater's approach



#### Our amendments



The recommended project/program level adjustments are summarised below.

**It is important to note that whilst they are formed by reviewing a sample of projects and programs, these recommendations are for the purpose of forming a view of the overall prudent and efficient envelope of capex rather than as recommendations for specific projects or programs to invest in.**



**Table 4-40 – Recommended adjustments by project/program (\$M nominal, PSP5 total)**

Project/program	TasWater proposed PSP5 capex	Our assumed capex	Adjustment	Reason for change
LST #1 – Ti Tree Bend STP Transformation	356	0	-356	Justification
Hobart - Ridgeway Dam Upgrade	144	75	-69	Cost estimate and timing
Water Efficiency Program – NRW reduction and Scheme Improvements	101	35	-65	Justification
Water Main Renewals	95	62	-33	Justification
Electrical and SCADA Renewals	87	59	-29	Justification
Burnie - Pet Dam Ridgley Safety Upgrade	97	70	-27	Cost estimate
LST #3 – Hoblers Bridge STP Transformation	25	0	-25	Justification
Sorell - STP Upgrades for growth	20	0	-20	Justification
ICT Major system upgrades and enhancements	26	10	-16	Justification
Oatlands - Blackman River Dams Upgrades	23	7	-16	Timing
ICT Infrastructure and end-user hardware	26	18	-8	Cost estimate
Selfs Point Sewer Transformation	31	26	-6	Removal of escalation from TOC
Metering Renewals	45	40	-5	Change in price base to \$FY25
Sewer Main Renewals	30	28	-2	Real terms increase outweighed by change in price base <sup>49</sup>
Bicheno Recycled Water Scheme	12	13	0	Timing of external funding adjustment
TOC adjustment	n/a	-2	-2	Our adjustment
Program management	Allocated across projects/programs	16	16	Treated as a separate line in our recommendations
Efficiency challenge	-100	-59	41	The same in % terms
<b>TOTAL (post efficiency)</b>	<b>1,569</b>	<b>942</b>	<b>-627</b>	

<sup>49</sup> TasWater’s model assumes that the costs of sewer main renewals are in FY22 prices and applies escalation starting in that year. Our recommendation is based on an analysis using ‘real’ FY25 prices so we have used that at the price base meaning that less escalation is applied than in TasWater’s model.

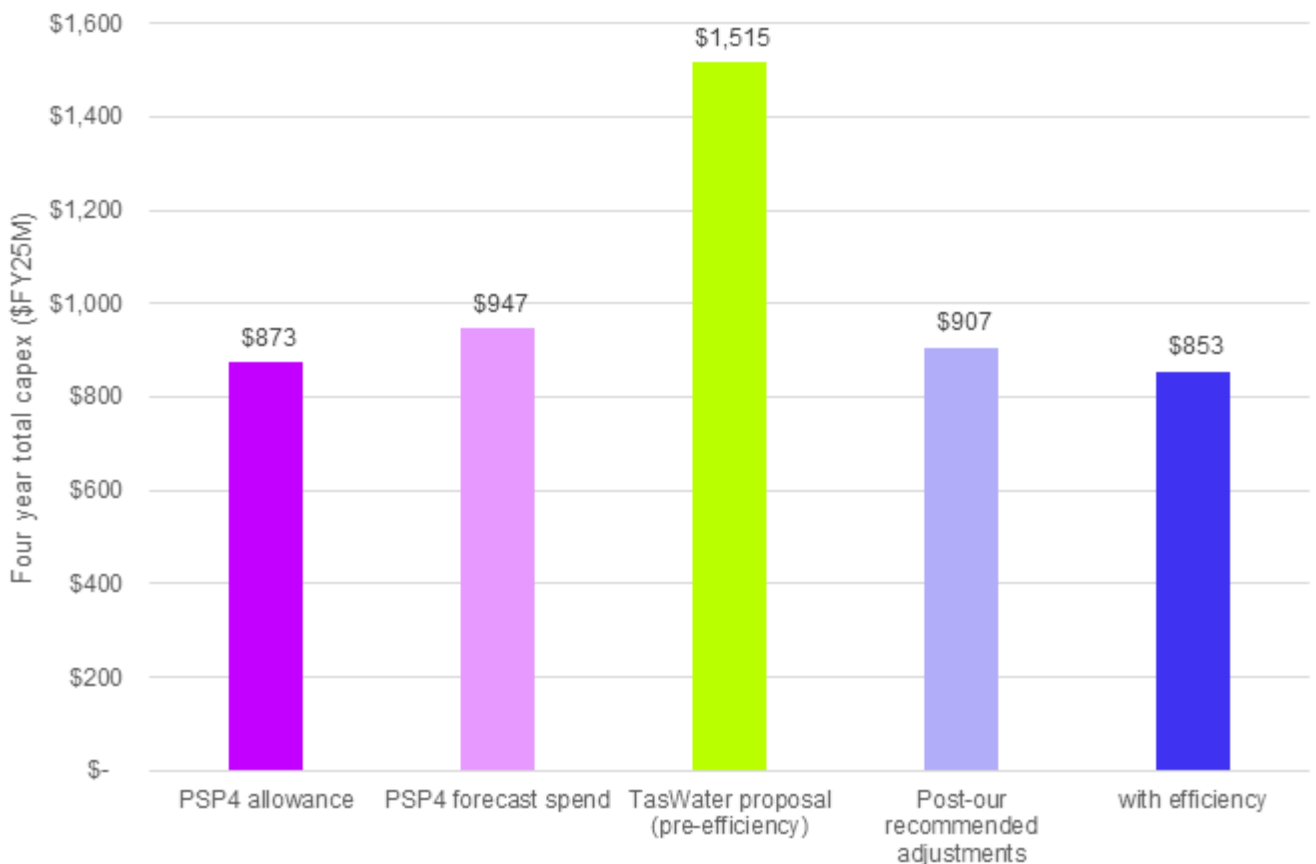


Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025". Note that this table only includes projects with adjustments so the totals do not sum to the bottom row except for the 'adjustment' column. Figures may not sum due to rounding.

Note that because these figures are nominal they are also affected by changes in assumed price base for a number of projects. For example, the sewer main renewals adjustment is negative because the price base has been amended from FY22 to FY25 meaning less escalation has been applied than in TasWater's proposal. The same applies to metering renewals, for which we have assumed a price base for the costs of \$FY25 compared to the assumption in TasWater's model that the costs were in \$FY22 and therefore had three years of additional escalation applied to them.

We summarise below our recommended expenditure allowance at a high level as a comparison against the PSP4 allowance and TasWater's proposal in 'real' \$FY25 terms to allow a like-for-like comparison. This suggests that the recommended expenditure is slightly lower than the PSP4 allowance.

**Figure 4-30 – Comparison of recommended PSP5 capex to PSP4 and TasWater's proposal (\$FY25M)**



Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025".

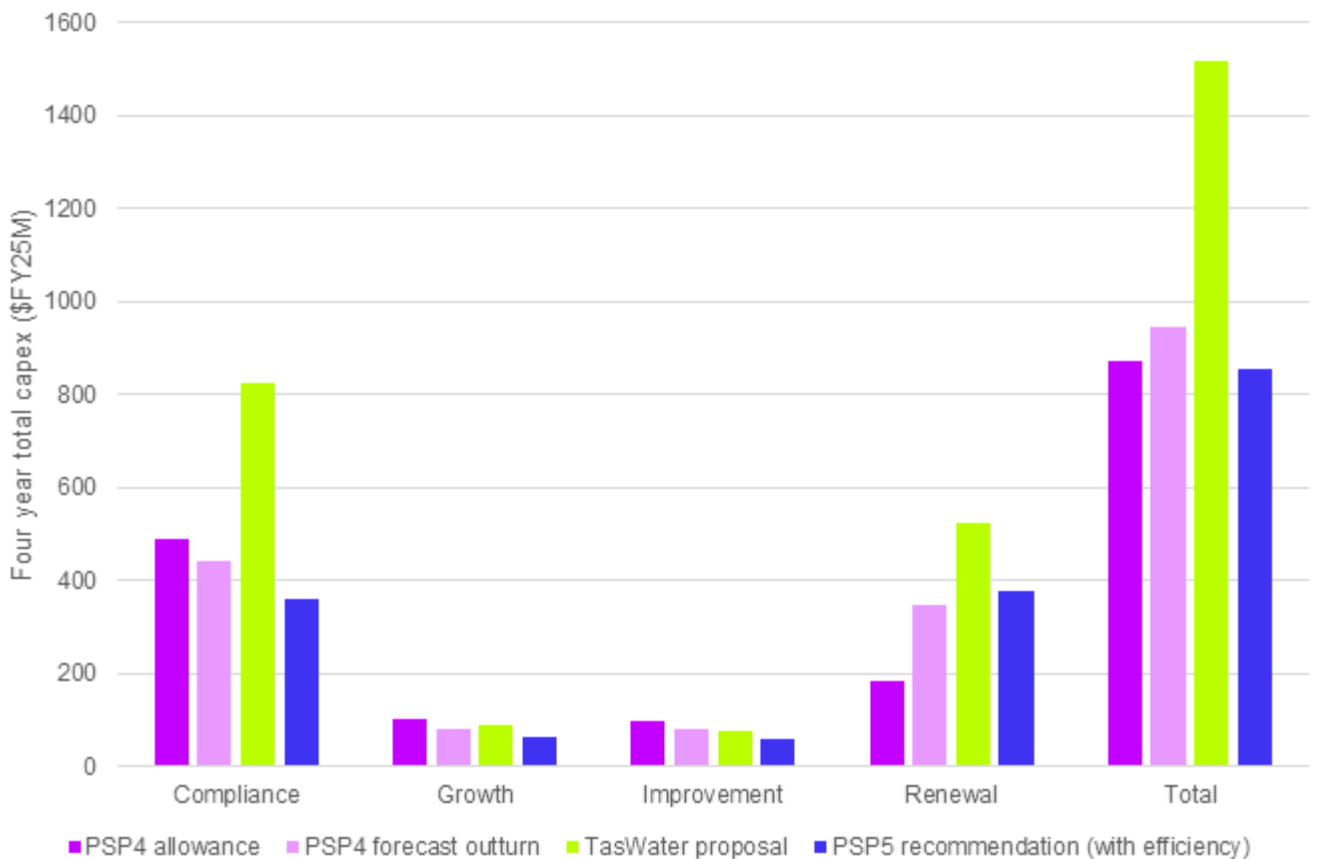
Comparing the recommendations by driver (see graphic below):

- the recommended allowance for Renewals in PSP5 is significantly higher than it was in PSP4 (+\$193M in \$FY25). This is based on the case made by TasWater for investment in electrical renewals and meter replacement and to allow investment in water efficiency.



- the recommended allowance for Compliance spend in PSP5 includes for significant capex on dam safety at Ridgeway and Pet Dam as well as investment in the Smithton Recycled Water and Prospect Vale projects. The recommended allowance is, however, lower than at PSP4 (-\$131M in \$FY25) reflecting the fact that the case for completing the largest proposed PSP5 Compliance projects in PSP5 has not been robustly made. It also reflects the significant Compliance allowance made at PSP4, representing more than half of the capex allowance and encompassing delivery of projects and programs such as the North-West Water Supply Upgrade, Bryn Estyn major upgrade and Ridgeway Dam upgrade.

**Figure 4-31 – Comparison of recommended PSP5 capex to PSP4 and TasWater’s proposal by driver (\$FY25M)**



Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025". Note that program management costs have been allocated pro-rata with capex

We present below a summary of recommended capex by asset type relevant to the RAB ("FA Posting Group Allocation" in TasWater’s model) and by service and driver. All of these figures are after the application of the efficiency challenge.



**Table 4-41 – PSP5 recommended post-efficiency expenditure by RAB asset category (\$M nominal)**

FY	2027	2028	2029	2030	PSP5 Total
DAMS	55	49	43	48	195
INTANGIBLE	10	11	12	9	42
LB-OTHER	1	1	1	2	5
MINOROTHER	23	24	26	29	103
PIPE WASTE	13	28	44	57	142
PIPE WATER	39	35	54	44	173
PUMP WASTE	4	3	3	6	17
PUMP WATER	1	1	1	6	9
RESERVOIRS	3	3	9	9	24
TREATWASTE	65	24	25	33	146
TREATWATER	15	18	15	22	70
VEHICLES	4	4	4	4	15
<b>TOTAL</b>	<b>233</b>	<b>201</b>	<b>239</b>	<b>269</b>	<b>942</b>

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025". Note that program management costs have been allocated pro-rata with capex

We present below a summary of recommended capex by service and driver.

**Table 4-42 – PSP5 recommended post-efficiency water service expenditure by driver (\$M nominal)**

FY	2027	2028	2029	2030	PSP5 Total
<b>Compliance</b>	73	62	50	52	237
<b>Growth</b>	0	0	9	14	23
<b>Improvement</b>	2	0	1	3	6
<b>Renewal</b>	37	43	63	60	204
<b>TOTAL</b>	<b>113</b>	<b>105</b>	<b>123</b>	<b>129</b>	<b>470</b>

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025". Note that program management costs have been allocated pro-rata with capex

**Table 4-43 – PSP5 recommended post-efficiency sewerage service expenditure by driver (\$M nominal)**

FY	2027	2028	2029	2030	PSP5 Total
<b>Compliance</b>	35	23	26	59	142
<b>Growth</b>	28	7	9	0	44
<b>Improvement</b>	2	5	3	0	11
<b>Renewal</b>	18	20	34	37	109
<b>TOTAL</b>	<b>83</b>	<b>55</b>	<b>72</b>	<b>96</b>	<b>306</b>

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025". Note that program management costs have been allocated pro-rata with capex



**Table 4-44 – PSP5 recommended post-efficiency ‘other’ expenditure by driver (\$M nominal)**

FY	2027	2028	2029	2030	PSP5 Total
Compliance	3	4	4	4	15
Growth	0	0	0	0	0
Improvement	9	11	12	14	46
Renewal	26	25	27	26	105
<b>TOTAL</b>	<b>38</b>	<b>41</b>	<b>43</b>	<b>44</b>	<b>166</b>

Source: Analysis of TasWater spreadsheet "Sup 2. Capital Expenditure Forecast PSP5 - September 2025". Note that program management costs have been allocated pro-rata with capex

## 4.7.1 Expected life of new assets

In its proposal TasWater has proposed the following new asset useful life assumptions:

- 100 years: dams
- 80 years: pipe waste, pipe water, reservoirs
- 60 years: pump waste, pump water
- 50 years: treat waste, treat water, "land and building- other"
- 35 years: minor other
- 10 years: vehicles and intangible

We note that, based on the CWP tab in TasWater’s spreadsheet “Sup 2. Capital Expenditure Forecast PSP5 - September 2025” the category “land and building- other” includes items such as small plant and equipment, and facilities management and improvements, roads and furniture.

We would make the following observations on TasWater’s proposed asset lives:

- The most significant capex line classified as “minor other” is the electrical and SCADA renewals program. Whilst an asset life of 35 years may be appropriate for electrical switchboards it is not clear that it aligns well with the SCADA and instrumentation and control elements which form the majority of this renewals program and typically have an asset life of less than 15 years.
- Metering renewals are included in the “pipe water” category. Meters typically have useful lives of 10-15 years rather than the 80 years.
- We understand that TasWater’s policy is to renew light vehicles and cars when they reach five years old or 150,000 km and heavy vehicles at 10 years old or at 250,000 km intervals. At first glance this would suggest that an asset life of 10 years is high. However, we understand that (a) heavy vehicles are very costly so have a greater effect on depreciation and (b) in practice vehicles have been replaced less frequently than the policy suggests.

We recognise that all of these points are likely to have reasonably low materiality and have not made any specific adjustments to reflect them in our recommendations.



## 5. Recommendations

TasWater has proven it can deliver large projects. We consider that it would now benefit from strengthening the demonstration and evidencing of its decision making for whether and what to spend customers' money on.

We think it would be valuable to ingrain benefits thinking, making the identification, tracking and evaluation of customer-focused benefits the common thread throughout decision-making processes (from the Board to Investment Committee to Planners, Delivery, etc). Potential elements of this kind of change include:

- **Business cases:** best practice is for business cases to be a genuine review of all potential options and robust justification for the timing and case for the intervention. They should set out the benefits which can then be measured.
- **Decision framework:** it is useful to embed cost-benefit analysis (CBA) or similar tools into decision making, especially for investments which are not mandatory and for which a robust case therefore needs to be made. Customer research can be used to create a customer value framework which all decisions can be measured against.
- **Measures/targets:** businesses, and more importantly customers, can benefit from having a focused set of customer-centric outcomes as targets (like minutes of service interruptions rather than mains breaks). These targets should be informed by customer priorities and linked to proposed interventions.
- **Portfolio management/capex variance:** where decisions are made to significantly amend the program and/or to spend more than the allowance then good practice is for these decisions to be strongly justified and formally documented, this includes for renewals programs as well as discrete projects.

We would also highlight areas for consideration on three specific themes:

- For an environmental improvement program, whenever interventions are not mandatory, the strength of justification is key. It is good practice to ensure the specific issue which is being tackled is clearly identified and to demonstrate that the proposed intervention is both the most cost-effective approach and also cost-beneficial, i.e. customers are willing to pay for it. Whilst we recognise the customer consultation undertaken by TasWater as part of the development of PSP5, including the bill simulator survey, our observation is that this has been decoupled from the proposed capital program in terms of both priorities and investment level.
- For renewals, best practice is for risk assessments to be forward-looking, to use rich data to justify the program and to prioritise using cost-effectiveness for risk reduction or similar. It is important that alternatives to straightforward asset replacement are considered as often, when feasible, these are a more cost-effective way of achieving customer benefits (e.g. implementation of calm networks).
- Improving losses/leakage is a journey which starts with improved understanding of losses. We consider it would be useful to develop an economic level of leakage and tailored least cost plan specific to each major system as the economics of leakage management depend on the characteristics of each area (e.g. cost and availability of water supplies, level of losses, feasibility of pressure management, etc). We consider it is useful to prioritise measures with highest net customer benefits and/or lowest regret options first.



# AtkinsRéalis



Graydon Jeal  
**AtkinsRealis Australia Pty Ltd**  
Level 21  
2 Market Street  
Sydney  
NSW 2000  
Australia

Tel: +61 02 8239 8700  
[graydon.jeal@atkinsrealis.com](mailto:graydon.jeal@atkinsrealis.com)

© AtkinsRealis Australia Pty Ltd except where stated  
otherwise