



2025 Water Corporation - Asset Management System Review

Review Report

Economic Regulation Authority
February 2026

EXECUTIVE SUMMARY

Introduction

This report presents the findings of an asset management system (AMS) review undertaken in respect of Water Corporation (Western Australia) pursuant to the requirements of section 24 of the *Water Services Act 2012 (WA)*.

The AMS review has been conducted in order to assess the effectiveness of Water Corporation's AMS. It has been conducted in accordance with the *2019 Audit and Review Guidelines; Water Licences (the Guidelines)*, as published by the Economic Regulation Authority (ERA) in March 2019.

The review has comprised an assessment of Water Corporation's performance against the 12 asset management processes and 58 effectiveness criteria, as set out in the Guidelines. Performance has been assessed in respect of the review period, 1 July 2021 to 30 June 2025.

Water Corporation

Water Corporation, which is owned by the State Government, was created under section 4(1) of the *Water Corporations Act 1995*. Under the provisions of its Water Services Licence WL32, Water Corporation is authorised to provide potable and non-potable water supply services, irrigation services, sewerage services, and drainage services within an operational area covering the entire state of Western Australia. It is the principal supplier of these services within its operational area.

Water Corporation has an asset base having a total replacement value of approximately \$50 billion. This includes water supply systems comprising two seawater desalination plants, 113 dams and weirs, 128 borefield facilities, 85 water treatment plants, 817 water storage facilities, 484 water pumping stations, 207 water dosing facilities and approximately 35,840 km of water network; wastewater collection and disposal systems comprising 1,197 wastewater pumping stations, 113 water resource recovery facilities, 47 recycled water storages and approximately 17,904 km of wastewater network; and a drainage network comprising of 2,538 km of urban and rural drains.

Response to Recommendations from Previous Asset Management System Review

The following recommendation was outstanding from the 2021 AMS Review:

- R2/2018 – Asset management information system: We recommend that Water Corporation be required to report annually on the progress of its nominated actions to address the observed shortcomings:
 1. Engineer out drivers of errors
 2. Provide real time validation on entry
 3. Refine the data integrity monitoring.

This recommendation was only partly closed out, brief details are as follows:

- Engineer out drivers of errors – partially closed, work has commenced on the Asset Data Model, which will provide a single point of truth for data and will engineer out issues related utilising multiple data systems.
- Provide real-time validation on entry – partially closed, the Works Management project was delivered in the review period, and this was part of project, however, there was no evidence to determine that the controls implemented were effective.
- Refine data integrity monitoring – closed, integrity monitoring evident.

Findings of Current Asset Management System Review

The latest review of Water Corporation's AMS confirms that thirty seven (37) of the fifty eight (58) effectiveness criteria received an A1 rating, where each criterion receives a single rating, combining Process & Policy (A–D) with Performance (1–4). The effectiveness criteria are grouped into twelve (12) process areas. Six (6) of those received an 'A' rating for Process & Policy and 'Asset Creation and Acquisition' was the only process area to receive an 'A1'. However, it should be noted that when grades were rolled up from the effectiveness criteria within process areas any deficiency resulted in a reduced process grade.

This means the majority of criteria were deemed to have adequately defined processes and policies, as well as effective performance. However, twenty one (21) criteria did not achieve an 'A1' rating, signalling areas where improvement is still required. Of these, nine (9) were rated '3' for Performance and one (1) 'C' for Process & Policy, which require substantial improvement. An additional twelve (12) were rated '2' for Performance and eight (8) 'B' for Process & Policy, which require some improvement.

Areas for improvement continue to include the timely review and update of documentation supporting the asset management plan, systematic identification of under-utilised assets, compliance with performance and service standards, fuller implementation of maintenance plans, thorough failure analysis, asset data integrity, adequacy of the capital investment program, and ensuring the ongoing currency of all elements within the AMS.

Overall Effectiveness of Water Corporation's Asset Management System

The review of Water Corporation's AMS reaffirms that Water Corporation's AMS is robust and mature. This is demonstrated by only one criterion being graded as needing substantial improvement for Process & Policy, the other criteria graded 'B' were generally functioning well but just not fully meeting the required standard. It is in the performance of the AMS where Water Corporation has not fared quite as well. In most aspects this was not due to a lack of will to implement processes and policy, but a lack of resources to fully implement planned activities.

In summary, Water Corporation's AMS is considered to be robust and effective. It was apparent to the auditors that it is a mature system, and that processes and procedures were well established and generally effectively implemented, albeit subject to funding constraints.

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1. INTRODUCTION

Viridis Consultants Pty Ltd (Viridis), in conjunction with Cobbitty Consulting Pty Ltd, was engaged by the Economic Regulation Authority of Western Australia (ERA) to undertake an AMS review in respect of Water Corporation.

The ERA is responsible for administering the licensing scheme in the *Western Australia Water Services Act 2012* (the Act). The primary objective of regulation is to ensure the provision of a competitive and fair environment, particularly where businesses operate as natural monopolies. Under section 24(1) of the Act, the ERA is responsible for engaging an independent expert (contractor) to undertake the review of a water services licence. Water Corporation ('the licensee') holds a water services operating licence (WL32, Version 17) that permits it to provide potable and non-potable water supply services, irrigation services, sewerage services and drainage services within an operational area covering the entire State (refer plans: OWR-OA-309, OWR-OA-175(E); OWR-OA-175-1(B)). The operating licence was granted by the ERA on 28 June 1996 and was last amended on 31 March 2021, when it was renewed for a further 25 years. Other licences are held by other entities with overlapping operational areas. Water corporations may be appointed as the supplier of last resort by the Minister for Water, with the concurrence of the Treasurer, under section 55(3) of the Act.

Water Corporation is the principal supplier of water, wastewater, drainage and bulk irrigation services in Western Australia, managing a \$50 billion asset base (replacement value), which is summarised in Figure 1.

Viridis undertook the review in accordance with ERA's *2019 Audit and Review Guidelines: Water Licences* (the Guidelines).

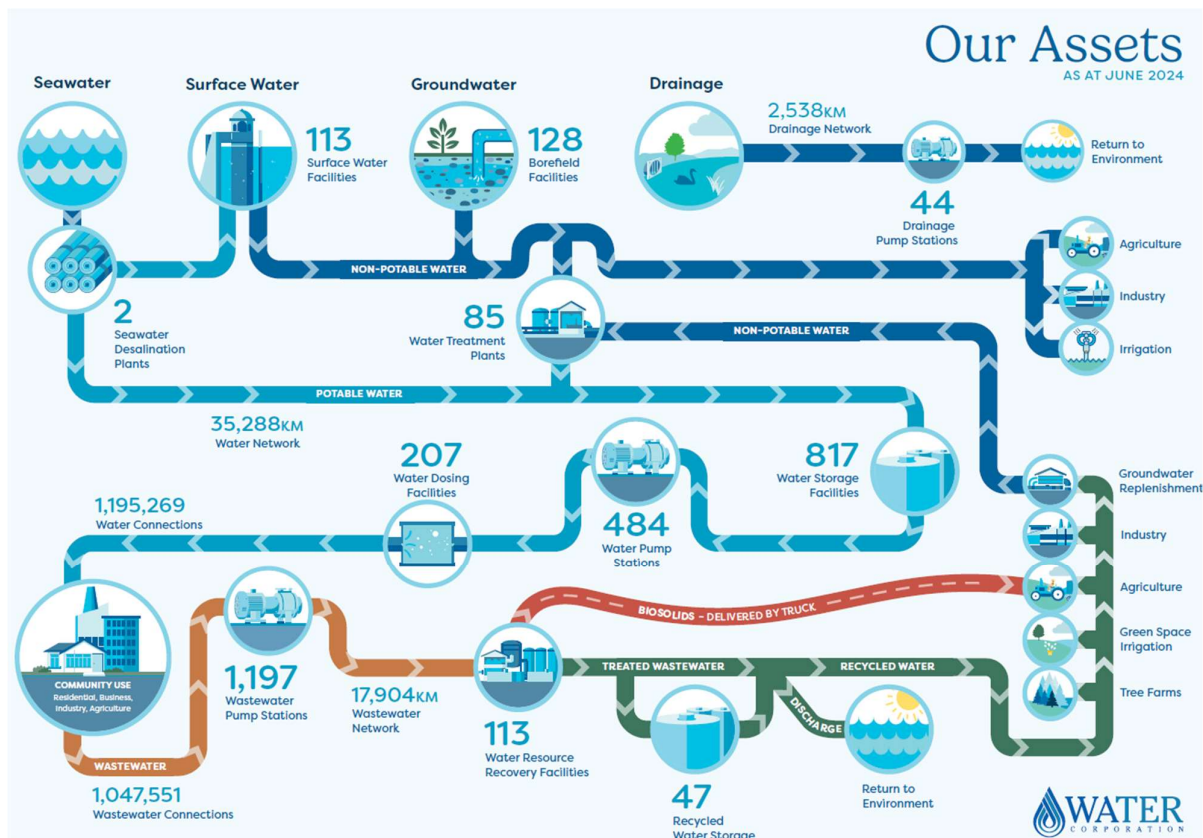


Figure 1 Water Corporation water and wastewater assets
(Source: Water Corporation, Asset Management Strategy 2022-42 (Feb 2025))

2. REVIEW OBJECTIVES

Section 24(1) of the Act requires licensees to have an AMS and to provide the ERA with a report prepared by an independent expert on the effectiveness of the system.

Section 24(2) of the Act requires the AMS to set out the measures taken by the licensee for:

- the proper maintenance of the water service works of the licensee
- the provision and operation of the water service works specified in the licence and of other water service works necessary for the provision of the water service or services authorised by the licence.

Under the Act, water services licensees also are required to provide a report on an effectiveness review of their AMS once every 24 months, or another period that has been specified by the ERA. Accordingly, the objective of this AMS review is to assess the effectiveness of Water Corporation's AMS against the twelve asset management processes and 58 effectiveness criteria set out in the Guidelines.

3. SCOPE OF WORK

3.1. Review Period

The review covers the period 1 July 2021 to 30 June 2025. During this period Water Services Licence WL32 Version 17 was in force for the entire review period.

3.2. Type of Assurance Engagement

This is a 'limited assurance engagement', as defined in the Guidelines. Engagement risk has been reduced to an acceptable level for the circumstances of this review. The following circumstances, which would require a 'reasonable assurance engagement', are not applicable:

- first review of the licence
- the previous review identified serious deficiencies
- there have been material changes to the AMS since the last review.

A review priority has been assigned for the twelve asset management processes and each of the effectiveness criteria, as detailed in the Guidelines (refer Section 4).

3.3. Site Visits

The onsite review included interviews of staff at the Perth head office and interviews of operational staff and inspections of assets at operational sites. The sites that were visited, and topics discussed are detailed below.

Perth Head Office:

- Meetings:
 - Opening Meeting 21 July 2025
 - Closing Meeting 25 July 2025.
- Interviews:
 - 12 Asset management processes were discussed
 - Held on 21-22 and 25 July 2025.

Woodman Point Water Resource Recovery Facility:

- 23 July 2025
- Interviews were held with onsite staff covering existing operations and capital works activities:
 - Inlet Screen Upgrade Project (CS01481)
 - Sludge Treatment Upgrade Project (CS03501).
- site inspection of the existing infrastructure
- observation of the construction activities.

Jandakot Ground Water Treatment Plant:

- 23 July 2025
- interviews held with onsite staff
- site inspection of the existing infrastructure and discussions of operational strategies.

Drainage Bridge 206.1:

- 24 July 2025
- interviews held with staff onsite
- the structure was inspected.

Waroona Wastewater Treatment Plant:

- 24 July 2025
- interviews held with onsite staff
- site inspection of the existing infrastructure
- the future capital upgrade of the plant was discussed.

Waroona Service Tank:

- 24 July 2025
- interviews held with staff onsite
- site inspection of the existing infrastructure
- renewal of the roof and structure were discussed.

Stirling Dam:

- 24 July 2025
- interviews held with onsite staff
- site inspection of the infrastructure
- the previous renewal project and operation of the dam were discussed.

3.4. Personnel and Documentation
3.4.1. Licensee's Representatives

Water Corporation staff involved in the review, interviews and site inspections, are detailed in Table 1.

Table 1 Licensee representatives

Water Corporation Interview Attendees - Position	Site/Location
Manager, Financial Planning & Analysis (Financial Services)	John Tonkin Water Centre (JTWC)
Principal, Regional WW Treatment and Reuse	JTWC
Specialist, Operations Support (Integrated Operations (IO))	JTWC
Manager Operational Co-ordination & Insight (IO)	JTWC
Manager Strategy & Risk (WQ)	JTWC
Manager Regulation & Compliance (RABU)	JTWC
Process Co-ordinator (TaRR)	Woodman Point Water Resource Recovery Facility (WRRF)
Head of Strategy Architecture & Security (SAS)	JTWC
Team Leader, Civil	JTWC
Head of Data & Analytics	JTWC
Manager, Operations Support (WQ)	JTWC
Head of Asset Investment (AI)	JTWC
Senior Tech Advisor, Dams and Drainage	Stirling Dam
Senior Principal, Strategic Programs (Future Water Solutions)	JTWC
Team Leader, Drainage	Waroona Drainage Bridge
Team Leader, Treatment	Waroona Wastewater Treatment Plant (WWTP)

Water Corporation Interview Attendees - Position	Site/Location
Senior Principal Project Manager, Asset Delivery (PMBU)	Woodman Point WRRF
Head of Environment	JTWC
Head of Engineering (EBU)	JTWC
Head of Information Technology Services	JTWC
Team Leader - Operations (TaRR)	Woodman Point WRRF
Specialist, Asset Management System & Risk (ASBU)	JTWC
TL Stakeholder & Internal Policy (Corporate Affairs)	JTWC
Manager Asset Performance & Forecasting	JTWC
Head of Asset Strategy (ASBU)	JTWC
Team Leader, Operations (TaRR)	Jandakot Ground Water Treatment Plant (GWTP)
Principal, Asset Management System & Risk	JTWC
Principal, Investment Portfolio (AI)	JTWC
Manager, Reliability & Capability (M&R)	JTWC
Tech Advisor - Wastewater Processes (TaRR)	Woodman Point WRRF
Manager Wastewater Operations (IO)	JTWC
Manager, Asset Metro Networks (Asset Investment Planning)	JTWC
Head of Asset Investment Planning (AIP)	JTWC
Head of Asset Planning & Delivery Services (AP&DS)	JTWC
Manager, Maintenance Planning & Deployment (M&R)	JTWC
Manager, Water Resource Recovery (Treatment & Resource Recovery TaRR)	Woodman Point WRRF
Manager, Asset Management System & Risk (ASBU)	JTWC
Manager Corporate Risk Management (RABU)	JTWC
Manager Water (Treatment and Resource Recovery (TaRR))	Jandakot GWTP
Manager Water Operations & Maintenance (TaRR)	Jandakot GWTP
Head of Operational Technology (OT)	JTWC
Manager Assets SWR (South West Region) & GSR (Great Southern Region) (AIP)	JTWC
Principal, Asset Management System & Risk (ASBU)	Virtual (JTWC)
Manager, Design Dams and Conveyance	Stirling Dam
Operations Director - Country Regions	JTWC
Principal, Group Finance	JTWC
Head of Project Management (PMBU)	JTWC
Head of Maintenance & Reliability (M&R)	JTWC
Manager, Infrastructure Program Management Office (AP&DS)	JTWC
Manager Service Delivery - Perth Region Field Services (PRFS)	JTWC
Head of Brand & Customer Strategy	JTWC
Head of Water Quality (WQ)	JTWC
Head of Financial Services	JTWC
Manager Group Finance	JTWC
Team Leader - Operations Integration (PMBU)	JTWC
Graduate	Stirling Dam
Senior Operator	Stirling Dam
Manager, Asset Management Services (AP&DS)	JTWC
Manager Assets MWR (Mid West Region) & GAR (Goldfields Agricultural Region) (AIP)	JTWC
Principal Metro WW Treatment, Reuse & Disposal (AIP)	Woodman Point WRRF
Senior Principal - Executive Operations Programme (IO)	JTWC
Head of Strategy and Performance	JTWC
Manager Customer Hub	JTWC
Head of Integrated Operations (IO)	JTWC
Senior Advisor, OSH (Safety & Wellbeing)	Jandakot GWTP

Water Corporation Interview Attendees - Position	Site/Location
Principal Metro Water Source & Treatment (Asset Investment Planning)	Jandakot GWTP
Manager - Statewide Renewals (AIP)	JTWC
Manager - Plant Operations & Maintenance (TaRR)	Jandakot GWTP
Head of Safety & Wellbeing	JTWC
Initiative Owner - IT Projects (ASBU)	JTWC
Head of Risk & Assurance BU (RABU)	JTWC

3.4.2. Information Sources

Documentation referred to throughout the review process, to determine compliance, has been footnoted in section 7 against each criterion for which it was used. In summary the documents referred to included, but were not limited to, the following:

- AMS documentation:
 - Asset Management System Manual
 - Infrastructure Asset Management Policy
 - Asset Management Strategy
 - Asset Class Management Plans
 - Asset Risk Framework
 - Strategic Asset Plan
 - Asset Acquisition Guidelines
 - Decommission and Dispose Assets Guidelines
 - External Environmental Scanning Guideline
 - Plan Scheme Operations Planned Operations and Maintenance Prioritisation Guideline
 - Operational Contingency Planning
 - Program Management Guideline
 - Asset Management Maturity Assessment Procedure
- ERA Compliance Reports
- Evidence of implementation of asset management procedures and guidelines, with a focus on facilities/sites identified for inspection
- Woodman Point Water Resource Recovery Facility:
 - Asset Management Plan (or Asset Class Management Plan, as applicable)
 - Operation and Maintenance Manual (including details of adopted maintenance regime)
 - Operation and maintenance procedural documentation
 - Maintenance schedules
 - Maintenance planning procedures/system (work order process)
 - Environmental Discharge Licence
 - Water Safety Plan (Recycled Water)
 - Incident/Emergency Management Plan
 - Operational records (including SCADA and water quality compliance records)
 - Maintenance records
 - Capital delivery framework documentation such as:

- business case and funding approval
- design reports
- contractor procurement and construction management plan
- inspection and test plans and commissioning plan
- Jandakot Ground Water Treatment Plant:
 - Asset Management Plan (or Asset Class Management Plan, as applicable)
 - Operation and Maintenance Manual (including details of adopted maintenance regime)
 - Operation and maintenance procedural documentation
 - Maintenance schedules
 - Maintenance planning procedures/system (work order process)
 - Water Safety Plan
 - Incident/Emergency Management Plan
 - Operational records (including SCADA and water quality compliance records)
 - Maintenance records
- Waroona Wastewater Treatment Plant:
 - Asset Management Plan (or Asset Class Management Plan, as applicable)
 - Operation and Maintenance Manual (including details of adopted maintenance regime)
 - Operation and maintenance procedural documentation
 - Environmental Discharge Licence (or relevant requirements)
 - Incident/Emergency Management Plan
 - Operational records (including SCADA, water quality compliance and environmental compliance records)
 - Maintenance records
 - Documentation (capital delivery framework documentation) related to the pending upgrade
- Drainage Bridge:
 - Asset Management Plan (or Asset Class Management Plan, as applicable)
 - Maintenance Manual (including details of adopted maintenance regime)
 - Maintenance procedural documentation
 - Maintenance records (to reflect maintenance activity over the review period)
 - Condition assessments
 - Renewal program documentation
 - Stakeholder engagement.
- Stirling Dam
 - Asset Management Plans (or Asset Class Management Plans, as applicable)
 - Operations and Maintenance Manuals for relevant dam systems
 - Operations and maintenance procedural documentation
 - Dam Safety Emergency Plan (DSEP) or broader Incident/Emergency Management Plans
 - Maintenance records and work orders
 - Dam safety inspections, monthly, annual, 5 yearly

- Waroona Service Tank
 - Asset Management Plans (or Asset Class Management Plans, as applicable)
 - Operations and Maintenance Manuals for the service tank and associated pipework
 - Operations and maintenance procedural documentation
 - Inspection records (internal, external, structural, coating condition)
 - Cleaning and disinfection records
 - Incident and Emergency Management Plans relevant to the tank
 - Maintenance records and work orders
 - Cathodic protection or corrosion monitoring reports (if applicable)
 - Access and safety compliance inspection reports
 - Recent capital works or renewal project documentation

3.5. Work Schedule

3.5.1. Activities and Period the Review has been Performed

The review was undertaken in accordance with the schedule in Table 2.

Table 2 Work Schedule

Activities	Date	Reviewer	Hours
Submit a detailed information request to Water Corp	13/06/25	James Howey Jim Sly	5
Review the supplied evidence, undertake a desktop review and identify specific areas for review.	18/07/25	James Howey Jim Sly	32
Prepare a detailed agenda for onsite work	11/07/25	James Howey	2
Onsite interviews and inspections			
Day 1: opening meeting and staff interviews	21/07/25	James Howey Jim Sly	16
Day 2: staff interviews	22/07/25	James Howey Jim Sly	16
Day 3: Field visits	23/07/25	James Howey Jim Sly	16
Day 4: Field visits	24/07/25	James Howey Jim Sly	16
Day 5: Staff interviews and Closing Meeting	25/07/25	James Howey Jim Sly	16
Post review information request	01/08/25	James Howey	4
Prepare Draft Review Report	02/09/25	James Howey Jim Sly Internal QA reviewer	158
Preparation of revised draft report	15/12/25	James Howey Jim Sly	90
Final Review Report	11/02/26	James Howey Jim Sly Internal QA reviewer	26

3.5.2. Review Team and Utilisation

Table 3 Review Team Members

Review team member	Position	Hours
James Howey	Director, Viridis Consultants	263
Jim Sly	Director, Cobbitty Consulting	257
Tasleem Hasan	Reviewer	5

4. DEVIATIONS FROM THE REVIEW PLAN

The following deviations were made from the review plan:

- It was stated that four drainage bridges would be inspected, however, due to time constraints only one could be inspected. It was considered that this did not impact on the outcomes of review, as all the bridges were of a similar nature.
- The draft report was submitted on Monday 2 September 2025 instead of the previous Friday.
- An extra revised draft report stage was added to the work schedule, due to some of the complexities of the review and the issues that were covered.
- The date of the final report has been pushed back due to the time taken for the auditors to receive comments on the draft report and the inclusion of an additional revised draft step in the work schedule.

The review plan was followed in all other respects.

5. RECOMMENDATIONS FROM PREVIOUS REVIEWS

Outstanding recommendations of previous reviews were assessed to determine if Water Corporation had resolved the identified issue. The status of these recommendations is shown in Table 4.

Table 4 Status of recommendations addressing asset system deficiencies from the previous review

A. Resolved during current review period				
Recommendation reference (no./year)	Process and policy deficiency / Performance deficiency (Rating / Reference number, Asset management process & effectiveness criterion / Details of deficiency)	Auditor's recommendation	Date resolved	Further action required (Yes/No/Not Applicable) Details of further action required (including current recommendation reference, if applicable)
N/A				
B. Unresolved at end of current review period				
Recommendation reference (no./year)	Process and policy deficiency / Performance deficiency (Rating / Reference number, Asset management process & effectiveness criterion / Details of deficiency)	Auditor's recommendation		Further action required (Yes/No/Not Applicable) Details of further action required (including current recommendation reference, if applicable)
R2/2018	<p>A2</p> <p>(7.2) Asset management information systems</p> <p>– <i>Input controls include appropriate verification and validation of data entered into the system.</i></p> <p>Water Corporation's tracking of work order data quality has identified that quality for some measures is persistently not meeting its requirements.</p>	<p>We recommend that Water Corporation be required to report annually on the progress of its nominated actions to address the observed shortcomings:</p> <ol style="list-style-type: none"> 1. Engineer out drivers of errors 2. Provide real time validation on entry 3. Refine the data integrity monitoring 		<p>Yes – The Works Management Project has been completed, however, implementation of the Asset Data Model was rescoped to become a separate project under the broader Enterprise Resource Planning Program. The preliminary completion date is 2028. Until this is delivered Point 1 cannot be completed. There has been progress on Point 2, but there has been no review to determine if it has been successful, which needs to take place. Point 3 has been closed, there is evidence that data integrity monitoring is undertaken.</p> <p>Refer to recommendation 05/2025</p>

6. PERFORMANCE SUMMARY

The effectiveness of Water Corporation’s AMS has been assessed for the adequacy of Water Corporation’s processes and policies and its performance in implementing them. Each asset management process and effectiveness criteria has been assessed using ERA’s rating scales from the Guidelines; one for process and policy and another for performance, which are shown in Tables 5 and 6.

Table 5 Process and Policy Rating Scale

Rating	Description	Criteria
A	Adequately defined	<ul style="list-style-type: none"> Processes and policies are documented. Processes and policies adequately document the required performance of the assets. Processes and policies are subject to regular reviews, and updated where necessary. The asset management information system(s) are adequate in relation to the assets being managed.
B	Requires some improvement	<ul style="list-style-type: none"> Processes and policies require improvement. Processes and policies do not adequately document the required performance of the assets. Reviews of processes and policies are not conducted regularly enough. The asset management information system(s) requires minor improvements (taking into consideration the assets being managed).
C	Requires substantial improvement	<ul style="list-style-type: none"> Processes and policies are incomplete or require substantial improvement. Processes and policies do not document the required performance of the assets. Processes and policies are considerably out of date. The asset management information system(s) requires substantial improvements (taking into consideration the assets being managed).
D	Inadequate	<ul style="list-style-type: none"> Processes and policies are not documented. The asset management information system(s) is not fit for purpose (taking into consideration the assets being managed).

Table 6 Performance Rating Scale

Rating	Description	Criteria
1	Performing effectively	<ul style="list-style-type: none"> The performance of the process meets or exceeds the required levels of performance. Process effectiveness is regularly assessed, and corrective action taken where necessary.
2	Improvement required	<ul style="list-style-type: none"> The performance of the process requires some improvement to meet the required level. Process effectiveness reviews are not performed regularly enough. Recommended process improvements are not implemented.
3	Corrective action required	<ul style="list-style-type: none"> The performance of the process requires substantial improvement to meet the required level. Process effectiveness reviews are performed irregularly, or not at all. Recommended process improvements are not implemented
4	Serious action required	<ul style="list-style-type: none"> Process is not performed, or the performance is so poor the process is considered to be ineffective.

A detailed assessment of Water Corporation’s AMS is provided in Section 7 and a summary of review grades is presented in Table 7 below.

Table 7 Performance Summary Table for Reviews

Asset management process & effectiveness criteria		Process and policy rating (A – D)	Performance rating (1 – 4)
1	Asset planning	B	2
1.1	Asset management plan covers the processes in this table	A	1
1.2	Planning processes and objectives reflect the needs of all stakeholders and are integrated with business planning	A	1
1.3	Service levels are defined in the asset management plan	B	2
1.4	Non-asset options (e.g. demand management) are considered	A	1
1.5	Lifecycle costs of owning and operating assets are assessed	A	1
1.6	Funding options are evaluated	A	1
1.7	Costs are justified and cost drivers identified	A	1
1.8	Likelihood and consequences of asset failure are predicted	A	1
1.9	Asset management plan is regularly reviewed and updated	B	3
2	Asset creation and acquisition	A	1
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options	A	1
2.2	Evaluations include all life-cycle costs	A	1
2.3	Projects reflect sound engineering and business decisions	A	1
2.4	Commissioning tests are documented and completed	A	1
2.5	Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood	A	1
3	Asset disposal	B	2
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process	C	2
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken	A	2
3.3	Disposal alternatives are evaluated	A	1
3.4	There is a replacement strategy for assets	B	2
4	Environmental analysis	B	2
4.1	Opportunities and threats in the asset management system environment are assessed	A	1
4.2	Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved	B	3
4.3	Compliance with statutory and regulatory requirements	A	2
4.4	Service standard (customer service levels etc) are measured and achieved.	B	3
5	Asset operations	A	2
5.1	Operational policies and procedures are documented and linked to service levels required	A	1
5.2	Risk management is applied to prioritise operations tasks	A	1

Asset management process & effectiveness criteria		Process and policy rating (A – D)	Performance rating (1 – 4)
5.3	Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition	A	1
5.4	Accounting data is documented for assets	A	1
5.5	Operational costs are measured and monitored	A	1
5.6	Staff resources are adequate and staff receive training commensurate with their responsibilities	A	2
6	Asset maintenance	B	2
6.1	Maintenance policies and procedures are documented and linked to service levels required	B	2
6.2	Regular inspections are undertaken of asset performance and condition	A	3
6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule	A	3
6.4	Failures are analysed and operational/maintenance plans adjusted where necessary	A	2
6.5	Risk management is applied to prioritise maintenance tasks	A	1
6.6	Maintenance costs are measured and monitored	A	1
7	Asset management information system	B	2
7.1	Adequate system documentation for users and IT operators	A	1
7.2	Input controls include suitable verification and validation of data entered into the system	B	3
7.3	Security access controls appear adequate, such as passwords	A	1
7.4	Physical security access controls appear adequate	A	1
7.5	Data backup procedures appear adequate and backups are tested	A	1
7.6	Computations for licensee performance reporting are accurate	A	1
7.7	Management reports appear adequate for the licensee to monitor licence obligations	A	1
7.8	Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation	A	1
8	Risk management	A	2
8.1	Risk management policies and procedures exist and are applied to minimise internal and external risks	A	2
8.2	Risks are documented in a risk register and treatment plans are implemented and monitored	A	2
8.3	Probability and consequences of asset failure are regularly assessed	A	1
9	Contingency planning	A	2
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks	A	2
10	Financial planning	B	2
10.1	The financial plan states the financial objectives and identifies strategies and actions to achieve those	B	3

Asset management process & effectiveness criteria		Process and policy rating (A – D)	Performance rating (1 – 4)
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs	A	1
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	A	1
10.4	The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period	A	1
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	A	3
10.6	Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	A	1
11	Capital expenditure planning	A	2
11.1	There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates	A	1
11.2	The capital expenditure plan provides reasons for capital expenditure and timing of expenditure	A	1
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	A	3
11.4	There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented	A	1
12	Review of AMS	A	2
12.1	A review process is in place to ensure the asset management plan and the asset management system described in it remain current	A	2
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system	A	1

7. AUDITOR’S OBSERVATIONS

The auditors’ observations and evidence utilised is detailed in Table 8.

Table 8 Review observations and recommendations

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
1	Asset planning Asset planning focuses on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price)			B	2
1.1	Asset management plan covers the processes in this table	4	<p>Summary:</p> <p>Water Corporation manages its assets through implementation of its AMS to achieve the goals and corporate objectives identified in the Corporate Strategy, “<i>Thrive2035</i>”.</p> <p>The AMS is comprised of many documents. Water Corporation identified the <i>Asset Management Strategy</i>, <i>Asset Acquisition Process</i> and <i>Asset Management System Manual</i> as the primary documents; review of these and other supporting documents confirms that they collectively address all the identified asset management processes and associated effectiveness criteria. Furthermore, in conducting the AMS review it was clear that all elements were covered.</p> <p>Process and policy:</p> <p><i>Thrive2035</i>, Water Corporation’s Corporate Strategy,¹ identifies its corporate goals as: ‘Safe for all’, ‘Satisfied customers’, ‘Environmentally sustainable’, ‘Great place to work’, ‘Efficient’, and ‘Supporting state development’. Corporate objectives are identified in respect of each of these goals.</p> <p>The Corporate Strategy is supported by a number of sub-strategies including:</p> <ul style="list-style-type: none"> • Subsidiary - ‘Yesterday, Today and Tomorrow’ and ‘Environmental, Social and Governance Strategy’ • Core – ‘Operations Strategy’, ‘Customer Strategy’ and ‘Asset Management Strategy’ • Enabling – ‘Great Place to Work Strategy’, ‘Data and Technology Strategy’ and ‘Sustainable Financing Strategy’. 	A	1

¹ Thrive 2035: Our Corporate Strategy 2022-2035

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Review of the <i>Asset Management Strategy</i>,² <i>Asset Management System Manual</i>³ and <i>Asset Acquisition Guideline</i>⁴ demonstrated that all of the asset management processes are covered. The <i>Asset Management Strategy</i> outlines Water Corporation’s proposed approach to implementation and improvement of its asset management practices over a 20 year planning horizon; the <i>Asset Management System Manual</i> provides an overview of how the asset portfolio is to be managed in accordance with the relevant guidance, including the ERA’s process requirements; and the <i>Asset Acquisition Guideline</i> provides guidance in respect of (for example) asset investment planning, asset creation (including development, engineering, delivery, etc) and linkages to the financial/budgeting process.</p> <p>These primary documents are supported by documentation including (for example) the <i>Strategic Asset Plan</i>,⁵ which outlines an annual assessment of the asset portfolio together with proposed actions and investments for the forward year; and the <i>Line of Sight Framework</i>,⁶ which shows how corporate objectives are met through implementation of the AMS for each portfolio (water, wastewater, irrigation and drainage) and identifies asset risk, asset management objectives, levels of service and investment source for each of the corporation objectives.</p> <p>Performance:</p> <p>Based on observations made during the interviews and site inspections, it was evident that Water Corporation’s AMS was comprehensive and covered all the ERA’s asset management processes and effectiveness criteria. Performance is assessed more specifically in respect of each criterion in the following.</p>		
1.2	Planning processes and objectives reflect the needs of all stakeholders and are integrated with business planning	5	<p>Summary:</p> <p>The <i>Asset Management Strategy</i>⁷ identifies the need to engage with key stakeholders as part of the planning process. The asset management objectives, as defined in the <i>Asset Management Strategy</i>, are focussed on delivering the needs of stakeholders. Stakeholders’ needs are considered throughout the asset planning, design and delivery stages of the Asset Acquisition Process.</p>	A	1

² Asset Management Strategy 2022 – 2042, 26 Feb 2025

³ Asset Management System Manual, Doc # 58587247, 30 Jan 2025

⁴ Asset Acquisition Guideline, Doc # 58555521, 27 Sep 2024

⁵ Strategic Asset Plan 2024-25, Dec 2023 and Strategic Asset Plan 2025-26

⁶ Line of Sight Framework, Version 1.6, 12 Aug 2024

⁷ Asset Management Strategy 2022 – 2042, 26 Feb 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Corporate stakeholders are managed and their needs identified in accordance with principles outlined in the <i>Stakeholder Engagement Policy</i>⁸ and the approach summarised as the <i>Stakeholder Engagement Framework</i>⁹. The identification of customer needs and values is managed in accordance with the <i>Customer Strategy</i>, thereby ensuring that the corporate goal of ‘Satisfied Customers’ is achieved.</p> <p>Process and policy:</p> <p>The <i>Asset Management Strategy</i>¹⁰ identifies the need to engage with stakeholders to achieve Water Corporation’s corporate goals. More specifically, the management objectives and planning processes outlined therein indicate that the needs of stakeholders are to be incorporated into management of the asset portfolio as follows:</p> <ul style="list-style-type: none"> • “<i>Customer and stakeholder expectations</i>” is identified as a driver of change that will influence Water Corporation’s approach to asset management over the next 20 years. • Water Corporation recognises the need to gain a broader and deeper understanding of local community and stakeholder values as they change. This evolves as a need to ensure that aging infrastructure supports delivery of community/customer/stakeholder driven levels of service. • Initiatives to ensure that stakeholder relationship management is maintained and improved have been identified. These are focused on time-based strategic outcomes in respect of asset planning with local community needs in mind; incorporation of community needs into investment decision making; and delivering against an agreed benefits framework and communicating the resultant successes. • External stakeholders are to be engaged on major projects to mitigate cumulative impacts. <p>The <i>Stakeholder Engagement Policy</i>¹¹ sets out guidance for Relationship Managers assigned to engage with corporate stakeholders. The <i>Stakeholder Engagement Framework</i>¹² details a 5-step process to be followed for effective engagement. The <i>Customer Strategy</i>¹³ outlines actions to be implemented to fulfill Water Corporation’s Customer Value Proposition of “<i>Deliver value through sustainable water services and support our customers and communities to thrive</i>”. Value is to be delivered through Water service delivery; Environmental and social responsibility; and Delivering value for money. From the</p>		

⁸ PCY262 Stakeholder Engagement Policy, Doc # 58491053, 8 Feb 2024

⁹ Stakeholder Engagement Framework, Sep2024

¹⁰ Asset Management Strategy 2022 – 2042, 26 Feb 2025

¹¹ PCY262 Stakeholder Engagement Policy, Doc # 58491053, 8 Feb 2024

¹² Stakeholder Engagement Framework, Sep 2024

¹³ Customer Strategy 2022-2027, Mar 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>perspective of this criterion, water service delivery requires Water Corporation to consider customer and community needs in how it delivers value through its assets, operations and customer services.</p> <p>The consideration of stakeholder (both external and internal) needs is embedded in the asset planning, design and delivery stages of the Asset Acquisition Process, as defined in the <i>Plan Asset Framework</i>¹⁴ and <i>Asset Acquisition Guideline</i>.¹⁵</p> <p>The <i>Asset Investment Plan</i> template¹⁶ indicates the requirement to engage with stakeholders, with input considered in the identification and evaluation of investment options. The development of stakeholder engagement strategies is identified as an action that does not require investment.</p> <p>Performance:</p> <p>Water Corporation provided its current <i>Corporate Stakeholder List</i>,¹⁷ which identifies some eighty-five (85) corporate stakeholders with which it engages. The responsible General Manager (role) and Relationship Manager (role and name) are identified in each case, together with priority rating and <i>Thrive2035</i> objective alignment.</p> <p>Records provided by Water Corporation that demonstrate engagement with stakeholders include (for example):</p> <ul style="list-style-type: none"> • <i>Securing Perth’s Water Supply; Application for Concept Approval</i>,¹⁸ which outlines proposed next steps for the development of the Strategic Asset Management Framework Business Case(s) for the future development of Perth’s IWSS (Integrated Water Supply Scheme). It includes a proposed stakeholder engagement strategy, including identification of those with a key interest in the process. • <i>SW Town RWSS Entitlement Funding Increase Investment Business Case</i>,¹⁹ which will enable an increase in the SW Town scheme peaking capacity to prevent customer supply interruptions. The business case indicates that the proposed investment is fully aligned to the corporate objective of “Satisfied customers”. • <i>Small Town WWTP Upgrade Delivery Business Case</i>,²⁰ which provides for upgrade of the plant to cater for growth in Small Town. The business case includes an External Approvals Tracking Spreadsheet which details engagement with external stakeholders. A review of strategic alignment indicates that the option for delivery is “... safe for our customers and community and protect public health and the environment”. 		

¹⁴ Plan Asset Framework, Doc # 58584892, Oct 2024

¹⁵ Asset Acquisition Guideline, Doc # 58555521, 27 Sep 2024

¹⁶ Asset Investment Plan template

¹⁷ Corporate Stakeholder List 2024-2025

¹⁸ Securing Perth’s Water Supply: Application for Concept Approval, 15 Apr 2025

¹⁹ SW Town RWSS Entitlement Funding Increase Investment Business Case, 29 Apr 2024

²⁰ Small Town WWTP Upgrade Delivery Business Case, Doc # 74150602, 7 Sep 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			These and other examples demonstrate that the needs of stakeholders and are integrated with business planning.		
1.3	Service levels are defined in the asset management plan	4	<p>Summary: Water Corporation indicated that levels of service for all portfolios are set out in the <i>Asset Management Strategy</i>; the detail provided therein is at an overview level. Specific levels of service for each asset class are identified in the Asset Class Strategies and are implemented through the Asset Class Management Plans. These arrangements are reiterated through the <i>Asset Performance and Risk Framework</i>.</p> <p>Performance against the levels of service are reviewed and reported annually. However, the Asset Class Strategies and Asset Class Management Plans have not been updated in accordance with the guidance, so the documented levels of service may no longer be appropriate. As a result this criterion has been graded as a 'B2'.</p> <p>Process and policy: The <i>Asset Management Strategy</i>,²¹ which is a forward-looking document, provides the basis for setting levels of service through alignment between the corporate goals and the actions to be implemented and performance outcomes to be achieved (Asset Management Objectives) from a business-wide perspective.</p> <p>The <i>Asset Performance and Risk Framework</i>²² clearly defines the Asset Performance Hierarchy against which performance is measured. It indicates that the <i>Asset Management Strategy</i> defines Asset Management Objectives aligned to Corporate Objectives; Asset strategies and plans define the performance hierarchy consisting of Level of service statements; Level of service measures; and Technical asset performance measures. Targets are set for Performance measures to support Corporate measures or compliance standards (levels of service).</p> <p>The <i>Asset Management System Manual</i>²³ indicates that:</p> <ul style="list-style-type: none"> • The Asset Manager is required to (amongst other responsibilities): "<i>Identify and address long, medium, and short-term risks and opportunities to meeting levels of service expectations</i>". • Asset Class Strategies outline contextual information including: "... <i>desired, actual and predicted performance</i>", which can be aligned to levels of service. • Asset Class Management Plans "... <i>articulate the asset classes' contribution to the Corporation meeting its Asset Management Objectives and customer Levels of Service</i>". 	B	2

²¹ Asset Management Strategy 2022 – 2042, 26 Feb 2025

²² Asset Performance and Risk Framework, Doc # 134790884, 30 Jun 2023

²³ Asset Management System Manual, Doc # 58587247, 30 Jan 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The <i>Asset Class Strategy Guideline</i>²⁴ provides guidance for the preparation of Asset Class Strategies, including the information/details to be included. An Asset Class Strategy is required to document (amongst other matters): “Levels of service” (including “Performance measures and targets at Asset Owner level”, and “Prioritisation between levels of service”); and a “Strategic Plan for the Asset Class to achieve Level of Service targets”.</p> <p>The <i>Water Corporation ACMP [Asset Class Management Plan] Guideline</i>²⁵ details the arrangements for how each asset class is to be managed to meet Water Corporation’s Asset Management Objectives and Customer Levels of Service; the adopted arrangements are the result of balancing cost, risk and level of service. Levels of service to which the asset class contributes are detailed in the Asset Class Management Plan.</p> <p>Performance:</p> <p>Review of a sample of Asset Class Strategies and Asset Class Management Plans revealed for (example:</p> <ul style="list-style-type: none"> • <i>Water Storage Facility Asset Class Strategy</i>²⁶ includes a table detailing the Levels of Service. It includes four levels of service statements aligned to three of the Corporate Goals (Safe; Reliable; Cost Effective). Details provided in respect of each level of service include: Measure; Risk tolerance (of not achieving the target); Area of operations applicability (Metro/Regional/Statewide); Target, Current performance and Trend; Strategic priority; Strategic direction for the asset class; and relevant Comments. Supporting analysis/data is also referenced. • <i>Wastewater Pump Station Asset Class Strategy</i>²⁷ documents objectives aligned to Corporate Goals, together with the associated performance measures. • <i>Sewage Pressure Main Asset Class Strategy</i>²⁸ again includes a table detailing the Levels of Service, similar to the Water Storage Asset Class Strategy. In this case six levels of service statements are aligned to three of the Corporate Goals (Safe; Reliable; Cost Effective). Details in respect of each level of service are also provided. 		

²⁴ Asset Class Strategy Guideline, Doc # 58584939, 31 Oct 2021

²⁵ Water Corporation ACMP Guideline, 18 Nov 2019

²⁶ Water Storage Facility Asset Class Strategy, Doc # 18161378, Jun 2018

²⁷ Wastewater Pump Station Asset Class Strategy, Doc # 16781020, 10 Aug 2017

²⁸ Sewage Pressure Main Asset Class Strategy, Doc # 19208941, Sep 2018

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • <i>Water Storage Facility Asset Class Management Plan 2019-2028</i>²⁹ details levels of service consistent with those in the <i>Water Storage Asset Class Strategy</i>. Details provided in respect of each include: Measure; Area of operations applicability (Metro/Regional/Statewide); Target, Current performance and Trend. • <i>Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan 2020-30</i>³⁰ similarly details levels of service consistent with the Asset Class Strategies. <p>It is noted that each of the Asset Class Strategies reviewed were identified as being under review. As further reported in respect of Criterion 1.9, these documents (Asset Class Strategies and Asset Class Management Plans) are well overdue for review.</p> <p>Corporate measures (levels of service) are reviewed and reported annually in a <i>Levels of Service Performance Report</i>;³¹ the report for 2023-24 was provided. This summarised performance against fourteen Levels of Performance Statements, in each case identifying risk tolerance; KPI status (target met/not met/NA; trend improving/stable/worsening); Performance metric; and commentary.</p> <p>These records demonstrate that levels of services are defined in the 'asset management plan' (through a combination of documents) and are implemented through the Asset Class Strategies and Management Plans. However, given that these documents are well overdue for review, and notwithstanding that levels of service are typically not often changed, it cannot be assumed that the documented levels of service remain appropriate.</p> <p>Accordingly, a performance rating of 'B2' has been assigned. A recommendation (01/2025) requiring review and update of the Asset Class Strategies and Asset Class Management Plans has been made in respect of criterion 1.9 (rated 'B3').</p>		
1.4	Non-asset options (e.g. demand management) are considered	4	<p>Summary:</p> <p>Non-asset options are considered in accordance with the <i>Plan Asset Investigation Guideline</i>. This guideline, which forms part of the <i>Plan Assets Framework</i>, is followed when investigating options to remedy identified deficiencies in assets. Non-asset options considered by Water Corporation include (for example) demand management, water carting, leak and burst management, and doing nothing.</p> <p>Further discussion in respect of non-asset options is presented under Criterion 2.1.</p> <p>Process and policy:</p>	A	1

²⁹ Water Storage Facility Asset Class Management Plan 2019-28, Doc # 8069647, 2 Sep 2019

³⁰ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan 2020-30, Doc # 96372224, 19-Apr-20

³¹ Levels of Service Performance Report 2023-24

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The <i>Plan Assets Framework</i>³² outlines how infrastructure asset planning relates to capital and operational investment decision-making. It outlines the activities that Asset Managers are required to undertake in relation to the planning of infrastructure.</p> <p>The <i>Plan Asset Investigation Guideline</i>³³ provides more detailed guidance, requiring the consideration of both operating and capital options to remedy identified asset deficiencies. Investigations can result in operational changes, operational and/or capital investments or an option to take no action and accept increased failure risks where it is deemed appropriate.</p> <p>Performance:</p> <p>Water Corporation advised that its Water Efficiency Program is a key non-asset approach being implemented principally in regional areas. Examples were cited, as reflected in the following business cases and reports:</p> <ul style="list-style-type: none"> • <i>Remote Town Water and Wastewater Regional Scheme Planning; Application for Concept Approval</i>³⁴ - the proposed solution, subject to further investigation, involves (for example) optimisation of the existing water allocation; smart metering to identify potential savings (potentially 45 ML/annum); and optimising irrigation water use. It is expected that the proposed actions will delay the need for augmentation. • <i>SW Town RWSS Entitlement Funding Increase Investment Case</i>³⁵ - a large increase in demand over recent years (since COVID) has resulted in over-allocation of the groundwater source from which SW Town is supplied. Whilst use of the bore field is being optimised, an additional ground water source will ultimately be required. • <i>Regional Source Security Assessment; Annual Review 2024</i>³⁶ - this report documents the findings of an annual review of regional water source to assess the likelihood of sustained supply failure in the next five years. Actions for each scheme where vulnerabilities are identified are documented; non-asset/opex solutions include (for example) leak detection; increased allocation; optimisation of operations; water use efficiency, water carting; reduction of irrigation; and planning. <p>Non-asset options are also considered when planning metropolitan servicing arrangements. For example, the <i>Securing City's Water Supply; Application for Concept Approval</i> business case³⁷ identifies non-asset solutions/strategic responses including:</p>		

³² Plan Assets Framework, Doc # 58584892, Oct 2024

³³ Plan Asset Investigation Guideline, Doc # 58582518, 29 Jun 21

³⁴ Remote Town Water and Wastewater Regional Scheme Planning: Application for Concept Approval, Apr 2025

³⁵ SW Town RWSS Entitlement Funding Increase Investment Case, 16 Mar 2024

³⁶ Regional Source Security Assessment: Annual Review 2024

³⁷ Securing City's Water Supply: Application for Concept Approval, 15 Apr 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>SR2 'Increase water demand management'; SR3 'Regulatory and pricing reform'; and SR4 'Revision of groundwater management scheme' in addition to the 'Do minimum' (SR1) and three asset solutions (SR4, SR6 and SR7) as the short-listed options for further investigation.</p> <p>These examples demonstrate that non-asset options are considered as part of the planning process.</p>		
1.5	Lifecycle costs of owning and operating assets are assessed	5	<p>Summary:</p> <p>The Asset Acquisition Process requires a Net Present Value analysis at the Asset Investment Planning Phase for all options. It also requires the preparation of a Financial Impact Statement, which considers lifecycle capital and operational costs as an attachment to each business case.</p> <p>An estimate of lifecycle costs, together with a future risk cost assessment, is incorporated into Asset Class Management Plans. Collectively, these plans provide the information required to better understand whole of life and life cycle costs across the asset portfolio.</p> <p>Process and policy:</p> <p>Asset acquisition is undertaken in accordance with the <i>Plan Assets Framework</i>³⁸ and the more specific guidance in the <i>Asset Acquisition Guideline</i>.³⁹ The acquisition process requires and evaluation of lifecycle costs for all options considered and the preparation of a Financial Impact Statement for the recommended option.</p> <p>The <i>Manage Finance – Evaluate Investments</i> standard⁴⁰ requires that financial analysis using the Discounted Cash Flow (Net Present Value) methodology is undertaken for all proposed investments and investment options. The required financial analysis process is outlined.</p> <p>The asset acquisition process has five gateways and the <i>Financial Impact Statement Guidelines</i>⁴¹ identify the Financial Impact Statement requirements for each of the gateways. Assessment of lifecycle costs is undertaken using the Financial Impact Statement template, which has six worksheets that collectively address all cost components:</p> <ul style="list-style-type: none"> • Assumptions • Capital – incremental capital costs • Operating Cost – covering operation and maintenance (O&M) costs, as well as disposal • Operating Cost Calculations – calculations for O&M costs 	A	1

³⁸ Plan Assets Framework, Doc # 58584892, Oct 2024

³⁹ Asset Acquisition Guideline, Doc # 5855521, 27 Sep 2024

⁴⁰ S066 Manage Finance – Evaluate Investments, Doc # 58539102, 17 Sep 2022

⁴¹ Financial Impact Statement Guidelines, Doc # 58541862, 1 Jul 2019

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Capacity utilisation – change in O&M costs due to population changes • Revenue – revenue information • Financial Impact Statement – additional information. <p>Business case templates for each gateway (i.e. <i>Development Business Case Template</i>,⁴² <i>Investment Business Case Template</i>⁴³ and <i>Delivery Business Case Template</i>⁴⁴) require inclusion of a TOTEX (Capex + Opex) investment forecast covering the current financial year plus 5 years. A Net Present Value is also to be provided for each assessed option.</p> <p>Performance:</p> <p>Review of the following business cases demonstrated that lifecycle costs have been assessed through preparation of Financial Impact Statements:</p> <ul style="list-style-type: none"> • <i>SW Town RWSS Entitlement Funding Increase Investment Business Case</i>⁴⁵ - TOTEX, which in this case comprises ongoing operational costs, are presented for the current (2024) and next five financial years. The costs over and above the existing operational budget for the scheme are consistent with those in the associated <i>Operational Impact Statement</i>.⁴⁶ Net Present Value costs are included for each of the four options considered. • <i>Small Town WWTP Upgrade Delivery Business Case</i>⁴⁷ - TOTEX, which comprises both capital and operating costs, are presented for the previous, current (2022) and next five financial years. The reported costs are consistent with those shown in the appended Financial Impact Statement output. Net Present Value costs are included for each of the four options considered. <p>Review of the <i>Water Storage Facility Asset Class Strategy</i>⁴⁸ confirms that it includes a Lifecycle Plan which summarises operational, maintenance, renewal and disposal costs.</p>		

⁴² Development Business Case Template, 2 Jul 2025

⁴³ Investment Business Case Template, 2 Jul 2025

⁴⁴ Delivery Business Case Template, 1 Jul 2025

⁴⁵ SW Town RWSS Entitlement Funding Increase Investment Business Case, 29 Apr 2024

⁴⁶ SW Town RWSS Entitlement Funding Increase Operating Financial Impact Statement

⁴⁷ Small Town WWTP Upgrade Delivery Business Case, Doc # 74150602, 7 Sep 2021

⁴⁸ Water Storage Facility Asset Class Strategy, Doc # 18161378, Jun 2018

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
1.6	Funding options are evaluated	5	<p>Summary:</p> <p><i>Financial Impact Statement Guidelines</i> indicate that third party funding is to be recorded on the revenue page of the Financial Impact Statement template; regulated revenue and operating subsidies are not included. As advised by Water Corporation, funding is mostly self-generated (rates and volumetric charges, developer headworks) with minor borrowings.</p> <p>Public Private Partnerships have been used to fund some major projects; under this arrangements, Water Corporation repays the capital funding over the life of the project.</p> <p>Water Corporation indicated that it is seeking more external funding from federal and state sources through available funding programs, where applicable.</p> <p>Process and policy:</p> <p>Water Corporation is a state owned entity. Funding is mostly self-generated through regulated revenue (rates and volumetric charges, developer headworks charges, etc.). The Government sets the levels of operating and capital expenditure and the charges and levies through which it can be funded. There is a small amount of loan funding for capital projects; borrowing amounts which are approved by Government, are sourced through the Western Australian Treasury Corporation.</p> <p>The <i>Financial Impact Statement Guidelines</i>⁴⁹ identify that revenue sources are to be identified in the 'Revenue' page of the Financial Impact Statement prepared for each project. More specifically, the guidance indicates that the following should be addressed:</p> <ul style="list-style-type: none"> • Regulated revenue and operating subsidies are not included as regulated cash flows, except for a scheme takeover or new scheme. • Incremental revenue from (for example) state/federal government grants or funding received from external parties is to be included. • Any revenue from asset sales resulting from the project (for example, sale of surplus land) if material in the context of the project being considered. <p>Performance:</p> <p>Revenue line items are provided in the various business case templates (i.e. <i>Development Business Case Template</i>,⁵⁰ <i>Investment Business Case Template</i>⁵¹ and <i>Delivery Business Case Template</i>⁵²); however, no revenue was recorded in the</p>	A	1

⁴⁹ Financial Impact Statement Guidelines, Doc # 58541862, 1 Jul 2019

⁵⁰ Development Business Case Template, 2 Jul 2025

⁵¹ Investment Business Case Template, 2 Jul 2025

⁵² Delivery Business Case Template, 1 Jul 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>business cases reviewed (e.g. <i>SW Town RWSS Entitlement Funding Increase Investment Business Case</i>⁵³ and <i>Small Town WWTP Upgrade Delivery Business Case</i>⁵⁴). These projects will be funded by regulated revenue.</p> <p>Water Corporation cited the Fringe Suburb Water Treatment Plant as an example of a Public Private Partnership. In this case the private sector provided over \$300m of capital funding for the project, which Water Corporation will repay over the 35 year life of the project.</p> <p>Water Corporation indicated that it continues to pursue external funding opportunities, including from federal and state sources.</p> <p>Potential external funding sources and external funding that has already been secured is reported in the <i>Strategic Asset Plans</i> that are prepared annually for submission to Treasury. This was demonstrated by the Plans submitted for both 2024-25⁵⁵ and 2025-26.⁵⁶</p> <p>Whilst there is minimal documented evidence that funding options are evaluated at a project level, it is anecdotally apparent that they are where applicable. Revenue sources are further discussed from a corporate perspective in respect of Criterion 10.2.</p>		
1.7	Costs are justified and cost drivers identified	4	<p>Summary:</p> <p>The Asset Acquisition Process requires that a cost estimate is prepared and Net Present Value analysis undertaken for all investment options. These are recorded, together with identification of the investment driver(s), in the business cases prepared for each approval gateway (e.g. Development, Investment and Delivery). A multi-criteria analysis is typically used to determine the best option.</p> <p>Process and policy:</p> <p>The <i>Asset Acquisition Guideline</i>⁵⁷ provides examples of drivers of asset investment decisions, which include the following:</p> <ul style="list-style-type: none"> • Base Capital Maintenance: Renewals to rectify deteriorating asset condition and performance. • Supply/Demand: Growth across residential, commercial and/or industrial customers. • Enhanced Services: licencing and compliance issues. 	A	1

⁵³ SW Town RWSS Entitlement Funding Increase Investment Business Case, 29 Apr 2024

⁵⁴ Small Town WWTP Upgrade Delivery Business Case, Doc # 74150602, 7 Sep 2021

⁵⁵ Strategic Asset Plan 2024-25, Dec 2023

⁵⁶ Strategic Asset Plan 2025-26

⁵⁷ Asset Acquisition Guideline, Doc # 58555521, 27 Sep 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> Quality and Standards: safety, water quality issues, changing standards or regulations. <p>The various business case templates (i.e. <i>Development Business Case Template</i>,⁵⁸ <i>Investment Business Case Template</i>⁵⁹ and <i>Delivery Business Case Template</i>⁶⁰) require detailed discussion of the Business Driver/Need, which also takes into account an assessment of the associated business and corporate risks.</p> <p>The business cases also require inclusion of lifecycle cost estimates (project cost and benefit (Net Present Value)) for each investment option considered. Costing and analysis are undertaken by the Estimating Team in accordance with the <i>Cost Estimating for Assets Investment</i> procedure.⁶¹ Estimates based on a combination of historical data and a review of current market conditions; factors such as location (e.g. remote locations or heavily built-up areas) are also taken into account. The database for capital costing is informed by post-project review of completed projects.</p> <p>Performance:</p> <p>Review of a sample of business cases and other planning documentation confirmed that detailed discussion of the business drivers/needs were included:</p> <ul style="list-style-type: none"> <i>SW Town RWSS Entitlement Funding Increase Investment Business Case</i>,⁶² the driver for which is principally to maintain security of water supply. Investment costs and Net Present Value analysis results are provided for each of four options (including 'Do nothing'). <i>Small Town WWTP Upgrade Delivery Business Case</i>,⁶³ the driver for which is to ensure adequate wastewater treatment capacity whilst meeting environmental discharge requirements. <i>IWSS: Planning for New Water Sources; Technical Advice</i>⁶⁴ summarises the preferred new water source options for the IWSS from 2029 to mid-2030s. This document presents a detailed discussion of the business drivers with linkage to the relevant asset management objectives and corporate goals; in summary, the primary Objective Risk Assessment items relate to annual demand exceeding available resource (source security) and peak demand exceeding source capacity. 		

⁵⁸ Development Business Case Template, 2 Jul 2025

⁵⁹ Investment Business Case Template, 2 Jul 2025

⁶⁰ Delivery Business Case Template, 1 Jul 2025

⁶¹ Cost Estimating for Assets Investment Planning Group procedure, Doc # 58528011, 12 Nov 2024

⁶² SW Town RWSS Entitlement Funding Increase Investment Business Case, 29 Apr 2024

⁶³ Small Town WWTP Upgrade Delivery Business Case, Doc # 74150602, 7 Sep 2021

⁶⁴ IWSS: Planning for New Water Sources; Technical Advice, Doc # 188120324, Mar 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Estimates of capital and annual operating costs, together with Net Present Value assessment of unit cost per kilolitre of water sourced (TOTEX) over 100 years are provided for each of the three options considered.</p> <p>These examples demonstrate that costs of proposed investments are justified, and cost drivers identified.</p>		
1.8	Likelihood and consequences of asset failure are predicted	2	<p>Summary:</p> <p>The likelihood and consequences (risks) of asset failure have been predicted in accordance with the guidance provided in the <i>Corporate Risk Management Guidelines</i> and the risk assessment methodology specified in the <i>Corporate Risk Assessment Criteria</i> (CRAC). Implementation is demonstrated by the risk profiles provided in respect of facilities visited as part of review fieldwork and embedment of risk assessment outcomes in business cases prepared as part of the Asset Planning and Asset Creation processes.</p> <p>Process and policy:</p> <p>Risk assessments are undertaken at various stages of the asset planning process in accordance with the requirements of the <i>Plan Assets Framework</i>.⁶⁵ Asset planning is undertaken as the initial phases of the over asset acquisition process including the Asset Investment Planning, Select and Program Formulation, and Development Phases. The assessed level of risk (likelihood and consequence of failure or other hazardous event) informs every stage of the process.</p> <p>Objective risk assessments (ORA), undertaken in accordance with the <i>Objective Risk Assessment Manual</i>,⁶⁶ are used to align risks at the facility level to corporate risks, corporate objectives, and levels of service; a library of more than 200 ORA pathways have been identified and documented.⁶⁷ These ORA pathways allows line of sight between asset investment business cases and achievement of corporate objectives.</p> <p>The assignment of relevant ORA pathways to each asset (facility, component, etc.) forms the basis of the asset’s risk profile. This is combined with the risk associated with any identified asset deficiencies to provide a complete view at any point of time.</p> <p>The <i>Corporate Risk Management Framework</i>⁶⁸ outlines the processes to be implemented for the management of risk and risk-based decision making, with more specific guidance provided in the <i>Corporate Risk Management Guidelines</i>.⁶⁹ The risk</p>	A	1

⁶⁵ Plan Assets Framework, Doc # 58584892, Oct 2024

⁶⁶ Objective Risk Assessment Manual, 27 Jun 2023

⁶⁷ Line of Sight Framework, Version 1.6, 12 Aug 2024

⁶⁸ Corporate Risk Management Framework, Doc # 58586787, 5 Nov 2024

⁶⁹ Corporate Risk Management Guidelines, Doc # 58546991, 18 Feb 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>assessment methodology specified in the <i>Corporate Risk Assessment Criteria</i>⁷⁰ document is a primary element of the process. The <i>Asset Performance and Risk Framework</i>⁷¹ provides a mechanism for consistent and repeatable measurement of infrastructure assets' contribution to Asset Management Objectives and inform actions to manage risk associate with identified performance risks.</p> <p>The likelihood and consequence (risk) of asset failure is captured at asset class level in the Asset Class Management Plans which are developed in accordance with the <i>Water Corporation ACMP Guideline</i>⁷²; these are aligned to the respective Asset Class Strategies.⁷³ In presenting information in respect of the 'State of the Assets', the Asset Class Management Plans present a cost-based risk assessment based on probability of failure, using the likelihood descriptors in the <i>Corporate Risk Assessment Criteria</i>.</p> <p>Detailed risk assessments (assessment of likelihood and consequence) are also undertaken with a specific focus, such as in respect of dam safety management and drinking water management. The <i>Standards and Guidelines for Dam Safety Management</i>⁷⁴ identify requirements for identifying and assessing consequence and probability of dam failure consistent with ANCOLD Dam Safety Guidelines, whilst the <i>Drinking Water Quality Barrier Risk Assessment Manual</i>⁷⁵ sets out extensive guidance for determining the effectiveness of treatment processes (risk mitigation barriers) by assessing and understanding the associated consequence and likelihood.</p> <p>Performance: Risk Profiles for each of the facilities visited as part of review fieldwork were provided for review: Coastal WRRF,⁷⁶ City</p>		

⁷⁰ Corporate Risk Assessment Criteria, Doc # 58553636, 11 Feb 2025

⁷¹ Asset Performance and Risk Framework, Doc # 134790884, 30 Jun 2023

⁷² Water Corporation ACMP Guideline, 18 Nov 2019

⁷³ Asset Class Strategy Guideline, Doc # 58584939, 31 Oct 2021

⁷⁴ Standards and Guidelines for Dam Safety Management, Doc # 58540475, 24 Jan 2024

⁷⁵ Drinking Water Quality Barrier Risk Assessment Manual, Doc # 134813824, 15 Jan 2023

⁷⁶ Coastal WWTP Risk Profile, 30 Jun 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Groundwater Treatment Plant (GWTP),⁷⁷ Small Town Drainage Bridge,⁷⁸ Small Town WWTP,⁷⁹ Small Town Service Tank,⁸⁰ and Major Dam.⁸¹ These revealed (for example):</p> <ul style="list-style-type: none"> • City GWTP: <ul style="list-style-type: none"> • Has one ORA pathway (assessed January 2025), which is assessed to be ‘low’ risk (ranked 25, which is the lowest likelihood/consequence combination). • Nineteen (19) asset deficiencies have been identified (investigation status complete, active or on hold), for which the associated risk varies from ‘low’ to ‘high’. Likelihood/consequence combinations vary from C (possible)/1 (insignificant) to B (likely)/2 (minor). • Heat map provides a visual representation of the overall level of risk against likelihood and consequence. • Major Dam: <ul style="list-style-type: none"> • Has five (5) water quality related ORA pathways for which risks have been reviewed (assessed January 2025). • One (1) asset deficiency has been identified for which the investigation is complete; the associated risk was assessed as ‘high’ with a likelihood/consequence combination A (almost certain)/3 (moderate) to B (likely)/2 (minor). • Heat map again provides a visual representation of the overall level of risk against likelihood and consequence. <p>These examples demonstrate that relevant hazards are being identified and the associated risks effectively managed.</p> <p>An extract of all listed sections of metropolitan sewer pressure mains from Water Corporation’s ADReg revealed that assessed risk of failure levels vary from a ranking of 3 (almost certain/minor) to 24 (unlikely/insignificant). It is noted that all pressure main sections associated with a recent sewage spill event were ranked 19 ‘Moderate’ (likely/insignificant).</p> <p>Evidence that likelihood and consequences of asset failure (risk) is considered as part of the asset planning process can be drawn from business case submissions. For example, the <i>Oceanside Seawater Desalination Plant Stage 1 – Development Business Case</i>⁸² includes a detailed discussion of risk driving this project, including alignment to corporate risks and ORA</p>		

⁷⁷ City GWTP Risk Profile, 30 Jun 2025

⁷⁸ Small Town Drainage Bridge Risk Profile, 30 Jun 2025

⁷⁹ Small Town WWTP Risk Profile, 30 Jun 2025

⁸⁰ Small Town Service Tank Risk Profile, 30 Jun 2025

⁸¹ Major Dam Risk Profile, 30 Jun 2025

⁸² Oceanside Seawater Desalination Plant Stage 1 Development Business Case, Doc # 74146986, 6 Aug 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>pathways. Review of the <i>Water Storage Facility</i>⁸³ and <i>Wastewater Pump Station and Sewer Pressure Main</i>⁸⁴ Asset Class Management Plans and associated Power BI dashboard <i>State of the Assets</i> screenshots reveals that they provide overarching (for each class component) assessments of criticality (effectively a surrogate for consequence) and probability of failure (likelihood).</p> <p>The <i>Standards and Guidelines for Dam Safety Management</i> require that review of the dam risk assessment is undertaken as part of each 5-yearly comprehensive surveillance review. The report on the <i>Major Dam; Comprehensive Surveillance Review 2023</i>⁸⁵ includes details of the risk assessment undertaken at that time, thereby demonstrating that the requirement had been fulfilled.</p> <p>These examples demonstrate that the likelihood and consequences (risk) of asset failure are predicted and actively used in management of the asset portfolio, including in respect of the asset planning function.</p>		
1.9	Asset management plan is regularly reviewed and updated	2	<p>Summary:</p> <p>Water Corporation identified the <i>Asset Management Strategy</i> and <i>Strategic Asset Plan</i> as the key documents that constitute the Asset management plan. It is noted that the <i>Asset Management Strategy</i> is a 'CorDoc', review of which is currently required on a 3-yearly basis. The <i>Strategic Asset Plan</i> is prepared in accordance with requirements of the State Treasury.</p> <p>The last (2021) AMS review found that there was a need for performance improvement against this criterion, primarily due to the <i>Asset Management Strategy</i> not having been reviewed within the required timeline. Based on the observations made, this specific shortfall has now been addressed; however, some other key documents (Asset Class Strategies and Asset Class Management Plans) have not been updated in accordance with the guidance. It is for these reasons that this criterion has been graded as a 'B3'.</p> <p>Process and policy:</p> <p>'CorDocs' are prepared and reviewed in accordance with the <i>Development and Review of CorDocs Documents</i> standard.⁸⁶ They are controlled in accordance with the <i>CorDocs Document Control</i> procedure.⁸⁷</p> <p>Both the standard and procedure indicate that the standard review period for all CorDocs is 36-months (i.e. review on a 3-yearly basis).</p>	B	3

⁸³ Water Storage Facility Asset Class Management Plan, Doc # 8069647, 2 Sep 2019

⁸⁴ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan 2020-30, Doc # 96372224, 19-Apr-20

⁸⁵ Major Dam; Comprehensive Surveillance Review 2023, Doc # 172898373, 5 Sep 2024

⁸⁶ S222 Development and Review of CorDocs Documents, Doc # 58544922, 26 Jul 2023

⁸⁷ CorDocs Document Control, Doc # 58529603, 27 Mar 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>In addition to the CorDoc requirements, strategies are developed in accordance with the <i>Strategy Development Guideline</i>.⁸⁸ This recommends that sub-strategies, which include the <i>Asset Management Strategy</i>, are reviewed annually and need for a strategy refresh evaluated every 3-5 years.</p> <p>The <i>Strategic Asset Plan</i>⁸⁹ is classified as a CorDoc; however, this is updated annually in accordance with Treasury requirements.</p> <p>Performance:</p> <p>The <i>Asset Management Strategy</i>,⁹⁰ which covers the period 2022-2042, was last updated following a Strategic Governance Review; it was endorsed by the Asset Management Committee on 26 February 2025 (recorded on the document). It had previously been reviewed and updated in February 2023.⁹¹ On this basis, it is apparent that it has been reviewed in accordance with the requirements of both the CorDocs standard and procedure, and the <i>Strategy Development Guideline</i>. <i>Strategic Asset Plans</i> for both 2024-25⁹² and 2025-26⁹³ were provided for review, which demonstrates that the plan has been reviewed annually as required.</p> <p>The <i>Asset Performance and Risk Framework</i>⁹⁴ is dated 30 June 2023 with 30 June 2026 nominated as the next review date. Water Corporation advised that the <i>Asset Performance and Risk Framework</i> was the result of a substantial review, update and merging of the previously separate asset risk and performance frameworks, which had been undertaken in parallel with the <i>Asset Management Strategy</i> review completed in February 2023. The improvements were guided by information presented in a detailed “engagement pack”.⁹⁵</p> <p>Review of a sample of other supporting documents confirmed that they have been reviewed in a timely manner, for example:</p> <ul style="list-style-type: none"> • <i>Asset Management System Manual</i> is dated January 2025. • <i>Plan Asset Framework</i> is dated October 2024 with October 2027 nominated as the next review date. • <i>Asset Acquisition Guideline</i> is dated 27 September 2024 with 27 September 2026 nominated as the next review date. 		

⁸⁸ Strategy Development Guideline, 28 Mar 2025

⁸⁹ Strategic Asset Plan 2024-25, Dec 2023

⁹⁰ Asset Management Strategy 2022 – 2042, 26 Feb 2025

⁹¹ Asset Management Strategy 2022 – 2042, 26 Feb 2025

⁹² Strategic Asset Plan 2024-25, Dec 2023

⁹³ Strategic Asset Plan 2025-26

⁹⁴ Asset Performance and Risk Framework, Doc # 134790884, 30 Jun 2023

⁹⁵ Asset Performance & Risk Framework Update, June 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • <i>Strategy Development Guideline</i> is dated 28 March 2025 with 28 March 2026 nominated as the next review date. It is, however, noted that: <ul style="list-style-type: none"> • The <i>Asset Class Strategy Guideline</i>⁹⁶ is dated 31 October 2021 with 31 October 2022 nominated as the next review date. Even if the standard 3--yearly review cycle is adopted, this is well overdue. • The Asset Class Strategies provided for review are all outdated (albeit marked “Currently under review”), as follows: <ul style="list-style-type: none"> • <i>Water Storage Facility Asset Class Strategy</i>⁹⁷ is dated June 2018 and was due for review by April 2021. • <i>Wastewater Pump Station Asset Class Strategy</i>⁹⁸ is dated 2017 (endorsed August 2017). • <i>Sewage Pressure Main Asset Class Strategy</i>⁹⁹ is dated September 2018 and was due for review by September 2021. • The Asset Class Management Plans provided for review are outdated, as follows: <ul style="list-style-type: none"> • <i>Water Storage Facility Asset Class Management Plan 2019-2028</i>¹⁰⁰ is dated September 2019 (signed 5 December 2019). A major review every 3 years is nominated, which is consistent with the guidance set out in the <i>Water Corporation ACMP Guideline</i>.¹⁰¹ • <i>Wastewater Pump Station and Sewer Pressure Main 2020-30 Asset Class Management Plan</i>¹⁰² is dated May 2020. Although not nominated in the document, a major review should have been undertaken by May 2023. <p>Whilst these specific documents may not be directly considered as part of the “Asset management plan”, they are important components of the AMS and should be reviewed at the appropriate documented intervals. Water Corporation advised that update of these documents had been impacted by a number of factors and initiatives, including a proposal to rationalise these strategy and planning artefacts and substantial updates to the <i>Asset Management Strategy</i> and <i>Asset Performance and Risk Framework</i> (amongst others). Notwithstanding, in the absence of any documented and approved record of deferment, a performance rating of ‘B3’ has been assigned and the following recommendation made.</p>		

⁹⁶ Asset Class Strategy Guideline, Doc # 58584939, 31 Oct 2021

⁹⁷ Water Storage Facility Asset Class Strategy, Doc # 18161378, Jun 2018

⁹⁸ Wastewater Pump Station Asset Class Strategy, Doc # 16781020, 10 Aug 2017

⁹⁹ Sewage Pressure Main Asset Class Strategy, Doc # 19208941, Sep 2018

¹⁰⁰ Water Storage Facility Asset Class Management Plan 2019-28, Doc # 8069647, 2 Sep 2019

¹⁰¹ Water Corporation ACMP Guideline, 18 Nov 2019

¹⁰² Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan 2020-30, Doc # 96372224, 19-Apr-20

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Recommendation – 01/2025 Water Corporation should take action to review, and update as necessary, its Asset Class Strategies and Asset Class Management Plans in accordance with CorDocs and other relevant guidance, thereby ensuring that the forward plans remain up-to-date.</p>		
2	Asset creation and acquisition		Asset creation/acquisition is the provision or improvement of assets.	A	1
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options	4	<p>Summary: Water Corporation has in place an Asset Acquisition Process that requires full evaluation of new assets, including the comparative assessment of asset and non-asset options for meeting servicing requirements. Governance of the asset acquisition process is managed through a series of ‘gateway’ approvals, each of which is based on a documented business case. Business case templates clearly define the information that is to be included, including the identification and evaluation of servicing options.</p> <p>A review of sample documentation demonstrated that the Asset Acquisition Process, as it applies to the evaluation of projects, is being effectively implemented.</p> <p>Process and policy: The <i>Asset Acquisition Guideline</i>¹⁰³ outlines the process for acquisition of assets from investment planning through to handover and subsequent review to verify that the planned benefits have been realised. The process comprises of seven phases, with an approval milestone or project ‘gateway’ between each phase, as follows:</p> <ul style="list-style-type: none"> • Asset Investment Planning Phase – the purpose of this phase is to plan and manage both existing and future assets to ensure that they have the capacity to meet the current and future expectations of Water Corporation’s customers. This phase leads to the Appropriation Request Approval gateway. • Select and Program Formulation (Prioritisation) Phase – this phase involves confirmation, through a prioritisation process, of projects to be included in the 5-year Asset Investment Plan. This phase leads to the Approval to Develop gateway. • Development Phase – the purpose of which is to develop a project that has been accepted into the 5-year Asset Investment Plan to a sufficient level of detail and certainty that a robust single option can be taken forward into the Engineering and Delivery phases. This phase leads to the Approval to Invest gateway. • Engineering Phase – comprises the detailed work required to further develop the project in preparation for the delivery phase. This phase leads to the Approval to Deliver gateway. 	A	1

¹⁰³ Asset Acquisition Guideline, Doc # 58555521, 27 Sep 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Deliver Phase – involves the detailed design, construction, and commissioning of the assets. Key documentation for commissioning and handover is prepared and completed in accordance with handover procedures. This phase leads to the Project Practical Completion gateway. • Handover Phase – this phase enables the formal transfer of the asset to the Asset Manager and Operators and eventual closure of the project. It leads to the Asset Transfer and Registration gateway. • Review Phase – this phase involves a review of the project to verify that the planned benefits have been realised, and to identify lessons learned for feedback into the overall asset acquisition process. <p>Project evaluations are undertaken initially in the Asset Investment Planning Phase and in more detail in the Development Phase of the asset acquisition process. This involves the comparative assessment of options, including non-asset options. The Asset Investment Planning Phase involves determination/confirmation of asset needs prior to inclusion via a risk prioritisation process. Activities undertaken in this phase include:</p> <ul style="list-style-type: none"> • Investigation of the problem/service requirement and definition of the scope for further investigation work. • Review of the applicable Asset Class Strategies. • Review of the Asset Class Management Plans and any related renewal programs currently in place. • Review of monitoring results to determine current asset performance. • Review of demand and growth projections. • Investigation of options to address the problem/service requirement. • Meeting with stakeholders to agree on the options to be further developed. <p>If, as a result of these activities, it is determined that a capital solution (new asset) is required, a project is registered for consideration for inclusion in the rolling 5-year investment program.</p> <p>As noted above, the Development Phase involves development of a project to a sufficient level of detail and certainty that a robust single option can be taken forward into the Engineering and Delivery Phases. Amongst the activities to be undertaken during this phase are the following which relate more specifically to the development and evaluation of options:</p> <ul style="list-style-type: none"> • Design activities (design alternatives review and/or concept design review, depending upon the complexity of the scheme and asset to be built); this excludes detail design, which would be undertaken in the Engineering or Delivery phases. • Financial evaluation of the design alternatives and/or the single option to be taken into Engineering and Delivery and preparation of a Financial Impact Statement. 		

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Although a single project option is carried forward into the Engineering and Delivery phases of the asset acquisition process, further project evaluation is undertaken during the Engineering Phase. This is realised through activities including:</p> <ul style="list-style-type: none"> • update of the Financial Impact Statement • update of the project cost estimate and schedule (+20% / -5%) • confirmation of system and user requirements (asset baseline requirement) • confirmation of the functional specification • identification and evaluation of risks, and development of management plans. <p>Governance of these processes is managed through the preparation and approval of business cases at each stage of the project development process, including a Development Business Case, Investment Business Case and Delivery Business Case. Standard business case templates (<i>Development Business Case Template</i>,¹⁰⁴ <i>Investment Business Case Template</i>¹⁰⁵ and <i>Delivery Business Case Template</i>¹⁰⁶) provide guidance in respect of content and detail, thereby ensuring a robust evaluation of both need and the adopted solution (option) for each investment.</p> <p>The requirement to consider non-asset solutions is identified in the <i>Plan Asset Investigation Guideline</i>,¹⁰⁷ which requires an initial investigation in response to a performance or condition deficiency to consider operational change or maintenance adjustment as well as asset replacement options.</p> <p>Review of the business case templates reveals that consideration of a ‘Do nothing’ scenario, which is essentially a non-asset option, is mandatory for all projects. ‘Do nothing’ scenarios would typically involve changes to operational arrangements and/or maintenance regimes to achieve the service objectives. As with all other options, assessment criteria include benefit (Net Present Value), duration, project cost, solution complexity and risk.</p> <p>Depending on the scope and location, most asset creation projects are subject to mandatory external approvals at various stages of their development. Ensuring that required approvals can be/are secured can be deemed part of the project evaluation process; external agency requirements may result in changes to project scope, which may potentially result in changes to the preferred solution. The <i>External Approvals Manual</i>¹⁰⁸ details the external approvals that may be required and</p>		

¹⁰⁴ Development Business Case Template, 2 Jul 2025

¹⁰⁵ Investment Business Case Template, 2 Jul 2025

¹⁰⁶ Delivery Business Case Template, 1 Jul 2025

¹⁰⁷ Plan Asset Investigation Guideline, Doc # 58582518, 29 Jun 21

¹⁰⁸ External Approvals Manual; External Approvals for Engineering Infrastructure, Doc # 58806596, Dec 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>the timing and way they should be secured. The external approval process for an individual project is managed using an <i>External Approvals Tracking Spreadsheet</i> for which a standard template is available.¹⁰⁹</p> <p>In summary, Water Corporation has in place an Asset Acquisition Process, which requires full evaluation of new assets, including the comparative assessment of asset and non-asset options for meeting servicing requirements.</p> <p>Performance:</p> <p>Water Corporation demonstrated that full project evaluations are undertaken for new assets by providing example business cases:</p> <ul style="list-style-type: none"> <p><i>Coastal WRRF Sludge Treatment Upgrade Delivery Business Case</i>¹¹⁰ provides for upgrades to the solids stream process at the plant which are required to ensure sludge treatment continues to meet biosolids classification standards for beneficial reuse; it will also provide for the quality of treated wastewater to be maintained whilst catering for future growth. Detailed justification for the project is provided.</p> <p>The business case notes that several options were considered during the Development Phase of the project (although identified, the ‘Do nothing’ option was not considered as it was non-compliant with regulatory conditions), with three options being considered during the Engineering Phase. An assessment of the remaining three options is presented, which supports Thermal Hydrolysis Pre-treatment (THP) of Excess Activated Sludge (EAS) only, with existing mesophilic anaerobic digestion (MAD) as the preferred option.</p> <p>Supporting documentation is referenced or attached.</p> <p><i>Small Town WWTP Upgrade Delivery Business Case</i>,¹¹¹ which provides for upgrade of the plant to cater for growth in Small Town. Detailed justification for the project is provided.</p> <p>The business case includes an assessment of four options, including ‘Do nothing’, and identifies Oxidation Ditch with year-round discharge into drain (Option 2) as the preferred option.</p> <p>Supporting documentation is again either referenced or attached. In this case, a completed External Approvals Tracking Spreadsheet is included as an attachment, which demonstrates that the evaluation has taken into account the requirements of external stakeholders.</p> 		

¹⁰⁹ External Approvals Tracking Spreadsheet (Template)

¹¹⁰ Coastal WWTP Sludge Treatment Upgrade Delivery Business Case, Doc # c43460890, 25 Oct 2022

¹¹¹ Small Town WWTP Upgrade Delivery Business Case, Doc # 74150602, 7 Sep 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> SW Town RWSS Entitlement Funding Increase Investment Business Case,¹¹² which provides for an increase in source water supply, thereby enabling an increase in the SW Town scheme' peaking capacity to prevent customer supply interruptions. Detailed justification for the project is again provided. <p>The business case includes an assessment of three options, including 'Do nothing' under which the existing source arrangements are maintained (Option 1); increasing entitlement under the existing source arrangements (Option 2); and upgrading capacity from other existing Water Corporation sources (Option 3). The preferred option (Option 2) is a non-asset option; the 'Do nothing' option was also effectively a non-asset option.</p> <p>In summary, Water Corporation demonstrated that full project evaluations are undertaken for new assets, including comparative assessment of non-asset options where appropriate, in accordance with its documented processes and procedures.</p>		
2.2	Evaluations include all life-cycle costs	4	<p>Summary:</p> <p>Water Corporation has in place and implements robust cost estimation and lifecycle costs analyses procedures in support of its project evaluation and decision-making processes. These procedures include the preparation of cost estimates and Financial Impact Statements in support of all business cases; these are updated at each stage of the Asset Acquisition Process.</p> <p>Process and policy:</p> <p>Water Corporation's <i>Asset Acquisition Guideline</i>,¹¹³ an overview of which is provided in respect of Criterion 2.1 (above), requires the estimation of lifecycle costs for all projects. Cost estimates are used as one of the option assessment criteria as well as determining the overall financial impacts associated with the project investment. Costing information is compiled into a Financial Impact Statement, which is a primary document referenced in support of all business cases.</p> <p>Cost estimates are prepared in accordance with the <i>Estimating Guidelines</i>¹¹⁴ and specific procedures for the various estimate types. These <i>Guidelines</i> detail the purpose, content, format, business rules and responsibility for each estimate type.</p> <p>The <i>Cost Estimating for Assets Investment Planning</i> procedure¹¹⁵ (for example) is the specific procedure applicable for all planning project cost estimates, including option analysis (i.e. cost estimates for project evaluation purposes). This procedure requires that cost estimates are prepared using the Asset Cost Estimating (ACE) System, or in consultation with an estimator; all Appropriation Request estimates, and preferred option estimates are to be checked by an Estimator. As reported in respect</p>	A	1

¹¹² SW Town RWSS Entitlement Funding Increase Investment Business Case, 29 Apr 2024

¹¹³ Asset Acquisition Guideline, Doc # 5855521, 27 Sep 2024

¹¹⁴ Estimating Guidelines for Category A, B and Selected C Infrastructure Projects, Doc # 47179384, 14 Jan 2019

¹¹⁵ Cost Estimating for Infrastructure Planning, Doc # 58528011, 12 Nov 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>of Criterion 1.7, the ACE system compiles estimates based on a combination of historical data and a review of current market conditions, with factors such as location taken into account.</p> <p>It is noted that, consistent with the <i>Estimating Guidelines</i>, the <i>Cost Estimating for Assets Investment Planning</i> procedure identifies the order of cost estimate accuracy expected at each phase of the asset acquisition process, specifically +50%/-10% for estimates prepared during the Investment Planning, Select and Program Prioritisation, and Development phases, and +20%/-5% for estimates prepared during the Engineering Phase.</p> <p>Financial Impact Statement are prepared in accordance with the <i>Financial Impact Statement Guidelines</i>,¹¹⁶ which identify six types of Financial Impact Statement that are required in support of approval submissions through the asset creation/acquisition process. Types of Financial Impact Statement include:</p> <ul style="list-style-type: none"> • Planning Financial Impact Statement – accompanies an Appropriation Request (Approval Gateway 1). • Notional Financial Impact Statement – accompanies a Development Business Case (Gateway 2). • Scoping Financial Impact Statement – accompanies an Investment Business Case (Gateway 3). • Delivery Financial Impact Statement – accompanies a Delivery Business Case (Gateway 4). • Post-commissioning review. • Options Analysis. <p>The <i>Financial Impact Statement Guidelines</i> details both the process for preparing and Financial Impact Statement using the available online tools, and the specific information that is to be input to the Financial Impact Statement model. Input data includes assumptions, capital costs, operation and maintenance costs, and asset lives. Net Present Value calculations are completed using the data inputs and results are included in the Financial Impact Statement report; they are based on a default project term of 100 years unless otherwise nominated and automatically incorporate asset replacement costs based on nominated asset life (manually input). Asset lives used for Net Present Value analyses are based on a <i>Schedule of Standard Economic Lives</i>.¹¹⁷</p> <p>As indicated in the preceding commentary, cost estimates and Financial Impact Statement (which include lifecycle cost analysis) are primary inputs to decision making and approval processes. The standard business case templates, which provide guidance in respect of content and detail, identify the requirement for robust lifecycle cost evaluation of projects. Each template requires:</p> <ul style="list-style-type: none"> • Details of the project cost and cost benefit (Net Present Value) of each option considered. 		

¹¹⁶ Financial Impact Statement Guidelines, Doc # 58541862, 1 Jul 2019

¹¹⁷ Schedule of Standard Economic Lives (contained in Fixed Asset Component Template, Doc # 58550006).

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • A summary of and reference to the Financial Impact Statement. • A detailed investment forecast for the project, including capital and operating cash flows over previous, current and the next five financial years. Forecast capital costs are compared to any existing budget allowance whilst operational costs are compared to those being incurred prior to the proposed investment. <p>In summary, Water Corporation has robust procedures in place to ensure that all lifecycle costs are considered when undertaking project evaluations. These include both capital and operational costs (operation and maintenance); changes in operational costs are identified as part of the financial analysis.</p> <p>Performance: Reference to the business case documentation that was discussed in respect of Criterion 2.1 reveals that lifecycle costs were determined for each viable option, in support of both project/option evaluation and the actual approval submissions. Costs are summarised within the body of the business cases (as required by the template); detailed cost estimates (typically for the preferred/recommended option) and Financial Impact Statement are appended as supporting documentation.</p> <p>For example:</p> <ul style="list-style-type: none"> • <i>Small Town WWTP Upgrade Delivery Business Case</i>¹¹⁸ - both the cost estimate and Financial Impact Statement output (summary sheets) are appended. In this case, only the preferred option had been costed as other options had been otherwise dismissed. Variance from previous cost estimates were explained within the body of the business case. Both capital and operating costs were considered in preparing the Financial Impact Statement. • Regional City Sewer Pressure Main Replacement – <i>Development</i>,¹¹⁹ <i>Investment</i>¹²⁰ and <i>Delivery Business Cases</i>¹²¹ were provided. These demonstrated the development of the project and associated changes in estimated cost and financial impact. Cost estimates were prepared for five options (including ‘Do nothing’) at the Approval to Develop stage; the options were reduced to three at the Approval to Invest stage. Detailed cost estimates for all options were appended to the <i>Development Business Case</i>; estimated costs for the updated options and Financial Impact Statement outputs were captured in the <i>Investment Business Case</i> with hyperlinks to the respective records. Updated cost estimates and 		

¹¹⁸ Small Town WWTP Upgrade Delivery Business Case, Doc # 74150602, 7 Sep 2021

¹¹⁹ Regional City SPM Replacement Development Business Case, Doc # 113380010, 16 Mar 2021

¹²⁰ Regional City SPM Replacement Investment Business Case, 17 Apr 2023

¹²¹ Regional City SPM Replacement Delivery Business Case, 17 Mar 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Financial Impact Statement outputs were again captured in the <i>Delivery Business Case</i> with hyperlinks to the respective records.</p> <p>It is noted that project capital and operational costs were forecast in both the <i>Investment and Delivery Business Cases</i>; the <i>Investment Business Case</i> also included forecast ongoing operational costs, as required by the respective templates.</p> <ul style="list-style-type: none"> • <i>Oceanside Seawater Desalination Plant Stage 1 – Development</i>,¹²² <i>Investment</i>¹²³ and <i>Delivery Business Cases</i>¹²⁴ were provided. These again demonstrated the development of the project and associated changes in estimated cost and financial impact. <p>Cost estimates were prepared for three options (including ‘Do nothing’) at the Approval to Develop stage. Revised cost estimates and Financial Impact Statements for the preferred option were prepared and captured within the business cases at both the Approval to Invest and Approval to Develop stages; the source documents were appended by hyperlink. Project capital and operational costs and ongoing operational costs estimated are included as part of the financial impact assessment.</p> <p>In summary, Water Corporation demonstrated that it uses robust cost estimation and lifecycle analyses in support of its project evaluation and decision-making processes.</p>		
2.3	Projects reflect sound engineering and business decisions	4	<p>Summary:</p> <p>Water Corporation demonstrated that it has in place a well-documented, mature and rigorous engineering design process, which has been developed to ensure that projects are developed on the basis of sound engineering and informed business decisions. Through the provision of sample project documentation, it demonstrated that this process is effectively implemented.</p> <p>Process and policy:</p> <p>Water Corporation’s asset creation and acquisition process has been developed to ensure that implemented projects are reflective of sound engineering and business decisions. This is achieved in the first instance by ensuring the identification and robust assessment of options for meeting service requirements, principally during the Asset Investment Planning and Development Phases of the process. Decision making during these phases is informed by inputs provided as part of the engineering design process, which extends throughout the life of the project.</p>	A	1

¹²² Oceanside Seawater Desalination Plant Stage 1 Development Business Case, Doc # 74146986, 6 Aug 2021

¹²³ Oceanside Seawater Desalination Plant Stage 1 Investment Business Case, 3 May 2022

¹²⁴ Oceanside Seawater Desalination Plant Stage 1 Delivery Business Case, 13 Dec 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Engineering input to an asset creation/acquisition project is in accordance with the <i>Engineering Design Guidelines</i>,¹²⁵ which provides guidance in respect of all phases of the asset creation/engineering design process. Inputs are provided in accordance with a design strategy based on the project requirements (including service/functional requirements, project delivery strategy and schedule), which identifies the inputs required throughout the acquisition process depending on the size, complexity and level of uncertainty associated with the project.</p> <p>The <i>Engineering Design Guidelines</i> present an overview of the design process, providing guidance in respect of planning the design job, doing the design work, checking the design (whether undertaken in-house or externally), documenting the design and the use of 'digital engineering' in support of the process. Specific guidance is provided for various design approaches that may be adopted in providing input to the various stages of project development, including:</p> <ul style="list-style-type: none"> • Advice (capital, in respect of asset investment planning and program formulation phases; and operational) • Concept Design (Development Phase) • Engineering Design (Engineering Phase) – Construct only contracts • Engineering Design (Engineering Phase) – Design and construct contracts • Combined Engineering and Detailed Design (Engineering Phase) – Construct only contracts • Detailed Design (Deliver Phase) – Construct only contracts • Tender and Construction Advice (Deliver Phase) – Design and construct contracts • Tender and Construction Advice (Deliver Phase) – Construct only contracts. <p>Further guidance is provided in respect of Safety and Risk Assessments, Job Administration and Third-Party Review.</p> <p>Guidance in respect of safety and risk assessments relates to safety and risks both in undertaking the design process and in ensuring that the outcomes of the design process can be safely constructed, operated and maintained. This aspect of the design process may require the conduct of a HAZOP assessment/workshop; the <i>Safety in Design Work Instruction</i>¹²⁶ provides further detailed guidance in respect of the processes to be followed throughout the life of a project.</p> <p>An integral part of the design process, particularly in respect of ensuring that projects reflect sound engineering, is a Design Alternatives Review, which is typically undertaken in a workshop format as part of the Development Phase of a project. The objective of this review is to determine a single recommended option to progress to the Engineering Phase. Whilst a single option cannot always be identified without further assessment, this process aims to ensure the robustness of the decision making.</p>		

¹²⁵ Engineering Design Guidelines, Doc # 58547221, 15 May 2025

¹²⁶ Safety in Design Work Instruction (downloaded from Water Corporation website).

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Engineering design is undertaken in accordance with Engineering Design Standards which set out standard requirements for the various types of infrastructure, as well as the design process itself. Engineering works are constructed in accordance with specifications drawn from a catalogue of standard specification clauses (Modular Construction Specifications) which address typical project requirements; these also inform the design process.</p> <p>Examples of design standards and specifications (which are available on the Water Corporation website) include:¹²⁷</p> <ul style="list-style-type: none"> • Electrical standards – <i>DS20 Design Process for Electrical Works, DS24 Electrical Drafting, DS25 Solar Energy Systems and DS26 Type Specifications Electrical.</i> • Treatment standards – <i>DS33 Water Treatment Plants Mechanical and DS81 Process Engineering.</i> • Water conveyance standards – <i>DS60 Water Supply Distribution Standard and DS61 Water Supply Distribution Tanks.</i> <p>The use of design standards and standard specification clauses ensures both the robustness of engineering input and consistency across Water Corporation’s asset portfolio. Revision status pages indicate that the standards are reviewed and updated.</p> <p>The soundness of engineering inputs is also enhanced by the requirement for peer checking and review of all design work. This can be further augmented by third party review when deemed necessary due to the complexity of the design work and/or the consequences if the constructed works were to fail.</p> <p>In summary, Water Corporation has in place processes and procedures for ensuring sound engineering input to project decision making and the resultant outcomes.</p> <p>Performance:</p> <p>Referring again to the business case documentation that was discussed in respect of Criterion 2.1 (<i>Coastal WRRF Sludge Treatment Upgrade Delivery Business Case</i>¹²⁸ and <i>Small Town WWTP Upgrade Delivery Business Case</i>¹²⁹), the discussion of options considered demonstrates the pursuit of sound engineering solutions to meet the identified servicing requirement. Multiple options have been considered in order to identify the most beneficial solution.</p> <p>It is noted that the <i>Concept Design Report</i>¹³⁰ in respect of the Coastal WRRF Sludge Treatment Upgrade project that is now being implemented was reviewed in detail as part of the 2021 AMS Review. The design report, which was prepared by an external consultant, demonstrated that the concept design involved the investigation and comparative assessment of six</p>		

¹²⁷ <https://www.watercorporation.com.au/About-us/Suppliers-and-contractors/Resources/Design-standards>.

¹²⁸ Coastal WWTP Sludge Treatment Upgrade Delivery Business Case, Doc # c43460890, 25 Oct 2022

¹²⁹ Small Town WWTP Upgrade Delivery Business Case, Doc # 74150602, 7 Sep 2021

¹³⁰ Jacobs, Concept Design Report; Coastal Water Resource Recovery Facility Sludge Treatment Upgrade; Water Corporation Project Number: C-S03501, 5 March 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>options for the proposed solids handling upgrade, including the inclusion of new technology, the identification of which was informed by a planning study undertaken by Water Corporation.</p> <p>The external consultant’s deliverables for the project included the following processes aimed at ensuring the robustness of the output (recommended option):</p> <ul style="list-style-type: none"> • Basis of Design Report • Operability/Constructability Workshop • Multi-Assessment Criteria Workshop • As-constructed 3D Model • Concept Design Drawings and Report • SiD (Safety in Design) Report • Third Party Review Report • Input to Business Case and/or Works Approval <p>Review of the <i>Concept Design Report</i> confirmed that the outcomes of (for example) the Safety in Design Review, Operability and Constructability Review Workshop and Third-Party Review are documented as appendices to the report.</p> <p>Documentation was also provided in respect of long-term water source planning for the small town of Satellite Town, including:</p> <ul style="list-style-type: none"> • <i>Satellite Town – Long Term Source Planning; Technical Advice – Options Review</i>¹³¹ – this report documents a review of options including ‘Do nothing’ (continue with current bore and water carting arrangement); Borefield with Advanced Treatment Plant; Water carting only (to either the existing or a new tank site); and Borefield blending. The report considered relevant factors including (for example) site availability/land acquisition requirements for new infrastructure, ongoing operation and maintenance requirements (such as access track maintenance for water carting), water quality, integration with existing infrastructure, and impact on existing customer supply agreements. It is noted that non-asset options were assessed with consistent rigour to new asset alternatives. • <i>Satellite Town – Long Term Plan Development Business Case</i>¹³² – as with other business cases, this sets out a comparative assessment of the options based on the technical advice arising from the above <i>Options Review</i>. <p>In summary, Water Corporation demonstrated that its engineering design process, which has been developed to ensure that projects are developed on the basis of sound engineering and informed business decisions, is effectively implemented.</p>		

¹³¹ Satellite Town – Long Term Source Planning; Technical Advice – Options Review, Oct 2024

¹³² Satellite Town – Long Term Plan Development Business Case, 28 May 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
2.4	Commissioning tests are documented and completed	4	<p>Summary: Water Corporation demonstrated that, consistent with the requirements of its <i>Asset Acquisition Guideline</i>, it has processes in place to ensure that commissioning tests are undertaken and documented for all new and refurbished assets. Sample documentation in relation to the Regional Town Tank 3 Renewal (CW03705) project and City Suburb Transfer Pumping Station and City Street Wastewater Pump Station Upgrade (CS01112) project demonstrated that commissioning tests are documented and completed as required.</p> <p>Process and policy: The <i>Asset Acquisition Guideline</i>¹³³ identifies commissioning requirements at a high level. Planning for commissioning is undertaken and performance requirements for testing and handover are identified as part of the Engineering Phase activities; commissioning of assets takes place during the Deliver Phase.</p> <p>Water Corporation requires that commissioning and acceptance testing of assets is undertaken for all new and refurbished assets, consistent with the requirements of the <i>Asset Commissioning Guideline</i>.¹³⁴ Commissioning is defined as the process of planning, testing, proving and finally verification that an asset or asset system functions and performs in accordance with specified requirements. The process is initiated with the production of a plan in the Engineering Phase of the project and finishes when Project Practical Completion is achieved.</p> <p>The <i>Asset Commissioning Guideline</i> outlines a process comprising commissioning planning, supply verification, construction verification, pre-commissioning, equipment commissioning, integration commissioning and performance testing, proof testing and completion of commissioning verification which forms part of the Project Validation Report. The requirements for each stage of the commissioning process are detailed, and proof testing requirements for various asset types are identified.</p> <p>Asset commissioning is undertaken to verify that functional and performance requirements of the asset have been met. An Approved Requirements Baseline (statement of the business requirements for a new system or asset), established using a system Requirements Management approach at the start of a new project, clearly identifies the functionality and performance requirements against which the project is assessed.</p> <p>The asset commissioning process is one element of the Asset Handover process, which is undertaken in accordance with the <i>Asset Data Handover Guideline</i>.¹³⁵ This process is aimed at ensuring that all project information is captured in the various</p>	A	1

¹³³ Asset Acquisition Guideline, Doc # 58555521, 27 Sep 2024

¹³⁴ Asset Acquisition Process: Asset Commissioning Guideline, Doc # 58540095, 13 Mar 2024

¹³⁵ Asset Data Handover Guideline, Doc # 58555521, 27 Sep 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>corporate information systems; however, it also serves to ensure that the required processes, including commissioning, have been completed and documented.</p> <p>The Asset Handover process is managed using the <i>Asset Handover Checklist</i>,¹³⁶ which identifies all documentation/data handover requirements and the project stages at which progressive handover of the information is to occur. The extensive portfolio includes documentation/data in respect of (for example) licences and approvals; asset data; operations and maintenance manuals; operational contingency plans; and commissioning. The latter includes both the Commissioning Plan and a detailed Commissioning Report; the final Commissioning Report must include the Commissioning Plan as an appendix and must be filed and published in accordance with requirements for acceptance.</p> <p>It is therefore apparent that Water Corporation has processes in place to ensure that commissioning tests are undertaken and documented for all new and refurbished assets.</p> <p>Performance:</p> <p>Water Corporation provided copies of the commissioning documentation in respect of the Regional Town Tank 3 Renewal (CW03705) project, including the following:</p> <ul style="list-style-type: none"> • <i>Asset Commissioning Report</i>¹³⁷ – this document details the commissioning process. It includes details of the new asset and its performance requirements together with a summary of the commission methodology; the Commissioning Plan was referenced via hyperlink. Other applicable records were also referenced via hyperlink. Commissioning results addressed Asset quality; Asset performance, reliability and requirements verification; and Asset operating constraints, process controls and troubleshooting (which included SCADA plots demonstrating performance during the testing process). Safety and risk, Training, Defects and outstanding commissioning issues, and several other matters were also addressed. • <i>Inspection and Test Plan – Leak and Weather Tightness</i>¹³⁸ – this identifies items to be verified in respect of precommencement, water tightness roof leak test, tank filling, leak and quality testing, and close out. Reference and acceptance criteria are identified for all items; date- completed, comments and sign-off are recorded. • <i>ATR (Asset Transfer) Verification Report (Project Validation Report)</i>¹³⁹ – this provides a record of: <ul style="list-style-type: none"> • Design Compliance – verification that the requirements agreed to during the Development Phase have been incorporated into the design, prior to submission of the Delivery Business Case. 		

¹³⁶ Asset Handover Checklist Template

¹³⁷ Asset Commissioning Report: Regional Town Tank 3 Renew (CW03705)

¹³⁸ Inspection and Test Plan – Leak and Weather Tightness, 15 Feb 2022

¹³⁹ ATR (Asset Transfer) Verification Report (Project Validation Report); CW03705 Regional Town Tank 3 Renew

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> Commissioning Verification – confirmation that the approved requirements registered in the Asset Requirements Baseline have been achieved. Project Validation – to record and confirm that all required validation has been undertaken. It is noted that two non-compliances identified under Commissioning Verification had been recorded as having been addressed under Project Validation, with the action taken/basis of assessment recorded. <i>Asset Handover Checklist</i>¹⁴⁰ – this provides a record that all applicable documentation and data had been prepared and submitted, thereby enabling handover to proceed. In respect of commission, both the Commissioning Plan and Commissioning Report were referenced. <p>Equivalent commissioning documentation in respect of the City Suburb Transfer Pumping Station and City Street Wastewater Pump Station Upgrade (CS01112) project was also provided and reviewed. This work was required to facilitate the transfer of sewage flows from the City Suburb Sewer District to the Outer Suburb Sewer District, thereby enabling decommissioning of the City Suburb WWTP. Records included: <i>Asset Commissioning Report</i>,¹⁴¹ <i>Gate Valve Pre-commissioning Inspection and Test Report</i>,¹⁴² <i>ATR (Asset Transfer) Verification Report (Project Validation Report)</i>¹⁴³ and <i>Asset Handover Checklist</i>.¹⁴⁴</p> <p>In summary, sample documentation in relation to these projects demonstrated that commissioning tests are documented and completed for new assets/infrastructure created or acquired by Water Corporation.</p>		
2.5	Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood	4	<p>Summary:</p> <p>Water Corporation demonstrated that it has in place robust processes/procedures for ensuring that legal, environmental and safety obligations as they apply to the creation of assets are effectively managed (i.e. they are assigned and understood). It has an external approvals process that is used to manage all the obligations associated with new assets. The evidence reviewed demonstrated that Water Corporation has effectively implemented its documented processes.</p> <p>Process and policy:</p> <p>Water Corporation advised that legal, environmental and safety obligations as they apply to the assets are managed using its External Approvals process. This process is managed by an External Approvals team, which works in conjunction with planning and delivery teams as the project progresses through the asset creation and acquisition process.</p>	A	1

¹⁴⁰ Asset Handover Checklist; CW03705 Regional Town Tank 3 Renew

¹⁴¹ Asset Commissioning Report: CS01112 City Suburb PS Divert to Outer Suburb, Doc # 168886803, 24 Jun 2002

¹⁴² Gate Valve Pre-commissioning Inspection and Test Report - CS01112 - City Suburb PS Divert to Outer Suburb Pre Commissioning, Doc # 5811340, Dec 2017

¹⁴³ ATR (Asset Transfer) Verification Report, CS01112 – City Suburb PS Divert to Outer Suburb, Jul 2025

¹⁴⁴ Asset Handover Checklist; CS01112 – City Suburb PS Divert to Outer Suburb, Doc # 136835883

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The <i>External Approvals Manual</i>¹⁴⁵ identifies and explains the various external approvals that may be required and provides advice regarding timing and notification of works proposals in the asset creation stages. It includes a summary of the extensive range of approvals that may be required, identifying for each external agency the approval or consultation that is required, the Water Corporation relationship manager, the primary contact, the applicable Act or Regulation, notification/approval timing requirements and references to relevant information/documentation. More specific guidance in respect of engagement with each of the agencies is also provided.</p> <p>The <i>External Approvals Manual</i> also describes the interaction between the external approvals and asset acquisition processes, which is also shown in the <i>Asset Acquisition Process – Overview of External Approvals Activities</i>¹⁴⁶ diagram. These identify the following:</p> <ul style="list-style-type: none"> • External approval activity is undertaken principally during the Asset Investment Planning and Development phases of the asset creation process; approvals are obtained during the Engineering Phase. • Early initiation of the external approvals process is required to manage risk through all stages of project development. • Activities to be undertaken during the Asset Investment Planning Phase include constraints mapping and obtaining External Approvals advice including the identification of requirements in respect of external surveys. This information is presented in support of Development business cases. • Once surveys are completed and SMEs have provided advice on the approvals pathway, an External Approvals Tracking Sheet is produced for the Approval to Invest Business Case. The External Approvals Tracking Sheet lists ‘Yes’ or ‘No’ if an approval is required (not Unsure) and a schedule of approvals is produced on this basis. • Formal approvals are obtained during the Engineering Phase, noting that the outcomes of the approval process may impact project scope. • Any approval conditions are to be managed and implemented through the Engineering and Delivery phases, and where the conditions are ongoing should be captured within the relevant corporate systems during the handover phase. <p>Constraints mapping can be recorded using the <i>Constraints Mapping and External Approval Advice for Planning Phase Template</i>,¹⁴⁷ which is required to be submitted in support of Development business cases. This template identifies thirteen potential constraint categories, including (for example) ‘Existing infrastructure and assets (including utilities)’, ‘State</p>		

¹⁴⁵ External Approvals Manual; External Approvals for Engineering Infrastructure, Doc # 58806596, Dec 2024

¹⁴⁶ Asset Acquisition Process – Overview of External Approvals Activities

¹⁴⁷ Constraints Mapping and External Approval Advice for Planning Phase Template

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Environmental Matters' and 'Native Title', and identifies potential constraints/opportunities that are to be identified/assessed by desktop mapping.</p> <p>The <i>External Approvals Tracking Spreadsheet Template</i>¹⁴⁸ reflects the summary of approval requirements by agency presented in the <i>External Approvals Manual</i> and has provision/provides guidance in respect of comments, consequences of not obtaining the required approvals, risk mitigation, issue ownership and approval status. This is the primary instrument for managing the external approvals for a project; it is a requisite support document for both the Investment and Delivery business cases (the <i>Constraints Mapping and External Approval Advice</i> is likewise mandatory for Development business cases). It is noted (from the Revision Record included in the document) that the <i>External Approvals Manual</i> is regularly updated, with changes generally reflecting updates to external agency requirements (policy, guidelines, etc.).</p> <p>In summary, Water Corporation has in place robust processes/procedures for ensuring that legal, environmental and safety obligations as they apply to the creation of assets are effectively managed (i.e. they are assigned and understood).</p> <p>Performance:</p> <p>Review of previously referenced business case documentation reveals that in each case the required <i>Constraints Mapping and External Approval Advice</i> or <i>External Approvals Tracking Spreadsheet</i> (as applicable) had been provided in support of Development, Investment and Delivery business cases as required. For example:</p> <ul style="list-style-type: none"> • <i>Small Town WWTP Upgrade Delivery Business Case</i>¹⁴⁹ – a completed/signed External Approvals Tracking Spreadsheet was attached. Applicable external requirements included (for example) Ministerial authorisation of General Works; issue of Works Approval by the Environmental Regulator; issue of a Bed and Banks Permit; Planning Commission Development Approval; Department of Aboriginal Affairs Section 18 Approval; WorkSafe (asbestos); and Utility provider approvals. • <i>Coastal WRRF Sludge Treatment Upgrade Delivery Business Case</i>¹⁵⁰ – a signed External Approvals Tracking Spreadsheet (not sighted) was referenced and accessible by hyperlink. • Regional City Sewer Pressure Main Replacement – email-based records detailing External Approvals Advice and Constraints Mapping were appended to the <i>Development Business Case</i>¹⁵¹ an External Approvals Tracking 		

¹⁴⁸ External Approvals Tracking Spreadsheet Template

¹⁴⁹ Small Town WWTP Upgrade Delivery Business Case, Doc # 74150602, 7 Sep 2021

¹⁵⁰ Coastal WWTP Sludge Treatment Upgrade Delivery Business Case, Doc # c43460890, 25 Oct 2022

¹⁵¹ Regional City SPM Replacement Development Business Case, Doc # 113380010, 16 Mar 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Spreadsheet (not sighted) was referenced by hyperlink in both the <i>Investment</i>¹⁵² and <i>Delivery Business Cases</i>.¹⁵³ The External Approvals Advice and Constraints Mapping identified and assessed potential constraints in respect of land tenure; environmental features; unexploded ordinances; utilities and public transport; petroleum title; and native title. Potential constraints requiring further investigation and/or management related to threatened species (flora and fauna), contaminated sites and location of utilities.</p> <ul style="list-style-type: none"> Oceanside Seawater Desalination Plant Stage 1 – a partially completed External Approvals Tracking Spreadsheet was appended to the <i>Development Business Case</i>¹⁵⁴ and a more advanced/completed version to the <i>Investment Business Case</i>.¹⁵⁵ A signed version (not sighted) was referenced in and accessible from the <i>Delivery Business Cases</i>.¹⁵⁶ <p>These records demonstrate that Water Corporation has effectively implemented its documented processes in respect of the management of its legal, legal, environmental and safety obligations as they apply to the creation of assets.</p>		
3	Asset disposal Asset disposal is the consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets.			B	2
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process	4	<p>Summary:</p> <p>On the basis of the evidence reviewed, it is apparent that Water Corporation has systematic review processes for monitoring asset condition and performance, which ensures that under-performing assets are proactively identified. However, there appears to be a gap in the process for the identification of under-utilised assets, which is the basis for the 'C' rating. It would seem that redundant assets are identified as part of project development, but there is no systematic process to identify under-utilised assets.</p> <p>The performance has been rated at '2', as although it would seem the scheduled inspections are being undertaken, those that have already been prioritised for risk are being further prioritised by the available budget. This is leading to Water Corporation carrying additional risk.</p> <p>Process and policy:</p>	C	2

¹⁵² Regional City SPM Replacement Investment Business Case, 17 Apr 2023

¹⁵³ Regional City SPM Replacement Delivery Business Case, 17 Mar 2025

¹⁵⁴ Oceanside Seawater Desalination Plant Stage 1 Development Business Case, Doc # 74146986, 6 Aug 2021

¹⁵⁵ Oceanside Seawater Desalination Plant Stage 1 Investment Business Case, 3 May 2022

¹⁵⁶ Oceanside Seawater Desalination Plant Stage 1 Delivery Business Case, 13 Dec 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Water Corporation has documented processes for identifying under-utilised and under-performing assets through several integrated guidelines and frameworks:</p> <ul style="list-style-type: none"> • The Plan Assets Framework establishes the overall approach to asset planning and investment decision-making • Asset monitoring responsibilities are assigned to the Maintenance and Reliability Business Unit • Issues are escalated through the Asset Deficiency Register and managed via a structured triage process <p>Water Corporation has documented processes for monitoring asset performance through the <i>Monitor Asset Performance Guideline</i>¹⁵⁷:</p> <ul style="list-style-type: none"> • Asset criticality assessment determines monitoring requirements • Monitoring programs are established based on defined measures and triggers derived from Asset Class Strategies • Performance Monitoring Exception Reports are generated when thresholds are exceeded • Asset Deficiency Reports are created to initiate investigation and prioritisation through the triage process. <p>Water Corporation has documented processes for assessing asset condition through the <i>Manage Asset Condition Guideline</i>¹⁵⁸:</p> <ul style="list-style-type: none"> • Condition assessment methodologies are identified by asset class • Candidates are selected based on operational observations, asset criticality and failure history • Risk-based prioritisation determines assessment requirements • Planning occurs at strategic and delivery levels with annual programs requiring approval • Ad hoc assessments may be triggered by operational events • Condition data informs deficiency management and investment planning. <p>Water Corporation has documented processes for managing identified deficiencies through the <i>Manage Asset Deficiency Guideline</i>¹⁵⁹:</p> <ul style="list-style-type: none"> • The process operates within the Triage framework encompassing Monitor Asset Performance, Manage Asset Condition, Manage Asset Deficiency and Plan Asset Investigations • Asset Deficiency Reports are prepared for proactive (performance monitoring) and reactive (asset failure) issues • Operations Engineering teams review reports and apply filtering processes to determine resolution approach • Issues requiring investigation are registered in the corporate Asset Deficiency Register 		

¹⁵⁷ Monitor Asset Performance Guideline, Doc # 58582513, 29-Jun-21

¹⁵⁸ Manage Asset Condition Process, Doc # 8717283, 11-Sep-18

¹⁵⁹ Manage Asset Deficiency Guideline, Doc # 58582506, 1-May-25

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Senior Technical Advisors facilitate collaborative Deficiency Prioritisation and Status Engagement meetings • Deficiencies are closed when investments are delivered or risk is deemed acceptable. <p>Based on the evidence reviewed, Water Corporation has documented systematic processes for monitoring asset condition and performance through the integrated Triage framework.</p> <p>There seems to be a gap in the systematic identification of under-utilised water infrastructure assets. The processes documented above monitor performance based on risk. It could be considered that it is most likely to be low risk assets that are underutilised. The <i>Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan</i>¹⁶⁰ does mention disposals, but this does not mean that the asset is underutilised. The current processes appear to rely primarily on opportunistic identification during project delivery or reporting rather than regular systematic portfolio review of water infrastructure assets for potential under-utilisation or redundancy.</p> <p>The next phase of the Asset Investment Planning/Asset Monitoring process as it relates to identified asset deficiencies is the planning and implementation of an Asset Investigation, which is discussed in respect of Criterion 3.2.</p> <p>Performance:</p> <p>The asset deficiency register was viewed during the onsite inspections, and this showed the entries of numerous deficiencies that have been identified through the monitoring and review of various assets.</p> <p>The <i>Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan</i>¹⁶¹ was provided as evidence. It provides the risk assessment that determines the frequency and level of condition assessments that should be undertaken. This is based on the criticality of a particular asset. Water Corporation has identified that it has aging infrastructure and the planned 10 year spend on condition assessment for this asset class significantly exceeds the allocated budget, with approximately a quarter of the planned work estimated to be unbudgeted. The condition assessments will be further prioritised on risk. The <i>Manage Asset Condition Guideline</i> includes a process to prioritise Asset Condition Assessments based on risk and cost, whereby the highest risks will be addressed within the budget. Therefore, Water Corporation is carrying the risk of the Asset Condition Assessments not undertaken based on available budget.</p> <p>The Small Town Tank was inspected during the field trip. Although the security fence was locked at the time, what was visible looked to be in good repair. A condition assessment report¹⁶² has been provided as evidence that inspections have been undertaken during the review period. The report supplied shows an inspection in March 2023. All internal components were</p>		

¹⁶⁰ WWPS and SPM Asset Class Management Plan 2020-30, Doc # 96372224, 19/04/2020

¹⁶¹ WWPS and SPM Asset Class Management Plan 2020-30, Doc # 96372224, 19/04/2020

¹⁶² W0046369_TANK GL 4500M3 WSC STRAIGHT RD SMALL TOWN _2023-03-17_FCD Level 1 Inspection

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>given a good rating. In accordance with the tank risk rating¹⁶³ an Opex - Level 1 inspection is required in accordance with the Asset Class Management Plan, which evidence shows has been undertaken.</p> <p>As the Small Town WWTP was one of the sites inspected, the <i>Small Town Wastewater Planning and Treated Wastewater Management – Investment Plan</i>¹⁶⁴ was reviewed. This shows that the plant had been monitored and assessed against the relevant Objective Risk Assessments (ORA). It was noted that action was being planned in accordance with the relevant risk levels for these ORAs.</p> <p>Recommendation - 02/2025</p> <p>Water Corporation must establish a regular systematic review process to identify under-utilised assets. Current processes rely on the diligence of staff to identify under-utilised assets opportunistically through capital projects or reporting activities. An option would be to embed criteria for the identification of under-utilised assets in the existing processes.</p>		
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken	4	<p>Summary:</p> <p>Water Corporation has documented arrangements in place that should facilitate robust examination of under-utilisation or poor performance of assets and ensure that appropriate corrective action, including disposal when found appropriate, are identified. However, it was noted that there is a backlog of projects to implement corrective actions and this is the reason that this criterion was graded '2' for performance.</p> <p>Process and Policy:</p> <p>Following on from Criterion 3.1, where an asset deficiency has been identified, an Asset Deficiency Report is produced¹⁶⁵. If the deficiency cannot be resolved immediately and the risk is not acceptable, it is added to the to the <i>Asset Deficiency Register</i> (ADReg) and then prioritised for investigation using a collaborative, risk-based process.</p> <p>Asset investigations for prioritised deficiencies (issues, risks, or opportunities) are conducted in line with the <i>Plan Asset Investigation Guideline</i>¹⁶⁶, which supports Water Corporation's Asset Management Objectives (safe, reliable, compliant, and cost-effective) and corporate objectives. Investigations occur within the Triage process to ensure structured escalation, engagement, and timely decision-making.</p> <p>Investigations fall into three categories:</p>	A	2

¹⁶³ Risk Profile Small Town Service Tank, 30 Jun 2025

¹⁶⁴ Small Town Wastewater Planning and Treated Wastewater Management – Investment Plan, Jan-20

¹⁶⁵ Manage Asset Deficiency Guideline, Doc # 58582506, 1-May-25

¹⁶⁶ Plan Asset Investigation Guideline, Doc # 58582518, 29 Jun 21

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> Reactive Issue/Risk Identification – Led by Field Operations, typically involving ‘like-for-like’ replacements to maintain business-as-usual. Unresolved issues are escalated via an Asset Deficiency Report (ADRep) to Operations Engineering. Field Investigation – Managed by Operations Engineering for more complex issues. If unresolved, these are escalated to the Asset Performance Technical Advisor. Asset Planning Investigation – Conducted by Asset Investment Planning, considering broader planning objectives. These are usually proactive (based on performance monitoring) but can also follow failures. <p>Investigations are prioritised based on risk and benefit, using inputs such as:</p> <ul style="list-style-type: none"> Asset criticality and condition (or proxies like age) Demand trends Reliability and operating performance (e.g., failure data) Levels of service (e.g., water quality, flow, pressure, safety) <p>Typical activities include:</p> <ul style="list-style-type: none"> Confirming drivers and understanding the issue Collecting and validating performance data Engaging stakeholders Identifying constraints, opportunities, and solutions Developing an implementation plan (scope, timing, cost, risk) Updating risk assessments <p>All investigations are documented in an Asset Investigation Report, detailing the issue, background, evaluation, decisions (investment, operational, or risk acceptance), and implementation priority. It is at this stage that corrective action is detailed and the ADReg is updated.</p> <p>If corrective action is required, it is delivered via the Asset Acquisition Process (AAP) using an Appropriation Request (OAR) and an Approval-to-Deliver business case; then program/project management deliver the works.</p> <p>The <i>Decommission & Dispose Assets Guideline</i>¹⁶⁷ sets out how Water Corporation evaluates and executes the decommissioning and/or disposal of infrastructure assets that are no longer required or are under-utilised due to condition, performance, growth/strategy shifts, maintenance economics, or regulatory/level of service changes. Evaluation typically occurs in the Planning/Select phases and considers criteria such as asset condition and performance, growth planning,</p>		

¹⁶⁷ Decommission & Dispose Assets Guideline, Doc #58558712, 24 Jun 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>maintenance strategy, statutory obligations, levels of service, and corporate strategy. Outcomes are classified as: (i) disposal, (ii) decommissioning only (asset made safe and isolated for possible future solution), or (iii) partial decommissioning.</p> <p>Where disposal/decommissioning is warranted, a Technical Advice (TA) is prepared to document the selected outcome, scope, timing, estimate, safety-in-planning, and funding approach (capital v's operational), which may then trigger an Appropriation Request and creation of a capital project. A Decommissioning & Disposal Plan is then mandatory, defining scope and timing, aligning with <i>PCY342 Decommission and Disposal of Infrastructure Assets</i> and <i>S087 Disposals Standard</i>, and addressing safety (e.g., asbestos) and administrative tasks. The plan can be produced within a broader capital project or as a standalone artefact and is required at handover.</p> <p>In terms of undertaking projects to administer corrective action or dispose of an asset, projects are delivered through the asset creation process. During the interviews it was noted that these projects were not being actioned in a timely manner, and a backlog was being created. This is discussed further in criterion 11.3.</p> <p>Performance:</p> <p>Based on the identified failure of the Small Town WWTP to meet treatment standards, a decision was made to build an oxidation ditch¹⁶⁸. The report identifies that the augmenting the ponds would have been unable to meet long-term discharge requirements; other options were also considered including irrigation and reuse of the effluent, the assessment identified a new oxidation ditch as the best option. This decision then renders the current lagoon treatment process as requiring disposal. The decision drivers were as follows:</p> <ul style="list-style-type: none"> • Reliability: Oxidation ditch consistently achieves target water quality • Compliance: Meets all regulatory requirements • Cost-effectiveness: Net Present Value only slightly higher than pond option but eliminates need for expensive wastewater reuse facilities • Sustainability: Reduces nutrient loading to the environment. <p>It was considered that the Oxidation ditch was the best alignment with the Corporate Vision in the following areas:</p> <ul style="list-style-type: none"> • Safe for all • Lowest Environmental Impact • Lowest Total Cost. 		
3.3	Disposal alternatives are evaluated	5	<p>Summary:</p> <p>Water Corporation has in place documented standards and guidelines that require robust planning in respect of the disposal of assets that are no longer required; this includes the need for the evaluation of disposal options. Review of a sample</p>	A	1

¹⁶⁸ Small Town Wastewater Planning and Treated Wastewater Management - Asset Investment Plan, Jan 20

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>renewal development business case demonstrated that decommissioning /disposal options are appropriately addressed consistent with procedural guidance.</p> <p>Process and Policy:</p> <p>The <i>Decommission and Dispose Assets Guideline</i>¹⁶⁹ requires that once an asset is identified for disposal, often during the planning or select phase, and typically in conjunction with a broader capital project, a Decommissioning and Disposal Plan must be prepared.</p> <p>This plan should:</p> <ul style="list-style-type: none"> • define the scope and timing of decommissioning and disposal activities • address scenarios such as: • full decommissioning and disposal within a capital project • decommissioning for future reuse or disposal • partial decommissioning • temporary retention for contingency use prior to disposal. <p>This process ensures that a range of disposal options are evaluated.</p> <p>The <i>Disposals Standard</i>¹⁷⁰ requires that disposal options are evaluated to ensure value for money and compliance with corporate policies. This involves assessing the costs and benefits of each option in light of the reasons for disposal. Factors to consider include:</p> <ul style="list-style-type: none"> • Type, condition, and location of the goods or materials • Offers from other authorities or potential users • Nature of the recipient market • Time and resource implications • Comparative costs and benefits of each option <p>The process mandates accountability and transparency, with all decisions documented. Disposal options may include transfer within the organisation, public tender, auction, trade-in, direct sale, or donation. The standard also provides a checklist to guide planning, execution, and review of disposal activities.</p> <p>These documents identified that there is a process in place for the evolution of disposal alternative.</p>		

¹⁶⁹ Decommission & Dispose Assets Guideline, Doc # 58558712, 24 Jun 2024

¹⁷⁰ S087 Disposals Standard, Doc # 58539177, 26 Mar 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Performance: To demonstrate implementation of disposal alternatives evaluation, Water Corporation provided the a <i>CBD Renew Development Business Case</i>¹⁷¹. The project addresses aging cast iron distribution mains installed in 1918-1919 that have reached end of life, with asset condition assessments identifying 89 defects including 14 classified as severe. Six options for addressing the deteriorated mains were assessed, with disposal/renewal approaches evaluated against safety, cost, and operational criteria. These included the 'Do Nothing' option. The evaluation demonstrated that various disposal and replacement alternatives were systematically assessed against technical, financial, and risk criteria. Option 4 (Elder Street Route) was selected as it provided the most effective option minimising ongoing risks and community disruption. Project documentation would then include a decommissioning plan for the safe disposal of the old main. During the review the Small Town WWTP was inspected and as such the <i>Small Town WWTP Upgrade (CS03605) Asset Decommissioning Plan</i>¹⁷² was reviewed, which was also assessed in the 2021 AMSR. The upgrade of the plant will leave the lagoon system redundant and in need of disposal. The plan discusses several options:</p> <ul style="list-style-type: none"> • Do nothing – this has a low capital cost, but a higher operational cost and a safety risk with working around water. • Partial reinstatement – this option was to decommission the ponds, but not fill them in. This has a higher capital cost and lower operational cost. This option would have some residual risk and reduce future use options. • Full reinstatement – This option was for the full remediation of the land. Whilst it had the highest capital cost, it removed all safety risks, had the lowest operational cost and future usage of the site was possible. This was the option selected. <p>This example demonstrates that disposal alternatives are comprehensively evaluated, considering not just traditional replacement approaches but innovative solutions that address the underlying risks that necessitated asset disposal.</p>		
3.4	There is a replacement strategy for assets	4	<p>Summary: Water Corporation’s process documentation requires that the strategic direction for each asset class, including the renewal of assets, is documented in its Asset Class Strategies, with more specific detail in respect of the asset renewal strategy for each asset class to be detailed in the relevant Asset Class Management Plan. Review of samples of both document types demonstrates that Water Corporation has strategies in places but they require review to ensure currency, which is also considered in Criterion 1.9. Although the strategy for replacement appears to be working there is also a backlog in</p>	B	2

¹⁷¹ Development Business Case – CBD Mount & Milligan St DN915/760CI Renew, 15 Mar 2024

¹⁷² Small Town WWTP Upgrade (CS03605) Asset Decommissioning Plan - Technical Advice, Doc # 1033322852, 26 Feb 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>implementing identified projects. This criterion has been graded as 'B2', due to the currency of the asset class strategies and Asset Class Management Plans and delays in renewal projects resulting in elevated risk.</p> <p>Process and policy: Based on the <i>Plan Assets Framework</i>¹⁷³, the replacement strategy for assets is defined through:</p> <ul style="list-style-type: none"> • Asset Class Strategies – which outline contextual information, an overview of the asset inventory, key characteristics of the cohort (such as age, material, condition) and desired, actual and predicted performance. Most importantly, they define the decision criteria to inform more detailed asset management plans which outline planning and investment activities. • Asset Class Management Plans – which document the specific activities (renewal, maintenance, and investigation) required to achieve the organisation's asset management objectives. Asset Class Management Plans identify the 5-year capital spend for each class through three investment options (fully invested, current investment, no investment) and document the impact on residual risk, with individual asset investment plans then required to create capital projects for each specific asset. <p>The <i>Asset Class Strategy Guideline</i>¹⁷⁴ sets the framework for defining the strategic direction for each asset class, ensuring alignment with Water Corporation's Asset Management Objectives. Each Asset Class Strategy must outline the overarching asset management approach, including a lifecycle plan that addresses maintenance, operations, renewals, and disposal. This lifecycle perspective underpins decisions on when and how assets should be replaced or renewed to maintain required levels of service while balancing cost and risk.</p> <p>The Asset Class Strategy informs the Asset Class Management Plan, which specifies how the strategy will be implemented. The Asset Class Management Plan must include:</p> <ul style="list-style-type: none"> • A 10-year asset condition assessment programme. • Forecasts for refurbishments, overhauls, renewals, and disposals (TOTEX-based). • At least three intervention scenarios (do-nothing, constrained, and unconstrained). • Supporting data, scenario gap analysis, maintenance records, and key improvement actions. • Capital forecasts for new and renewal works, and consideration of non-asset options. <p>The Asset Class Strategy also requires:</p> <ul style="list-style-type: none"> • Strategic direction statements that define triggers for interventions (condition, performance, age, criticality). 		

¹⁷³ Plan Assets Framework, Doc # 58584892, Oct 2024

¹⁷⁴ Asset Class Strategy Guideline, Doc # 58584939, 31 Oct 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Prioritisation of levels of service based on risk tolerance and performance. • Documentation of asset inventory, risk analysis, and key challenges. • Governance and review processes to ensure strategies remain current and effective. • Asset Class Strategy are to be reviewed every 3 years. <p>The <i>Asset Class Management Plan Guideline</i>¹⁷⁵ explains how Water Corporation translates Asset Class Strategy into actionable plans that manage assets through their lifecycle, including renewals and replacements. While the Asset Class Strategy sets the long-term strategic direction (20–30 years), the Asset Class Management Plan focuses on a 10-year planning horizon, detailing how to implement that strategy.</p> <p>Key points relevant to replacement strategy:</p> <ul style="list-style-type: none"> • Lifecycle Planning: Each Asset Class Management Plan must include a lifecycle plan covering maintenance, operations, renewals, refurbishments, and disposal, supported by a TOTEX (total expenditure) forecast for 10 years. • Scenario Modelling: Plans must model at least three intervention scenarios (do-nothing, constrained, and unconstrained) using risk-based and physical condition criteria to determine optimal timing for replacements and other interventions. • Decision Support: Asset Class Management Plans use decision support tools and asset lifecycle models to prioritise investments based on risk, cost, and level of service, ensuring replacements are justified and aligned with corporate objectives. • Integration with AMS: Asset Class Management Plans provide the link between strategic intent and delivery, feeding into Water Corporation’s Capital Investment Program and annual operating budgets. • Supporting Information: Asset Class Management Plans include asset condition assessments, criticality and risk analysis, historical maintenance trends, and improvement actions to enhance lifecycle management maturity. • Require a major review every 3 years and a minor review annually. <p>In summary, the replacement strategy is embedded in the Asset Class Strategy/Asset Class Management Plan framework: the Asset Class Strategy sets the strategic direction and lifecycle intent, while the Asset Class Management Plan sets the detailed investment and intervention planning, including renewals and replacements.</p> <p>Performance:</p> <p>The Sewage Pressure Main and Wastewater Pump Station asset class strategies have been provided as evidence and are discussed below:</p>		

¹⁷⁵ Water Corporation ACMP Guideline, 18 Nov 2019

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • <i>Sewage Pressure Main Asset Class Strategy</i>¹⁷⁶: <ul style="list-style-type: none"> • Applies to all sewage pressure mains and associated valving; ~1,713 km of mains across 247 sewer districts. Failures carry public health, environmental and service continuity risks; critical mains are tied to critical SPS sites. • Includes proactive condition assessment of mains/valves, prioritised by risk (consequence + condition), with investment priority for high and extreme risk assets. This is the core trigger set that escalates assets toward renewal/replacement. • Recognises corrosion, material vulnerabilities, ground conditions, and valve condition as drivers that shorten life and complicate isolation/repair—factors that should feed the renewal decision. • Investment signals for replacement planning; pressure main assets, accounting for 12% of the asset class, will be beyond nominal life within 20 years. • Calls for Level of Service targets where not defined, improved understanding of design life according to material type, and better Geographical Information System (GIS) capture of valving, all prerequisites for precise renewal triggers and scoping. • <i>Wastewater Pump Station Asset Class Strategy</i>¹⁷⁷: <ul style="list-style-type: none"> • Covers all WWPS types from inlet penstock to outfeed isolating valve (including overflow storage). • Large portfolio: 1,234 WWPS (817 Metro / 417 Regional); overflows are the key service and reputation risk. • Data quality issues (data is held across multiple systems, which not fully integrated) currently hinder precise performance/renewal analytics. • Reliability target: “better than 1 overflow in 10 years” for all stations—a clear service-based trigger to drive investment (including renewal of plant systems) when sites exceed risk/likelihood thresholds. • Risk is determined based on flow and mitigations put in place if determined to be cost effective. • Forecasts renewals across mechanical/electrical/SCADA/civil lines over a 20-year horizon and average required spend per year. • Unknown performance at many sites, SCADA gaps/inconsistency, and overflow data fidelity issues; the strategy’s actions include building an integrated data store and standardising operations & analytics—all essential to tighten renewal triggers. 		

¹⁷⁶ Sewage Pressure Main Asset Class Strategy, Doc # 19208941, Sep 2018

¹⁷⁷ Wastewater Pump Station Asset Class Strategy, Doc # 16781020, 10 Aug 2017

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The <i>Wastewater Pump Station and Sewer Pressure Main ACMP</i>¹⁷⁸ has been provided as evidence, it demonstrates implementation of the replacement strategy requirements through:</p> <ul style="list-style-type: none"> • Establishment of decision criteria matrix for renewals based on risk levels, using criticality and probability of failure. • Renewals over 10 years are forecast and it estimates that with the current constrained budget, approximately a third can be undertaken. • The constrained scenario shows a significant increase year on year in required refurbishment and replacement spend beyond 2026. This is due to aging assets and a chronic under investment in renewals. Continuing on this path will result in an increasing required annual spend on refurbishments and renewals and more asset failures, due to a steady increase in risk. • The Asset Class Management Plan identifies performance measures, actual vs planned renewal expenditure variation greater than +/- 20%. <p>These examples demonstrate that Water Corporation has in place strategies for implementing the planned renewal of its assets. However, all of these documents have a common theme in that there are gaps in knowledge, including such things as accurate data from systems and information on design life. In addition, these are meant to be somewhat live documents, with Asset Class Strategies updated every 3 years and Asset Class Management Plans subject to a minor update annually and major review every 3 years. All of these examples are more than 5 years old. Based on the age profile of the assets and constrained budget for renewals it is considered that these documents are out of date and in need of urgent review.</p>		
4	Environmental analysis Environmental analysis examines the asset management system environment and assesses all external factors affecting the asset management system			B	2
4.1	Opportunities and threats in the asset management system environment are assessed	4	<p>Summary: Water Corporation has implemented a structured approach using the PESTE framework to systematically identify and evaluate external factors that may impact the AMS. This process ensures that both opportunities and threats are comprehensively assessed and addressed. This has been implemented through the Situational Assessment report.</p> <p>Process and Policy: The <i>External Environmental Scanning Guideline</i>¹⁷⁹ provides a structured approach for external environmental scanning to identify macro-level opportunities and threats that could impact Water Corporation’s ability to deliver its purpose and achieve</p>	A	1

¹⁷⁸ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan 2020-30, Doc # 96372224, 19-Apr-20

¹⁷⁹ External Environmental Scanning Guideline, Doc # 58582450, 21 Mar 2023.

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>its vision. It is a key input into the Corporate Strategy Framework, setting context for strategic issues likely to arise in the medium to long term.</p> <p>The guideline uses the PESTE framework (Political, Economic, Socio-cultural, Technological, Ecological) to systematically identify external factors that may present opportunities or risks to the organisation. Each category includes guiding questions to uncover trends, regulatory changes, economic shifts, technological innovations, and environmental impacts. Sources of information to prepare the assessment include government reports, industry associations, think tanks, consultants, media, and research institutions. Emphasis is on broad scanning to capture early signals of change and reduce bias.</p> <p>Data is funnelled into themes and storyboards to identify material trends. These themes are prioritised based on potential impact and uncertainty, forming the basis for strategic discussion. The process includes iterative engagement with business units and subject matter experts to validate relevance and scale of issues.</p> <p>The main output is an environmental scan document highlighting: key external drivers, Opportunities for innovation, partnerships, or efficiency, and threats such as regulatory changes, climate risks, or disruptive technologies. Findings feed into corporate strategy development.</p> <p>The process appears to be appropriate to identify macro environmental opportunities and threats.</p> <p>Performance: Water Corporation's <i>Situational Assessment Report</i>¹⁸⁰ demonstrates the approach detailed above, to evaluate opportunities and threats within their AMS environment, has been implemented by analysing internal asset conditions and external environmental factors.</p> <p>The assessment directly evaluates asset system performance by quantifying that 10% of assets are beyond their expected life while only 30% of investment supports sustaining existing infrastructure. It identifies that delivery of renewals and maintenance are a challenge and as a result network performance is under performing when compared to other Australian water utilities.</p> <p>External environmental threats are comprehensively assessed, including climate impacts where extreme weather events are testing asset resilience and operational capacity. Economic pressures are evaluated through analysis of energy cost increases up to 30%, particularly affecting intensive operations like desalination plants. The assessment examines how government funding constraints create ongoing threats to essential asset renewal programs.</p> <p>The process also identifies system-wide opportunities, including potential technology adoption to improve asset management efficiency and demand management strategies that could defer costly asset capacity expansions. Alternative water source development is evaluated as an opportunity to reduce reliance on traditional dam-based infrastructure systems.</p>		

¹⁸⁰ Situational Assessment, Feb 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Forward-looking analysis incorporates population growth projections to 3.5 million people, assessing the implications for asset capacity requirements. Workforce capability risks are examined, particularly skill shortages in trades and technical roles that threaten the organisation's ability to maintain critical infrastructure.</p> <p>This systematic approach combines quantitative analysis, industry benchmarking, trend evaluation, and scenario planning to provide a robust framework for understanding threats and opportunities across Water Corporation's entire AMS environment. It appears to have identified the environmental issues that have surfaced as part of this review.</p>		
4.2	Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved	2	<p>Summary:</p> <p>Water Corporation has established processes for performance reporting, including National Performance Reporting (NPR) as required under Clause 4.8.2 of its Water Services Licence WL32 1. However, the process has been rated as a 'B' as there is some improvement required with the process; the functionality of the legacy systems being used is limited and it should be updated to address the reporting requirements of the current asset management strategy.</p> <p>The performance rating for this criterion is '3' due to the poor performance in the number of unplanned interruptions per 1,000 properties. Despite having a structured process for performance reporting, the increasing trend of unplanned interruptions highlights the need for corrective actions to address the underlying issues.</p> <p>Process and Policy:</p> <p>National Performance Reporting (NPR) is required under Clause 4.8.2 of Water Corporation's Water Services Licence WL32. This clause mandates that the licensee must provide the ERA with performance data as specified in two key documents:</p> <ul style="list-style-type: none"> • The Water, Sewerage and Irrigation Licence Performance Reporting Handbook. • The National Performance Framework: Urban Performance Reporting Indicators and Definitions Handbook. <p>This establishes NPR as a formal reporting obligation under Water Corporation's licence with the ERA. Water Corporation develops an <i>Annual ERA Performance Reporting Manual</i>¹⁸¹, which outlines the procedures for reporting performance data to the ERA. This manual references specific work instructions for each business unit, detailing how relevant data is collected and validated.</p> <p>Section 2.2 of the <i>Strategic Asset Plan</i>¹⁸², Asset Portfolio Performance, discusses how Water Corporation benchmarks against other water utilities using NPR data published by the Bureau of Meteorology and Business Performance Reporting.</p>	B	3

¹⁸¹ Annual ERA Performance Reporting Manual - 24/25 reporting period, Doc # 59034083, 18 Feb 2022

¹⁸² Strategic Asset Plan 2024-25, Dec 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The <i>BPR System Administration Manual</i>¹⁸³ describes how the Business Performance Reporting system within SAP is managed. It explains that BPR provides a single point of access for financial and non-financial performance data, ensuring consistency, accuracy, and alignment with corporate objectives.</p> <p>The process begins with data collection from source systems and manual inputs, which are consolidated into SAP Business Warehouse. Reports and scorecards are then generated, incorporating KPIs and financial metrics, and organised into report packs for different organisational levels. Administrators manage the setup and maintenance of these reports, including creating templates, customisations, and KPI definitions, while ensuring correct hierarchies and mappings.</p> <p>The reporting cycle follows a clear workflow: data is reviewed and commentary added, reports are released once complete, and packs are published either automatically or manually when all reports reach final status. Data integrity is maintained through locking mechanisms, audit logs, and role-based security, while features like drill-down to source data, alerts, and commentary provide transparency and context. Overall, the manual emphasises governance, accuracy, and efficiency in delivering timely, reliable performance information to support decision-making.</p> <p>The BPR system is a legacy system that is planned to be replaced. Usage of the system has evolved over time, but due to limitations, KPIs that are no longer tracked are still visible as the functionality to move / archive them is not available. It seems that there is some improvement required to this process to ensure it is consistent with the reporting requirements of the <i>Asset Management Strategy (2022-42)</i>¹⁸⁴.</p> <p>Water Corporation’s operating licence¹⁸⁵ details performance standards in Schedule 2. These cover the following:</p> <ul style="list-style-type: none"> • Potable water – pressure and flow • Drainage – protection of flooding • Irrigation – water quality • Farmlands – pressure and flow <p>Water Corporation has adequate¹⁸⁶ processes in place to monitor these performance standards and it reports on compliance with them to the ERA annually.</p> <p>Performance:</p>		

¹⁸³ System Administration Manual - Business Performance Reporting (BPR), Doc # 373140-v5, 7 Mar 2006

¹⁸⁴ Asset Management Strategy 2022 – 2042, 26 Feb 2025

¹⁸⁵ Water Services Licence, Water Corporation, WL32, Version 17, 31 March 2021

¹⁸⁶ Operational Audit Report, Water Corporation Water Services Licence (WL32), Nov 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>This element was given a performance rating of '2' in the 2021 AMSR, due to low level of conformance with standards.</p> <p>The data in the NPR reporting is audited every two years, the audit report from 2021/22 was provided as evidence¹⁸⁷. This report indicated that the auditor was satisfied that all of the indicators reported by Water Corporation for the major towns were accurate and in accordance with internal procedures and NPR requirements.</p> <p>Water Corporation supplied the following NPR data and minor towns data to demonstrate that performance reporting is taking place:</p> <ul style="list-style-type: none"> • Urban_NPR_The_complete_dataset_2021-22 • Urban_NPR_The_complete_dataset_2022-23 • Urban_NPR_The_complete_dataset_2023-24 • 2021-22 Performance Reporting Datasheet - ERA Minor Town Submission • 2022-23 Performance Reporting Datasheet - ERA Minor Town Submission • 2023-24 Performance Reporting Datasheet - ERA Minor Town Submission <p>It was noted in the performance reporting that Water Corporation did not benchmark well against other similar water utilities, especially on indicator code C17, Number of unplanned interruptions per 1,000 properties. The <i>Strategic Asset Plan</i>¹⁸⁸ shows that this performance criterion in particular is trending upwards. It notes that '<i>continued deferral of capital renewal projects increases the likelihood of unplanned failures which drives the need to undertake more corrective maintenance.</i>' An aging infrastructure base and continued deferral of renewals is compounding performance against this indicator.</p> <p>An example of the Business Performance Reporting¹⁸⁹ was provided; it is viewed in SAP and users are provided with specific KPIs. Water Corporation provided the Head of Asset Strategy Pack, which contained some relevant indicators, although it was difficult to align them to the <i>Asset Management Strategy (2022-42)</i>¹⁹⁰.</p> <p>Annual ERA compliance reports were provided for the audit period to demonstrate compliance with the performance standards in schedule 2 of the operating licence. Water Corporation undertakes hydraulic modelling to identify properties that have water supply pressures outside of the required ranges. It was reported in the 2024/25 report that previous modelling had failed to correctly identify six properties that were outside of the range. The model has since been reviewed to improve accuracy. There were also instances where drainage systems did not perform as expected in 2023/24 and 2024/25 reports. In</p>		

¹⁸⁷ National Performance Report (NPR) - LONG FORM AUDIT REPORT 202-22

¹⁸⁸ Strategic Asset Plan 2024-25, Dec 2023

¹⁸⁹ Performance Scorecard - Process Manager, Head of Asset Strategy Pack, May 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>both of these instances the 1 in 5 average recurrence interval was not met and resulted in minor flooding. These were most due to blockages and one instance of a pump failure.</p> <p>Recommendation - 03/2025</p> <p>Performance standards and Levels of Service must be tracked and where necessary strategies put into place to ensure that targets are met. For example, the number of unplanned interruptions per 1,000 properties for water supplies needs to be addressed to ensure that the negative trend is reversed.</p>		
4.3	Compliance with statutory and regulatory requirements	2	<p>Summary: In the <i>2021 Asset Management System Review</i> this criterion was given an 'A2' grading, due to the number of non-compliances with legal requirements. This grade has been maintained as the level of minor non-compliances has remained constant, based on the small sample of information provided in the Breach Register extract.</p> <p>Process and Policy: Water Corporation ensures that it remains aware of current statutory and regulatory requirements through the maintenance of a <i>Legislation Register</i>¹⁹¹ which is reviewed annually, and also through periodic external scans and regular and ongoing stakeholder engagement with regulatory bodies as per the regulator engagement plans. The register was viewed in the interviews.</p> <p>The <i>Corporate Compliance Breach Reporting Framework</i>¹⁹² sets out how Water Corporation identifies, reports, and manages compliance breaches to uphold governance obligations and maintain stakeholder confidence. It applies to breaches of legislation and licences, the Code of Conduct, delegated financial or legal authorities, core policies linked to corporate values, and any event likely to harm the Corporation. It also covers serious or minor misconduct requiring notification to the Corruption and Crime Commission or Public Sector Commission, and any court action against the Corporation.</p> <p>All employees share responsibility for reporting breaches promptly, with Business Unit and Line Managers required to escalate matters to Risk and Assurance (RA). RA records breaches in the Corporate Breach Register, reports significant cases to the Audit & Risk Committee, and ensures statutory notifications are made. The process involves classifying the breach, recording details in designated systems, and investigating and implementing corrective actions to prevent reoccurrence. Reporting is critical for trend analysis, early intervention, and demonstrating commitment to good governance.</p> <p>Failure to report under this framework may itself constitute a breach of the Code of Conduct and lead to disciplinary action for staff.</p> <p>There is quarterly reporting to the Audit and Risk Committee on any compliance breaches, which are reviewed.</p>	A	2

¹⁹¹ Extract from the Legislation Register (Water Services Act and Regulations).

¹⁹² S332 Corporate Compliance Breach Reporting Framework, Doc # 845435, 17 Jun 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Performance: Breaches of regulatory requirements are reported to the Board Audit and Risk Committee, as identified in the Corporate <i>Compliance Breach Reporting Framework</i>.¹⁹³ External reporting requirements are in the <i>Legislation Register</i>. Breaches with regulatory requirements are recorded in the <i>Breach Register</i>.¹⁹⁴ There were 55 breaches noted between July 2021 and June 2025. Most breaches were minor, with no immediate safety or environmental harm, but water licence exceedances (exceeding allocations) remain a material compliance risk requiring sustained attention. It was also noted that:</p> <ul style="list-style-type: none"> • Many of the breaches appear to have been identified by the relevant regulatory authority, i.e. they have not been self-identified. • There have been repetitive breaches where (for example) there has been unauthorised taking of water. • A number of breaches from as early as June 2022 are shown as remaining 'open' and the status of some remains blank (i.e. status not identified). 		
4.4	Service standard (customer service levels etc) are measured and achieved.	5	<p>Summary: Processes are in place to measure service standards. Levels of service have continued to be developed with the implementation of the new corporate strategy <i>Thrive2035</i>. In order to achieve these, the asset class strategies and plans need to be updated, and the process has been rated as a 'B'. Water Corporation has a number of issues to contend with; some are external factors such as climate change and water security, whilst others are within their control. It would appear that significant investment in infrastructure is required to bring about change to correct the imbalance between regional areas on issues such as drinking water aesthetics. Based on the fact that many levels of service are not being achieved, this criterion has been awarded a '3' for performance.</p> <p>Process and Policy: <i>Thrive2035</i> is Water Corporation's corporate strategy for 2022–2035, aimed at ensuring Western Australia thrives through sustainable water services. It sets corporate performance measures across six strategic domains:</p> <ul style="list-style-type: none"> • Net zero carbon footprint • Waterwise outcomes and environmental sustainability • Reliable and safe services • Customer and community trust • Aboriginal empowerment and inclusion • Financial sustainability and internal funding of priorities 	B	3

¹⁹³ S332 Corporate Compliance Breach Reporting Framework #845435.

¹⁹⁴ Breach register extract 2021.

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>These strategic goals are implemented through the <i>Asset Management Strategy</i>¹⁹⁵ and <i>Strategic Asset Plan</i>,¹⁹⁶ the five Asset Management Objectives drive the development of customer and environmental levels of service (and the technical asset and operational performance targets) needed to achieve <i>Thrive2035</i>. These objectives are delivered operationally through relevant Asset Class Strategies and Asset Class Management Plans. The asset class strategies document the levels of service, and these are implemented on an asset class basis through the Asset Class Management Plans.</p> <p>The <i>Sewage Pressure Main</i>¹⁹⁷ and the <i>Wastewater Pump Station</i>¹⁹⁸ asset class strategies were provided as evidence. The Asset Class Strategies and Asset Class Management Plans have not been updated in over 5 years and they do not align with the current Asset Management Strategy and need to be updated to ensure that current service standards are effectively cascaded to, and implemented within, each asset class enabling consistent measurement, monitoring, and achievement of those standards at the operational level.</p> <p>The System Capability Matrix is a dashboard tool that consolidates risk levels across Water Corporation’s asset systems. One of its uses is to support decision-making by integrating asset performance monitoring and forecasting.¹⁹⁹ This is a useful tool, although does not fill the gap of the class strategies and plans.</p> <p>The performance standards in Schedule 2 of the operating licence are discussed in criterion 4.2.</p> <p>Performance</p> <p>Water Corporation produces an annual Corporate Performance Report. The 2021-22²⁰⁰ report was provided as evidence, and it summarises performance against FY22 corporate objectives and how those performance standards cascade into executive assessment and statutory reporting. It flags that the next cycle will “substantially reset to reflect Thrive2035,” signalling a transition of standards and measures in FY23. The report uses traffic-light dashboards and quarterly/rolling-year views to show status and momentum, making it clear when a metric is on track, off-track but recoverable, or not meeting target.</p> <p>In aggregate, the organisation met 21 of 36 targets (with one pending) across six corporate objectives, i.e. out of the 36 objective targets, 15 were not achieved. Interestingly, the number of unplanned interruptions was compliant showing a slight disconnect with Water Corporation’s performance when compared to its peers. Another interesting outcome was that</p>		

¹⁹⁵ Asset Management Strategy 2022 – 2042, 26 Feb 2025

¹⁹⁶ Strategic Asset Plan 2024-25, Dec 2023

¹⁹⁷ Sewage Pressure Main Asset Class Strategy, Doc # 19208941, Sep 2018

¹⁹⁸ Wastewater Pump Station Asset Class Strategy, Doc # 16781020, 10 Aug 2017

¹⁹⁹ Manage Asset Deficiency Guideline, Doc # 58582506, 1 May 2025

²⁰⁰ Corporate Performance Report - End of financial year 2021 2022 (FY22), Doc # 136881405

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>regional areas are struggling to meet aesthetic water quality standards; the Water Quality FY22 target was achieved in the metro areas, but regional areas did not, <i>‘resulting in an overall performance below target. Significant levels of investment in regional aesthetic water quality and/or new water sources, such as desal, would be necessary to improve ratings in regional areas and deliver against the Water Quality target.’</i></p> <p>The Levels of Service Performance Reports provide a five-year, data-driven view of how Water Corporation’s assets are performing against agreed Levels of Service statements that align to Thrive2035 goals (Safe, Environmentally Sustainable, Satisfied Customers, Supporting State Development, Efficient). Each Levels of Service is supported by one or more quantitative measures (where available), with commentary on performance, drivers, risks, data quality and recommended improvements. The reports are designed to inform Strategic Asset Planning, portfolio investment choices and AMSR assurance over whether asset performance is delivering the intended customer, safety, environmental and cost outcomes.</p> <p>The 2022-23²⁰¹ and 2023-24²⁰² reports were provided as evidence. A summary of the performance against Levels of Service:</p> <ul style="list-style-type: none"> • 2022-23: <ul style="list-style-type: none"> • 18 KPIs listed under the levels of service statements • 5 are being met • 9 are not being met • 4 have no target • 2023-24: <ul style="list-style-type: none"> • 18 KPIs listed under the levels of service statements • 5 are being met • 12 are not being met • 1 has no target <p>The Levels of service have been slightly modified between the years but are predominantly the same. The reports identify some areas of ongoing concern:</p> <ul style="list-style-type: none"> • Water source security (Integrated Water Supply Security Tier status & regional schemes) – this continues to be a risk and has the potential to escalate. • Customer & community disruption (reliability) – Unplanned water interruptions are trending upward. • Workforce safety – Total Recordable Injury Frequency Rate has increased; there is a significant variation between regions, Goldfields & Agricultural and South West Regions fairing the worst. 		

²⁰¹ Levels of Service Performance Report 2022-23

²⁰² Levels of Service Performance Report 2023-24

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> Wastewater recycling – this is somewhat below the target. Environmental compliance indicators – there continues to be a number of issues raised. Whole of life costs are minimised – corrective maintenance costs and large reactive jobs are rising; deferred renewals; increased contractor costs; all leading to an increase in the cost per property. Aesthetic water quality (regional focus) – there have been some issues concentrated in Mid West, Goldfields & Agricultural and Great Southern regions which are often costly to resolve; customer perception risk persists. <p>Recommendation - 03/2025 Performance standards and Levels of Service must be tracked and where necessary strategies put into place to ensure that targets are met. For example, the number of unplanned interruptions per 1,000 properties for water supplies needs to be addressed to ensure that the negative trend is reversed.</p>		
5	Asset operations Asset operations is the day-to-day running of assets (where the asset is used for its intended purpose).			A	2
5.1	Operational policies and procedures are documented and linked to service levels required.	4	<p>Summary: Water Corporation has a robust portfolio of policy and process /procedural documentation in place to guide its operational activities. Operating Plans, which include Water Safety Plans for water treatment plants and Process Control Tables for a wastewater treatment plant, are the principal documents that guide the achievement of operational objectives and performance against defined levels of service. Review of a sample of plans and the implementation of other operational arrangements demonstrated that documented procedures are implemented in a manner that ensures that service levels are achieved.</p> <p>Process and policy: The <i>Operations Strategy</i>²⁰³ outlines at a high-level Water Corporation’s approach to the operation and maintenance of its asset portfolio over the period to 2035, in a manner that aligns with the <i>Thrive2035</i> Corporate Strategy. It provides an overview of the current operating environment (situational awareness), identifies gaps and capability uplift requirements, and outlines a strategic approach and action plan for improvement over the forecast period.</p> <p>From a tactical perspective, Water Corporation has in place an extensive portfolio of policy and process/procedural documentation in respect of asset operations. This includes (for example):</p>	A	1

²⁰³ Operations Strategy 2023-35, 9 Nov 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • <i>PCY340 Manage Scheme Operations</i>²⁰⁴ – this policy document details the requirement to develop and implement scheme operations plans and identifies the overarching principles that they must address. • <i>Scheme and Asset Operations Plan Guideline</i>²⁰⁵ – this guideline defines the structure of scheme and asset operations plans and responsibilities for their development. It identifies the requirement for ‘high level’ scheme operations plans that are supported by a series of more detailed, complementary plans that address the requirements of the individual components of the scheme. • <i>S542 Disruption Risk Management</i>²⁰⁶ – this standard outlines a framework for the management of disruption risk, i.e. “<i>Effects of uncertainty where routine modes of operation are interrupted degraded or impaired in a way that compromises the ability to achieve purpose or key objectives</i>”. Guidance in respect of Crisis Management, Corporate Incident Management, Emergency Management and Business Continuity Management is provided, including reference to more detailed procedural guidance such as the <i>Corporate Incident Management Guidelines</i>.²⁰⁷ • <i>Monitor Control & Optimisation (MC&O) Framework - Water Schemes</i>²⁰⁸ and <i>Monitor Control and Optimisation Framework – Water Schemes</i>²⁰⁹ – these documents (the first in presentation format) set out the arrangements under which water supply schemes are assigned to a ‘tier level’ that defines how each water scheme should be monitored and controlled (operated). The tier level assignment is risk-based, i.e. based on an assessment of criticality and risk. • <i>Planned Operations and Maintenance Prioritisation Guideline</i>²¹⁰ – this guideline outlines the process for prioritising operation and maintenance activities based on risk (refer Criterion 5.2 for further discussion). Risk ratings take into account the need to achieve required levels of service. • <i>Request and Develop System Change Instructions</i>²¹¹ – details the process for requesting a change in configuration of (for example) a water supply scheme and the steps undertaken to develop, review and publish the required System 		

²⁰⁴ PCY340 Plan Scheme Operations (previously sighted).

²⁰⁵ Scheme and Asset Operations Plans Guideline (previously sighted).

²⁰⁶ S542 Disruption Risk Management, Doc # 1175567499, 13 Feb 2024

²⁰⁷ Corporate Risk Management Guidelines, Doc # 58546991, 18 Feb 2025

²⁰⁸ Monitor Control & Optimisation (MC&O) Framework - Water Schemes, Sep 2023

²⁰⁹ Monitor Control and Optimisation Framework – Water Schemes, Doc # 164229566, 21 Jan 2024

²¹⁰ Planned Operations and Maintenance Prioritisation Process Guideline, Doc # 58583163, 26 Oct 2021

²¹¹ Request and Develop System Change Instructions, Doc # 58584845, 23 Oct 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Change Instruction. This ensures that the operational configuration of conveyance assets is known and that any changes are performed at the appropriate time and recorded.</p> <ul style="list-style-type: none"> • <i>Deliver Field Services Business Framework; Lifecycle of a Work Order</i>²¹² - provides an overview of field work management (operation and maintenance). The process described is supported by a series of Business Rules in relation to (for example) <i>Creation of a Work Order, Schedule Field Work, Conduct Field Work, Conduct Field Work - Allocation of Time to a Work Order, Manage Field Work Stoppage Event, and Complete Field Work</i>.²¹³ <p>Water Safety Plans (for drinking water) and Process Control Tables (for wastewater) are primary instruments that are used to guide management of scheme infrastructure. They clearly outline how required levels of service with respect to water quality are to be delivered, as required pursuant to Memoranda of Understanding (MoU) with the Department of Health in respect of <i>Drinking Water</i>²¹⁴ and <i>Wastewater Services and Groundwater Replenishment</i>.²¹⁵ These Water Safety Plans and Process Control Tables clearly set out all control parameters for the scheme (or scheme component) to which they relate.</p> <p>On the basis of these examples, it is apparent that Water Corporation has a robust portfolio of policy and process /procedural documentation in place to guide its operational activities.</p> <p>Performance: Water Corporation operates and maintains its assets through seven operating groups (regions), five of which service non-metropolitan areas and two that service the metropolitan area. The two metropolitan groups cover Treatment and Resource Recovery, and Perth Region Field Services; the non-metropolitan groups cover all activities with their respective regions.</p> <p>Operations and maintenance are managed from an overall perspective via the Integrated Operations Centre (which was inspected during the review fieldwork), which is responsible for:</p> <ul style="list-style-type: none"> • SCADA alarm monitoring. • Operational customer complaints (from 6pm to 6am). • Operation of some more complex schemes in conjunction with field operations. 		

²¹² Deliver Field Services Business Framework Lifecycle of a Work Order, Doc # 165939778, 31 Jan 2025

²¹³ Deliver Field Services - Business Rule - Creation of a Work Order, Doc # 163343573, 31 Jan 2024; Deliver Field Services - Business Rule - Schedule Field Work guide, Doc # 159237632, 31 Jan 2024; Deliver Field Services - Business Rule - Conduct Field Work, Doc # 161379372, 31 Jan 2024; Deliver Field Services - Business Rule - Conduct Field Work - Allocation of Time to a Work Order, Doc # 160295389, 31 Jan 2024; Deliver Field Services Business Rule Manage Field Work Stoppage Event, Doc # 162186947, 31 Jan 2024; and Deliver Field Services - Business Rule - Complete Field Work, Doc # 161777337, 31 Jan 2024.

²¹⁴ MoU with Department of Health – Drinking Water

²¹⁵ MoU with Department of Health – Wastewater, Jun 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Involvement in reactive maintenance. <p>Operational customer contacts received from 6am to 6pm are managed through a dedicated Customer Hub, separate to the Operations Centre.</p> <p>To demonstrate that assets are operated consistent with the relevant policies and processes, Water Corporation provided a sample of Operations Plans, including the following:</p> <ul style="list-style-type: none"> • <i>Small Town Water Safety Plan</i>²¹⁶ and <i>Appendix</i>²¹⁷ – water safety plans constitute the Operations Plan for water supply schemes and components thereof; in this case the scheme comprises a supply line from another system, pressure reducing valve, service/water storage tank and distribution/storage network. This <i>Water Safety Plan</i> includes an overview of the scheme operation, a process flow schematic, an outline of the operating strategy, a process control table that details the various control parameters (including location at which it they are measured, measurement frequency, where data is stored, alert limits and corrective actions), key contacts, an action plan for both operational and maintenance improvements, and plan endorsement. <p>In this case the treatment process is not detailed as water is supplied from ‘outside’ sources. Process control is limited to monitoring free chlorine levels in the distribution/reticulation system.</p> <p>It is noted that the version of the plan provided for review was dated December 2020 and scheduled for review in December 2025, which indicates that it has been kept under review.</p> <p>The <i>Appendix</i> provides more extensive detail/analysis including: a risk register; scheme description and operation (summary, GIS (geographical information system) screen capture, system operation and critical valves, supply modes); projects and asset/treatment/operational changes; disinfection C.t analysis; storage tanks and reservoirs; reticulation water quality; sampling program and monitoring point evaluation; asset condition and maintenance; and site visit requirements. This provides a detailed basis upon which to operate the scheme.</p> <ul style="list-style-type: none"> • <i>City GWTP Water Safety Plan</i>²¹⁸ – this water safety plan relates to the groundwater treatment facility. There is significantly more detail included, however, it follows a similar format to that outlined above. There is a more extensive process control table reflective of the monitoring undertaken in respect of the treatment processes, including the documentation of both alert and critical limits for critical control point parameters. Information in relation to source water (groundwater) quality over the period since the last plan update is also included. 		

²¹⁶ Small Town Water Safety Plan, Doc # 59080533, Dec 2020

²¹⁷ Small Town Water Safety Plan Appendix, Nov 2020.

²¹⁸ PR City GWTP Water Safety Plan, Doc # 58548808, Jun 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • <i>Small Town WWTP Process Control Table</i>²¹⁹ – process control tables constitute the Operations Plan for wastewater treatment plants. This <i>Process Control Table</i> includes a process flow schematic, a listing of monitoring and the location of the sampling points for the treatment process (Maturation treatment) together with operational targets, alert and violation limits and corrective actions. Similar detail is also provided in respect of biosolids management. requirements in respect of dry sludge sampling for landfill, odour and noise management, and sludge profiling are also documented. • <i>Coastal WRRF Process Control Tables</i>²²⁰ – separate process control tables were provided for each of the Preliminary and Primary Treatment, Secondary Treatment, Sludge Treatment and Odour Control Facility processes were provided for review. A process flow schematic, identification of monitoring points and detailed control information for each sub-process is included. • <i>IWSS (Integrated Water Supply System) Operating Plans</i> (for week commencing 26 April 2025) – these are prepared on a weekly basis to manage inter scheme/region water transfers and include:²²¹ • <i>Operating Plan</i> – details system configuration requirements, status and daily transfer targets for surface water sources, metropolitan dam status, GWTP production, bore run times, desalination plant production rates, service reservoir operating levels, tank status, trunk – distribution PRV (pressure reducing valve) settings, and source identification for Southern Water Supply and South-West Towns. • <i>Ground Water Order</i> – water order requirements for GWTP production and bore run times (from the <i>Operating Plan</i>). • <i>Metropolitan Dam Status</i> – operational requirements in respect of the status of metropolitan dams (from the <i>Operating Plan</i>). • <i>Water Quality Set Points</i> – nominates the required water quality (principally chlorine residual) setpoints at IWSS sources, artesian bores, reservoirs, tanks and other points within the water supply system. <p>In addition to these Operations Plans, focussed operational guidance is provided in (for example):</p>		

²¹⁹ Small Town WWTP Process Control Table, Doc # 74405239

²²⁰ Coastal WWTP Process Control Table: Preliminary and Primary Treatment, Doc # 58550203, 14 Oct 2024, Secondary Treatment, Doc # 58549020, 14 Oct 2024, Sludge Treatment, Doc # 58569450, 2 Sep 2021; and Odour Control Facility, Doc # 58561435, 14 Oct 2024.

²²¹ IWSS (Integrated Water Supply System) Operating Plan: Operating Plan, 26 Apr 2025; Ground Water Order, 26 Apr 2025; Metropolitan Dam Status, 26 Apr 2025; and Water Quality Setpoints Spreadsheet.

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> Facility specific operation and maintenance manuals such as the <i>Major Dam Operation, Inspection and Maintenance Manual</i>.²²² Process management manuals such as the Drinking Water Quality - Process Management Manual²²³ and Manage Wastewater & Alternative Water Quality – Process Management Manual.²²⁴ <p>A sample of operational records including the following were sighted/reviewed:</p> <ul style="list-style-type: none"> <i>Coastal WRRF - Secondary Treatment Area Checklist</i> (template only)²²⁵ – daily checklist covering all components/elements of the secondary treatment area. City Groundwater Treatment Plant²²⁶ – <i>Operations Daily Checklist</i> and <i>Daily Sample Sheet</i>. Major Dam²²⁷ – Routine Inspection/Daily Inspection Visuals (25 records), Monthly Inspection, Intermediate Inspection Report 2024 (these inspections undertaken at 15-month intervals) and Comprehensive Surveillance Review 2023 (undertaken at 5-year intervals). <p>In summary, review of a sample of Operating Plans and the implementation of other operational arrangements as outlined above demonstrated that documented procedures are implemented in a manner that ensures that service levels are achieved.</p>		
5.2	Risk management is applied to prioritise operations tasks.	4	<p>Summary:</p> <p>Water Corporation has a robust risk-based process in place that facilitates prioritisation of both its operations and maintenance tasks which, in effect, are jointly managed. Implementation was demonstrated by the priority ratings applied to operational tasks undertaken at the Small Town WWTP, which had been prioritised in accordance with guidance presented in the <i>Planned Operations and Maintenance Prioritisation Guideline</i>.</p> <p>Process and policy:</p>	A	1

²²² Major Dam Operation, Inspection and Maintenance Manual, Doc # 58637356, 3 Jul 2025

²²³ Manage Drinking Water Quality – Process Management Manual, Doc # 102961143, 21 May 2024

²²⁴ Manage Wastewater & Alternative Water Quality – Process Management Manual, Doc # 75755055, 2025

²²⁵ Coastal WWTP - Secondary Treatment Area Checklist (2019 - Coastal - Checklist - Secondary Treatment.xlsx; attachment to: SVMETWPS ERA AMSR - Site Visit - Wednesday 23rd June - Coastal WRRF email.msg)

²²⁶ City Groundwater Treatment Plant: Operations Daily Checklist, 24 Jul 2025; and Daily Sample Sheet, 24 Jul 2025

²²⁷ Major Dam: Routine Inspection/Daily Inspection Visuals, 31 Apr 2025, Monthly Inspection, 14 May 2025; Intermediate Inspection Report 2024, Doc # 175228151, 2024; and Comprehensive Surveillance Review 2023, Doc # 172898373, 5 Sep 2024.

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Operations and maintenance tasks are prioritised in accordance with the <i>Planned Operations and Maintenance Prioritisation Guideline</i>.²²⁸ This guideline outlines a prioritisation process based on risk, taking into account that low priority work may need to be deferred in the short term in order to accommodate budget and other constraints.</p> <p>The <i>Guideline</i> describes a risk prioritisation framework whereby tasks/activity is to be undertaken in accordance with the following prioritisation:</p> <ul style="list-style-type: none"> • Priority 1 – activity that directly contributes to compliance with <u>statutory obligations</u>. • Priority 2 – activity that directly contributes to compliance with the requirements of Water Corporation’s <u>business licences</u> (licence and regulation). • Priority 3 – activity that is <u>business critical</u> in relation to the enabling of Priority 1 or 2 activities and level of service type activities (reliability, safety or compliance). • Priorities 4 to 7 – based on the risk of the asset/facility or event it is intended to manage, <u>extreme, high, moderate or low risk</u> (as assessed under the corporate risk profile). • Priority 8 – activities for which the <u>risk</u> (consequence/likelihood) has <u>not yet been assessed</u>. <p>Planned operation and maintenance tasks are assigned Priority 4 to 7, with the priority of tasks associated with statutory, business licence or business critical (mandatory) activities elevated accordingly. Tasks that can be used in multiple risk settings are assigned a nominal priority of zero, which is then adjusted within allowed limits to represent the risk associated with the asset being managed by the activity.</p> <p>A prioritised tasks list, which identifies the priority for an extensive list of tasks, is included as an appendix to the Guideline. This identifies priority band limits applicable to tasks that can be used in multiple risk settings.</p> <p>The <i>Alarm Management Philosophy</i>²²⁹ provides further guidance in respect of what is essentially a risk-based response to alarm conditions. Alarm conditions are assigned a priority (severity) rating ranging from Critical (Level 1); Urgent (Level 2); Warning, Routine and Maintenance (all Level 3) and Workorder (Level 4). Response times and actions for both Integrated Operations and Local Operator/Maintainer are set out for each alarm priority in an Alarm Severity Matrix.</p> <p>Scheduling of operational/maintenance tasks/work orders is undertaken in accordance with the <i>Deliver Field Services - Business Rule - Schedule Field Work</i> procedure.²³⁰ This requires that scheduling of work orders is based on priority, resource (labour and equipment) availability and capability, and geographical bundling.</p>		

²²⁸ Planned Operations and Maintenance Prioritisation Process Guideline, Doc # 58583163, 26 Oct 2021

²²⁹ Alarm Management Philosophy, Doc # 5394506, Apr 2014

²³⁰ Deliver Field Services - Business Rule - Schedule Field Work guide, Doc # 159237632, 31 Jan 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>In summary, Water Corporation has guidance in place that facilitates the prioritisation of both operational and maintenance tasks on the basis of risk.</p> <p>Performance:</p> <p>Review of the <i>Maintenance Schedule for Small Town WWTP</i>,²³¹ which also includes tasks that are operational in nature, revealed that a priority is assigned to all tasks. For example:</p> <ul style="list-style-type: none"> • Maintenance item 166278 – 01W HOUSEKEEPING WWTP SMALL TOWN (WEEKLY GENERAL HOUSEKEEPING e.g.: Cleaning of Toilets, Floors, Rubbish Bins, Kitchen, & everything internal WWTP Building & Roads kept clear etc) – Priority 5 High Risk. • Maintenance item 166325 – 01W OPERATIONAL CHECK (TUE) WWTP (C00046 WWTP Weekly Inspection OPERATIONAL CHECKS - SCADA (check system faults), analyse alarm alerts, View X & DO levels, level sensors, tank floats & analyse operating trends. Includes visual checks of site plant operation & site in general (Does not include Chlor, Hypo Chlor, Fluoride, UV or UF Operational checks, as these have their own PM04 Orders) – Priority 5 High Risk. • Maintenance item 208796 – 01W ODSS SCHEDULE SW_WR_WWTP (Read and record stats as per ODSS SCHEDULE SW_WR_WWTP [weekly]) – Priority 3 Business Critical. • Maintenance item 290168 – 01W INSP TANK SHOWER ALUM WWTPSMALL TOWN (C00189 – Tank Safety Showers Inspection [weekly]) – Priority 5 High Risk. • Maintenance item 359734 – 01M SAMPLE SCHEME (TUES) WWTP SMALL TOWN (TAKING SAMPLES FOR WWQMS & ODSS & AQUA LOGBOOK FOR PEG & OTHER REGULATORY, LICENCE CONDITIONS & OPERATIONAL WATER/WASTEWATER TESTING [monthly]) – Priority 2 Business Licence. <p>The assigned priorities appear to be consistent with the Prioritised Task List presented in the <i>Planned Operations and Maintenance Prioritisation Guideline</i>. For example:</p> <ul style="list-style-type: none"> • Housekeeping activities should be rated Priority 7 (Min) to 4 (Max.); Item 166278 rated Priority 5. • Taking samples for effluent/water quality testing should be rated Priority 3; Item 359734 rated Priority 3. <p>Work order records (refer Maintenance Schedule for Small Town WWTP) indicate that all scheduled operational activities had been completed in accordance with the planned timing (weekly or monthly) during the 2024/25 year.</p>		

²³¹ Maintenance Schedule for Small Town WWTP, Jul-24 to Feb 25

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			The actual process of scheduling operational/maintenance tasks/work orders was not reviewed, so no assessment has been made of that process. Nonetheless, these examples demonstrated that operational tasks for which work orders had been raised were assigned a risk-based priority.		
5.3	Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets' physical /structural condition.	4	<p>Summary: Water Corporation has in place processes to ensure that asset details are captured in its Functional Location and Equipment Register (FLER) (effectively its asset register), which has links to the Geographical Information System (GIS) where assets are recorded with reference to the relevant drawings. Records of asset condition, which may be identified through observation, performance monitoring a more specific Asset Condition Assessment, are recorded in the ADReg. Online review of the FLER and review of Asset Handover records and Asset Deficiency Register extracts confirm that the requisite records are maintained.</p> <p>Process and policy: Asset data is captured through the asset creation process and recorded into the SAP proprietary AMS. As constructed drawings and information are entered into the GIS. Asset data capture is one element of the Asset Handover process, which is undertaken in accordance with the <i>Asset Data Handover Guideline</i>.²³² This process is aimed at ensuring that all project information is captured in the various corporate information systems, including the FLER. The Asset Handover process is managed using the <i>Asset Handover Checklist</i>,²³³ which identifies all documentation/data handover requirements and the project stages at which progressive handover of the information is to occur. All assets are assigned an identifier (functional location) in the FLER early in the asset creation process. This identifier, which is also used to link the FLER (SAP based) and GIS records, provides a unique identifier against which all asset records are stored. Review of the <i>Asset Handover Checklist</i> reveals that asset data to be provided includes equipment schedules and construction drawings, together with relevant financial, operational, plant information (SCADA) and operational support data/information, which is captured in other corporate information systems. Asset details are to be updated following commissioning and as-constructed drawings provided. Asset condition is monitored/assessed in accordance with the <i>Manage Asset Condition Guideline</i>.²³⁴ Records of asset condition deficiencies are maintained in an ADReg, through which condition assessments are typically initiated. Asset</p>	A	1

²³² Asset Data Handover Guideline, Doc # 58555521, 27 Sep 2024

²³³ Asset Handover Checklist Template

²³⁴ Manage Asset Condition Guideline Doc # 8717283, 11 Sep 2018

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Condition Assessment reports provide supporting information for Level 2 and 3 (detailed) inspections/assessments. Level 1 (visual inspection for maintenance or safety purposes) condition assessments are recorded as necessary in work order closeout records. Asset deficiencies are recorded against functional location, thereby aligning to the specific assets to which they relate.</p> <p>At the time of the 2021 AMS Review, records of asset conditions assessments were maintained in an Asset Condition Register; however, it is understood that this is no longer used in anticipation of the Maximo asset/maintenance management system being implemented to augment the SAPFLER system. Records are currently generally located within the Nexus document management system with hyperlinks to them in the GIS (hyperlinks only provided in some operational areas; others use alternative mechanisms).</p> <p>Water Corporation advised that the SAPFLER system will remain but will be renewed/replaced with the implementation of a new enterprise Asset Data Model. The new asset data model is part of the Enterprise Resource Planning program, which is currently being reviewed with a timeline for delivery yet to be approved.</p> <p>In summary, Water Corporation has in place processes to ensure that asset details are captured in its FLER (asset register), which has links to the GIS where assets are recorded with reference to the relevant drawings. Records of asset condition are maintained; the manner in which this information is stored is dependent on the type (level) of assessment undertaken.</p> <p>Performance:</p> <p>The FLER (asset register) was reviewed online during the review interviews, with a sample of records in respect of the sites visited as part of the audit being sighted. It was noted that detailed equipment records are limited; for example, location details are retained, however, maintenance history and other details are lost if an item of equipment is swapped out.</p> <p>Records that demonstrate that asset information from capital projects has been captured include:</p> <ul style="list-style-type: none"> • <i>Asset Handover Checklist</i>²³⁵ for the City Suburb Transfer Pumping Station and City Street Wastewater Pump Station Upgrade (CS01112) project indicates that FLER information had been compiled and submitted as required throughout the asset creation process, i.e. at the Engineering Deliver and Handover phases. Nexus records in respect of Primary FLER task registration (#62865167), Equipment register (#121033952), Engineering Summary Report (ESR) (##137495839), Design drawing plan set, FLER update request (#143223785), and Final notification (#185898535) were recorded (although not sighted). 		

²³⁵ Asset Handover Checklist; CS01112 – City Suburb PS Divert to Outer Suburb, Doc # 136835883

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> <i>Asset Handover Checklist</i>²³⁶ for the Regional Town Tank 3 Renewal (CW03705) project similarly indicates that FLER information had been compiled and submitted. Nexus references #157899732 (Primary registration), #130622136 (FLER Register), #157899929 (Final as-constructed records) and #166895392 (Asset Settlement Notice) relate. <p>During the site inspection at the City GWTP, Water Corporation noted that the backwash blowers were to be replaced. An <i>Asset Condition Report</i>²³⁷ in respect of an identified deficiency demonstrated that blowers had been assessed to be in 'Average Condition' at the time of the assessment (2023).</p> <p>An example linkage from the GIS to an Asset Condition Assessment report in Nexus was demonstrated during the review interviews.</p> <p>These records collectively demonstrate that Water Corporation maintains records of asset details and condition.</p>		
5.4	Accounting data is documented for assets.	4	<p>Summary:</p> <p>Water Corporation has in place an established process for the capture of accounting data for its assets. Records of cost data capture and allocation to assets for sample projects completed during the review period demonstrate that data is effectively captured. The capture of operational costs is discussed more specifically in respect of Criterion 5.5.</p> <p>Process and policy:</p> <p>Accounting data in relation to assets is initially captured through the asset creation process and is recorded into the Financial Fixed Asset Register (FFAR). This comprises one element of the Asset Handover process, which is undertaken in accordance with the <i>Asset Data Handover Guideline</i>.²³⁸ As previously reported, this process is aimed at ensuring that all project information is captured in the various corporate information systems.</p> <p>Financial data is to be captured on a component basis. The <i>Fixed Asset Component Template (FACT)</i>²³⁹ provides a suggested list of components, which is based on the asset classes and associated structure (hierarchy) from the FLER, against which to allocate costs associated with the new infrastructure.</p> <p>Cost data is provided to the Asset Accounting team in spreadsheet form on the basis of the Work Breakdown Structure (WBS) using <i>Notification of Asset Creation/Change Form</i>.²⁴⁰ This form can also be used to capture cost data associated with any changes (additions/improvements) to an existing asset.</p>	A	1

²³⁶ Asset Handover Checklist; CW03705 Regional Town Tank 3 Renew

²³⁷ ACA - Three City GWTPs Blowers and Twin Valves Spreadsheet

²³⁸ Asset Handover Guideline, Doc # 58543308, 3 Jul 2024

²³⁹ Fixed Asset Component Template, Doc # 58550006

²⁴⁰ Notification of Asset Creation or Change Form

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Project costs are then ‘settled’, i.e. allocated to component assets. The aim is to align financial assets from the FFAR to the functional locations in the FLER.</p> <p>Transfer of non-capital costs occurs at financial year end or on project accounting settlement. The decision as to whether expenditure is to be capitalised is based on assessment against criteria identified in <i>S336 Capitalisation Decision</i> guideline.²⁴¹</p> <p>In summary, Water Corporation has in place an established process for the capture of accounting data for its assets.</p> <p>Performance:</p> <p>Records that demonstrate that costs (accounting data) from capital projects have been allocated to assets include:</p> <ul style="list-style-type: none"> • <i>Asset Handover Checklist</i>²⁴² for the City Suburb Transfer Pumping Station and City Street Wastewater Pump Station Upgrade (CS01112) project indicates that a FACT had been completed and issued to Asset Accounting, the submitted FACT had been processed and the FFAR updated. Nexus references to the relevant documentation/records (not sighted) were recorded (Nexus #190396719, #191352367 and #179771119 respectively). • <i>Asset Handover Checklist</i>²⁴³ for the Regional Town Tank 3 Renewal (CW03705) project similarly indicates that a FACT had been prepared, submitted and processed and the FFAR updated. Nexus references #166895392 (Asset Settlement Notice) and #130622136 (FLER Register) relate. <p>From a broader perspective, operation and maintenance cost is captured through work orders (as discussed in respect of Criterion 5.5) which are linked to assets and ‘rolled up’ for financial monitoring and review.</p>		
5.5	Operational costs are measured and monitored.	5	<p>Summary:</p> <p>Water Corporation has a system to capture operational and maintenance costs. Costs are captured through SAP-based work orders, from where they are ‘settled’ into SAP-FICO (SAP Finance and SAP Controlling), the corporation financial general ledger. Actual costs are reported against budget/forecast using Power BI generated reports, which are reviewed/monitored at district, region and corporate levels. Examples provided demonstrated that operational (and maintenance) costs are effectively captured and monitored.</p> <p>Process and policy:</p> <p>All costs, including operational and maintenance costs, are recorded in the SAP-FICO module, which is effectively</p>	A	1

²⁴¹ S336 Capitalisation Decision guideline, Doc # 58536967, 28 Mar 2025

²⁴² Asset Handover Checklist; CS01112 – City Suburb PS Divert to Outer Suburb, Doc # 136835883

²⁴³ Asset Handover Checklist; CW03705 Regional Town Tank 3 Renew

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Water Corporation’s general ledger, or single source of truth, for financial reporting. Irrespective of the way they are captured or to what activity they relate, all costs are ‘settled’ to FICO.</p> <p>Operational (and maintenance) costs are captured through Work Orders as part of the closeout process. Work order records include details of task codes and cost centre location which determine where costs are automatically posted in FICO. Guidance such as the <i>FICO Quick Reference Sheet - Financial Master Data Maintenance; Cost/Profit Centres</i>²⁴⁴ and <i>FICO Quick Reference Sheet - Financial Master Data Maintenance; Accounts/Cost Elements/CE Groups</i>²⁴⁵ provide direction/a mechanism to ensure that data is correctly captured.</p> <p>Cost data captured in FICO is compiled for financial reporting purposes and can be monitored against forecast/budget. Power BI is then used to generate reports (including online dashboard reporting) for monitoring purposes.</p> <p>Performance:</p> <p>Review of the <i>Maintenance Schedule for Small Town WWTP</i>,²⁴⁶ which also includes tasks that are operational in nature, confirms that costs are captured at work order level. Costs are captured against categories including labour, materials chemicals, plant and machinery and external services (labour is the predominant cost for operational tasks). For example:</p> <ul style="list-style-type: none"> • Maintenance item – 01W HOUSEKEEPING WWTP SMALL TOWN: total cost for the 2024/25 year, together with total labour time versus budget, and chemical and material costs were recorded. The material costs were expended against a work order completed on 5 August 2024 when the recorded labour cost correlates to the material cost being incurred on this occasion. • Maintenance item– 01W OPERATIONAL CHECK (TUE) WWTP SMALL TOWN: total cost for the 2024/25 year was again recorded together with total labour time versus budget; material cost was incurred on one occasion. Labour expended for one work order was well over budget, suggesting that an identified issue required attention on that occasion. <p>Review of a sample of financial reporting demonstrates that operational (and maintenance) costs are ‘rolled’ and reported at both Region and Organisation level. For example, the <i>GAR (Goldfields and Agricultural Region) Financial Update for June 2024</i>²⁴⁷ demonstrated that operating (and other) costs are monitored and reviewed in detail on a monthly and year-to-</p>		

²⁴⁴ FICO Quick Reference Sheet - Financial Master Data Maintenance; Cost/Profit Centres, Doc # FICO-QRS-002, 11 Sep 2018

²⁴⁵ FICO Quick Reference Sheet - Financial Master Data Maintenance; Accounts/Cost Elements/CE Groups, Doc # SAP-QRS-FICO-003, 2 Nov 2018

²⁴⁶ Maintenance Schedule for Small Town WWTP 01-0702024 to 30-0602025

²⁴⁷ GAR Financial Update – RLT; June 2024, Jun 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>date basis. Detailed analysis is also undertaken at Operations Group (corporate) level as demonstrated- by the <i>Operations Group Financial Update</i> for June 2025²⁴⁸ and <i>Operations Group: Quarterly Finance Review</i> for June 2025.²⁴⁹</p> <p>These examples demonstrated that operational (and maintenance) costs are effectively captured via the work order system, are monitored and the subject of detailed review and analysis.</p>		
5.6	Staff resources are adequate and staff receive training commensurate with their responsibilities.	4	<p>Summary: Water Corporation demonstrated it has human resource management processes and procedures in place, the implementation of which ensures that it actively manages its staff resources from a capability perspective; however, based on the information provided it is apparent that staff resource capacity is not sufficient to enable Water Corporation to fully and effectively address its combined asset operations and maintenance obligations. It is for this reason that implementation of this criterion has been graded '2'.</p> <p>Process and policy: The management of staff resources is undertaken in accordance with the approach set out in the <i>Great Place to Work Strategy</i>,²⁵⁰ (effectively Water Corporation's human resource strategy), which outlines the approach to 1. Plan and Design – the workforce of the future; 2. Attract and Secure – the right talent; 3. Engage and Support – a safe, diverse and inclusive environment; and 4. Grow and Sustain – a learning and high performing organisation.</p> <p>Resource competency management is undertaken in accordance with the <i>PCY328 Learning and Development Policy</i>²⁵¹ which commits to: "...supporting employee's training and development needs and outlining the Corporation's training and development principles and approach" and further indicates that "The Water Corporation invests significant time, systems, and resources to ensuring our people have access to development programs and are capable in performing their roles efficiently and competently, whilst remaining safe and developing future capability to meet the Water Corporation's strategic intent, continuous improvement, and customer focus needs".</p> <p>The achievement of these commitments is guided by frameworks and processes including:</p> <ul style="list-style-type: none"> Development Planning Process (currently under biannual review) – provides for collaborative discussion between line managers who hold accountability for ensuring their direct reports have the correct training and development 	A	2

²⁴⁸ OG Financial Update: OG Lead Team P&R Meeting July 2025, June 2025

²⁴⁹ Operations Group: Quarterly Finance Review; June 2025, 29 July 2025

²⁵⁰ Thrive2035; Great Place to Work; 2024-2035, Aug 2024

²⁵¹ PCY328 Learning and Development Policy, Doc # 58557094, 21 Mar 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>to perform their roles. Through this process, training needs are identified and implemented, and staff skills and experience remain relevant and appropriate to the positions held.</p> <ul style="list-style-type: none"> • Corporate Competency Framework – supports the development planning process by defining the knowledge, skills, and behaviours staff need to be successful in their roles. • Corporate Learning and Development Framework - outlines a structured approach to defining roles and assigning responsibilities, the aim of which is to ensure consistency and quality in the way that learning and development is planned, coordinated, developed and delivered. • Leadership Development – details leadership expectations and the organisation’s approach to leadership development. • Mentoring Program – one of the development pathways, which enables employees to grow and improve their knowledge, skills, networks and careers. • Graduate Program – a structured program helps to develop and shape the future leaders of the industry. <p>Collectively, these frameworks and processes support the effective management of core and technical competencies across the organisation.</p> <p>The policy is implemented in accordance with the <i>S471 Learning and Development Standard</i>,²⁵² which outlines a structured approach to defining roles and assigning responsibilities, the aim of which is to ensure consistency and quality in the way that learning and development is planned, coordinated, developed and delivered.</p> <p>The following core competencies apply to all Water Corporation roles:²⁵³ Communication and Relationships; Continuous Improvement and Change; Outcomes Driven and Results Orientated; Planning and Organising; Problem Solving and Decision Making; and Lead and Develop People (applicable to leadership roles and the transition thereto). Each is defined and has five levels of proficiency, the progression through which is cumulative: Awareness, Knowledge, Skilled, Advanced and Expert. A competency assessment process, which engages both employees and managers, is clearly defined.</p> <p>These core competencies are augmented by technical competencies applicable to a particular role/position; competency requirements are determined for each facility and training pathways developed accordingly. Technical competencies are similarly assigned levels of proficiency.</p> <p>Resource (staffing) requirements are determined through the business planning processes which determine resource (FTE – full-time equivalents) requirements to deliver business-as-usual and initiative work programs. Recruitment is undertaken in</p>		

²⁵² S471 Learning and Development Standard, Doc # 58576226, 5 May 2024

²⁵³ Generic Competency Framework and LD Framework (previously sighted)

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>accordance with the <i>Recruitment and Selection Procedure</i>²⁵⁴ which is aimed at ensuring that the recruitment process is consistent, equitable, transparent and effective in its delivery; is aligned with business objectives; and manages candidate applications appropriately. Taleo e-Recruitment system is used to support the process.</p> <p>Performance:</p> <p>To demonstrate that staff receive training commensurate with their responsibilities, Water Corporation provided training profile templates (i.e. skill requirements) and personnel training records for:</p> <ul style="list-style-type: none"> • Senior Operator – Level 1 that covers multiple sites including the Small Town WWTP – the Profile Template showed training/competency requirements for two Senior Operator positions, for which the skill requirements again varied slightly. Both positions required 52 competencies out of the 69 listed. Personnel training records were provided for one of the incumbents. The records were listed by ‘Curriculum title’ and ‘Course title (Item)’ and showed completion date, required date for next training and status amongst other information. This showed that of the 123 listed items, four were overdue. • Process Coordinator that services the City GWTP – the Profile Template showed training/competency requirements for six Process Coordinator/Operator positions, for which the skill requirements varied slightly; a total of 58 competencies were listed. Personnel training records were provided for one of the incumbents. Of the 123 listed items, four were marginally overdue. • Electrical Dual Tradesperson working in the West Pilbara area – the Profile Template showed training/competency requirements for three (Levels 1, 2 and 3) Electrical Dual Tradesperson positions, for which the skill requirements varied; a total of 100 competencies were listed. Personnel training records were provided for one incumbent. This showed that training is generally implemented as planned with a small number of items marginally overdue at the time of reporting. <p>It was further noted that:</p> <ul style="list-style-type: none"> • Some competencies are site based; these are being further developed. • Water Corporation partners with TAFE, which provides certification. • Water Corporation operates a training centre which ensures that consistent training is provided. • There is an automated reminder system to trainee and manager for overdue training. Lifting (dogging) is a problem with 72% completion. 		

²⁵⁴ Recruitment and Selection Procedure, Doc # 58568841, 22 Jul 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>These example and commentary demonstrate that staff receive appropriate training.</p> <p>In respect of resource level management (resource adequacy), a <i>Planned Maintenance Performance Power BI Dashboard</i> extract²⁵⁵ indicated that a minimum of 93.5% of planned maintenance (PM04) work orders (which also include planned operations activities) was achieved each month over the last two years (July 2023 to June 2024). This suggests that resource levels are adequate.</p> <p>However, this appears inconsistent with narrative provided by Water Corporation, which indicates that preventative maintenance is being reduced to fund a growing requirement for corrective maintenance. This growth is driven by aging/deteriorating assets, for which the renewals investment appears to be inadequate. Furthermore, any deferment (or cancellation) of preventative maintenance will likely exacerbate the issue.</p> <p>Water Corporation subsequently clarified that: <i>“The planned maintenance performance dashboard measures the annual program to the level that it is resourced and funded. Unfunded work is not included in the annual planned maintenance performance dashboard (Power BI)”</i>, which explains the inconsistency.</p> <p>From a broader perspective, the <i>Great Place to Work Strategy</i> highlights that a capability uplift is required for forecasting workforce requirements and developing strategies to address workforce gaps. ‘Strategic Workforce Planning’ is identified as a critical Plan and Design Phase project on the strategy roadmap; this activity is aimed at building a future-ready and adaptable workforce to support core operations.</p> <p>From a tactical perspective, the <i>Water Corporation Operations & Maintenance Business Case FY26-FY29</i>²⁵⁶ demonstrates that Water Corporation is actively seeking additional funding to adequately resource asset management activities, which includes labour resources. This business case specifically notes (for example): <i>“Currently there is a shortfall in internal labour to do the required work, this shortfall increases over the next 5 years”</i>; <i>“Country Region roles are very difficult to fill due to scarcity of labour in remote areas”</i>; and <i>“The External Labour Market survey reflects a shortage across trades and an increasing competitive labour market”</i>.</p> <p>In summary, Water Corporation demonstrated that it actively manages its staff resources from a capability perspective; however, based on the information provided it is apparent that an uplift in staff/labour resource capacity is required to enable Water Corporation to fully and effectively address its combined asset operations and maintenance obligations.</p> <p>On this basis and acknowledging that Water Corporation is actively seeking to address the resource deficiency, a performance rating of ‘A2’ is assigned to reflect the impact.</p>		

²⁵⁵ Planned Maintenance Performance PowerBI Dashboard Jul 23 to Jun 25

²⁵⁶ Water Corporation; Operations and Maintenance Program Business Case, March 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
6	Asset maintenance		Asset maintenance is the upkeep of assets.	B	2
6.1	Maintenance policies and procedures are documented and linked to service levels required.	4	<p>Summary:</p> <p>There is an adequate framework to link maintenance to levels of service. Water Corporation is currently reviewing and updating strategy documentation, and this will take some time to cascade down through subordinate documentation. It is noted that although maintenance is planned using an RCM (Reliability Centred Maintenance) approach, ultimately implementation appears to come down to cost. This approach is potentially contributing to a reduction in planned maintenance and a skewing toward a run to fail strategy. It can be seen that over the review period there has been an increase in corrective maintenance and service levels have been impacted. It is for this reason that the process has been graded as a 'B' and the performance '2'. It is considered that the processes are robust, but constraints in budget are requiring Water Corporation to prioritise cost over meeting Levels of Service.</p> <p>Process and policy:</p> <p><i>Thrive 2035</i>²⁵⁷ sets out Levels of Service under the following areas:</p> <ul style="list-style-type: none"> • Safe for All • Satisfied customers • Environmental sustainability • Great Place to Work • Efficient • Supporting State Development <p>Under these there are specific levels of services that are directly affected by maintenance policies and procedures, such as:</p> <ul style="list-style-type: none"> • Water main breaks, bursts, and leaks, per 100 km of water mains (%) • Sewer mains breaks and chokes per 100 km (%) • Total cost per property (\$) <p>Then there are others that are indirectly affected such as:</p> <ul style="list-style-type: none"> • Customers and communities we serve with access to safe water (%) • Total recordable injury frequency rate (TRIFR, per million hours worked) • Reputation among customers and communities across regions (%) • Value for money across regions (%) 	B	2

²⁵⁷ Thrive 2035: Our Corporate Strategy 2022-2035

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Voice of customer experience (%) • Return on invested capital (%) <p>The <i>Availability Workbench (AWB) Standard</i>²⁵⁸ provides a framework for developing maintenance through the use of Reliability Centred Maintenance²⁵⁹. AWB plans maintenance as follows:</p> <ul style="list-style-type: none"> • Uses Failure Modes, Effects and Criticality Analysis (FMECA) to identify: <ul style="list-style-type: none"> • Functions (what the asset should do) • Functional Failures (ways it can fail to meet functions) • Failure Modes (specific causes of failure) • Effects (consequences of failure) • RCM decision logic is used to determine the optimal maintenance strategies based on: <ul style="list-style-type: none"> • Safety consequences • Environmental Impact • Operational/service effects • Economic considerations <p>Consequences of failure modes are defined and parameterised using the Effects Matrix (Appendix A)—which is based on the corporate risk matrix—to model cost, safety, environmental and operational impacts (including hours-based thresholds). The standard enables quantification of service impacts and operational consequences, but does not explicitly mandate that maintenance levels be directly linked to corporate Levels of Service, nor does it prescribe a corporate method for criticality rankings. It instructs that maintenance interval optimisation be set to ‘by cost’ (rather than ‘by availability’). It is suggested that varying optimisation criteria ‘by asset criticality’ would be a sensible governance enhancement, but that option is not specified in this standard.</p> <p>Not every asset has a full RCM; a streamlined process can be followed where a full analysis is not warranted using FMECA and for less critical assets as a minimum a Failure Modes and Effects Analysis (FMEA).</p> <p>The outcomes of the FMEA/RCM Maintenance Planning process results in updates and development of new maintenance standards, Preventive Maintenance Instructions (PMI), Standard Work Instructions (SWI) and operational documents. The</p>		

²⁵⁸ Availability Workbench (AWB) RCM Cost Modelling Standard, Version 2, 02 Apr 2024

²⁵⁹ Asset Maintenance Requirements FMEA/RCM Guideline, Doc # 17201988, 28 Jan 25

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p><i>Maintenance Standard Register</i>²⁶⁰ was provided as evidence. The maintenance standards are generally built around an asset class structure.</p> <p>Performance:</p> <p>Water Corporation has a portfolio of 37 Maintenance Standards²⁶¹ which detail its approach to maintaining its assets. The <i>Maintenance Standard Wastewater Pumping Stations and Pressure Mains</i>²⁶² was provided as evidence. This demonstrates that the FMECA was undertaken following the RCM methodology. There is also a linkage to the levels of service in section 9 on the interpretation of drivers; it discusses:</p> <ul style="list-style-type: none"> • National Guidelines for managing Sewerage systems, which states ‘<i>Ideally there should be no overflows from sewerage systems, apart from those caused by exceptional circumstances; Extreme wet weather events and/or major system failure</i>’. • Maintenance strategy and activities are adequate for reliable operations and maintenance of sewerage systems. • Operating licence: <ul style="list-style-type: none"> • Sewage does not overflow on customers’ properties - 99.8% of sewage customers receive the standard on a licensee wide basis. • Sewer blockages are minimised – fewer than 40 blockages per 100 km of main on a licensee wide basis • Unplanned interruptions. • Response within 2 hours. • Water Corporation design and maintenance standards. <p>The maintenance standard discusses the risk of not meeting Levels of Service.</p> <p>It is noted in the Levels of Service Performance Report that the majority of metrics against the Levels of Service are not being met. These mostly cannot be related to maintenance, however, the following points are relevant:</p> <ul style="list-style-type: none"> • Satisfied customers: Customer and community impact from disruption is minimised – ‘Customer water interruptions’ and ‘water and sewer main failures’ have both increased. • Efficient: Whole of life costs are minimised - The total cost per property has increased as well as the amount/cost of required corrective maintenance. 		

²⁶⁰ Maintenance Standards Register

²⁶¹ Maintenance Standards Register

²⁶² S414 Maintenance Standard Wastewater Pumping Stations and Pressure Mains, Doc # 314598, 1 Mar 24

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>These points from the report indicate that both water and sewer main failures are increasing and this is having a direct impact on the cost of water through increased amounts of corrective maintenance.</p> <p>The <i>Asset Class Management Plan for Wastewater Pump Stations and Sewer Pressure Mains</i> raises some significant concerns about planned maintenance being undertaken as required and maintaining levels of service. The following points are made:</p> <ul style="list-style-type: none"> • The level of service regarding wastewater overflows is trending unfavourably up. • A significant portion of the maintenance budget is Corrective, in response to incidents. In the Metro area this is estimated to be 50%. • The greatest proportion of the Planned Maintenance is Single Cycle Plans, however this is actually reactive work in response to a failure or poor condition. • After Single Cycle Plans, Cleaning pump station wetwells is the next biggest cost, which is the removal of debris to prevent ragging (build-up of materials that do not breakdown causing blockages or equipment failure). • The quality of data needs to be improved to support better planning. 		
6.2	Regular inspections are undertaken of asset performance and condition.	2	<p>Summary: Water Corporation has processes in place for monitoring asset condition and performance. It can be seen that some inspections are undertaken, however it cannot be determined that all of the inspections specified under the maintenance standards are being undertaken. Safety Security and Environment (SSE) inspections of elevated reservoirs were stopped due to budgetary issues, but were resumed following an incident. The incident report indicated that, had the inspections occurred it would not have changed the outcome, but the value of a regular site inspections was acknowledged. There is also lack of a single point of truth for inspection report/condition assessments, which further frustrates the situation (Water Corporation notes that the Work Management Uplift and the Asset Data Model projects will address this when complete). On this basis, performance has been rated as '3'.</p> <p>Process and policy: Asset performance is monitored in accordance with the <i>Monitor Asset Performance Guideline</i>.²⁶³ This guideline details the monitoring processes that Water Corporation implements to identify asset deficiencies which, if not addressed, could potentially lead to unacceptable risk to maintaining agreed levels of service. The monitoring process involves:</p> <ul style="list-style-type: none"> • assigning a lifecycle management strategy • completing an asset criticality assessment and determining the level of performance monitoring that is required 	A	3

²⁶³ Monitor Asset Performance Guideline, Doc # 58582513, 29/06/2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • identifying/developing the appropriate monitoring program (including the identification of funding/budget requirements) • implementing the monitoring program and assessing performance against pre-defined triggers • where a deficiency (or risk) is identified, preparation of an asset deficiency report. <p>Asset condition is to be monitored/assessed in accordance with the <i>Manage Asset Condition Guideline</i>.²⁶⁴ This guideline details a management process as follows:</p> <ul style="list-style-type: none"> • The process identifies infrastructure assets needing condition assessment through triggers like operational inspections, asset failures, high criticality, or opportunistic access during maintenance work • Assets are prioritised for assessment using risk-based evaluation considering likelihood and consequence of failure, with existing risk data reviewed and rough cost estimates developed • Detailed scoping and planning determines assessment methodology, timing, operational impacts, bypass requirements, and delivery approach (in-house, contractors, or specialist panels) • Annual funding applications are submitted through the capital program, with a 5-year forward program maintained for long-term planning • Assessment execution follows three levels - Level 1 visual inspection, Level 2 detailed non-intrusive testing, or Level 3 destructive testing (e.g. taking cores of pipe material for examination) depending on requirements • Condition data and remaining service life determinations are captured and fed into investment planning, deficiency management, and renewal decisions • The process includes continuous stakeholder engagement with operations, engineering, projects, and customer networks throughout Planning and Delivery phases • Ad-hoc assessments can be incorporated when assets are offline for other work or when new failure information emerges <p>As reported in respect of Criterion 5.3, records of asset conditions assessments are not currently maintained in the Asset Register (Functional Location and Equipment Register (FLER)); however, condition assessment reports providing supporting information for Level 2 and 3 (detailed) inspections/assessments are stored in the corporate document management system. Level 1 (visual inspection for maintenance or safety purposes) condition assessments, which are typically undertaken in conjunction with programmed maintenance tasks, are recorded as necessary in work order closeout records. The</p>		

²⁶⁴ Manage Asset Condition Guideline Doc # 8717283, 11 Sep 2018

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>implementation of the Work Management Uplift and Asset Data Model projects will address this issue once complete, linkage of asset health information to functional locations is included within the digital roadmap.</p> <p>Maintenance standards²⁶⁵ specify Condition Based Maintenance (CBM), which is condition monitoring based on inspections and instruments, such as temperature and vibration. Condition monitoring can be part of an operational visit or a more formal Asset Condition Assessment, as described above. It also specifies Safety, Security and Environmental (SSE) inspections, these are a site scan to detect any adverse changes, checking necessary safety policies are followed, and addressing any hazards, security breaches, or environmental issues identified during the inspection²⁶⁶. They are a high-level visual assessment for obvious adverse conditions. The Wastewater Pumping Stations and Pressure Mains standard states that SSEs are a time-based planned maintenance for critical section valves, pits, pipework along pumping mains etc.</p> <p>Performance:</p> <p>In this section, documents from two incidents during the review period were considered:</p> <ul style="list-style-type: none"> • Catastrophic failure of high-level tank • A sewer pressure main burst. <p>Details of the high-level tank significant operational incident²⁶⁷ are as follows:</p> <ul style="list-style-type: none"> • An elevated tank failed in December 2024. • The tank catastrophically collapsed, releasing a large volume of water that caused physical damage to nearby properties and infrastructure. • Condition assessments failed to accurately reflect the tank’s deteriorating state over a nine-year period. • The visual Asset Condition Assessment inspection program was ceased due to funding, the last being completed in 2016. • A number of Asset Condition Assessments were undertaken following this, as part of tank cleaning and following a storm. • An SSE to investigate was triggered when a leak was observed. Routine SSE inspections at this point were not routinely carried out. • The ADReg and CRAC ratings fluctuated and were inconsistently applied, with the tank only briefly rated as high risk before being downgraded again. 		

²⁶⁵ S414 Maintenance Standard Wastewater Pumping Stations and Pressure Mains, Doc # 314598, 1 Mar 24

²⁶⁶ SWI C00053 - Safety, Security and Environmental Inspection

²⁶⁷ Elevated Tank Significant Operational Incident INC-075324, Doc # 188298262, Jan 25

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> The tank was 26 years old at the time of failure, exceeding its design life of 20 years. A large backlog of ADReps and manual processes contributed to delays in investigation and remediation. An Asset Condition Assessment was scheduled for July 2025, this was changed to December 2025, before the tank failed in December 2024. <p>This event demonstrates that tanks are inspected, but funding plays a significant role in how inspections are implemented. It would appear that preventive maintenance has reduced, periodic visual condition assessments and SSE inspections were ceased; this is an example where activities have had to be reduced due to funding constraints. Reactive inspections were undertaken once an issue was identified. Water Corporation has indicated that SSEs have been reintroduced since this event. There was a sewage spill in June 2025; relevant details are as follows:</p> <ul style="list-style-type: none"> There was a history of failures along a 16km section of this pressure main, which created an ADRep. There were two Asset Condition Assessments undertaken in the pipe following a previous incident: <ul style="list-style-type: none"> An internal assessment in August 2021²⁶⁸ An external Assessment in August 2021²⁶⁹ Inspection of Sewer Pressure Main Isolation Valves²⁷⁰ was scheduled for 2024, work commenced in 2025. A spreadsheet detailing relevant planned maintenance for the pressure main relevant to the incident shows sporadic inspections of an upstream sewer pump station from September 2020; before that they were conducted approximately every 6 months. The air valves were inspected in 2017, 2022 & 2024²⁷¹. An extract from the ADReg²⁷² indicates a number of High-risk deficiencies regarding missing air valves and seized isolation valves. During the incident it became evident that it was unknown if valves on the main were open or closed. Some were also inoperable. There is no planned program to inspect valves; anecdotally this used to occur every 5 years, but has been stopped due to funding constraints. The 610mm mild steel main burst was potentially due to corrosion. Flows were diverted to a contingency 450 reinforced concrete main that subsequently burst. 		

²⁶⁸ Inspection Report: SECT 7 MAIN 610 SPS - Data Summary Report, Doc # 155223939, 23 Jun 2021

²⁶⁹ Second Suburb Inspection Report SECT 7 MAIN 610 SPS, Doc # 120621744, Aug 2021

²⁷⁰ Inspection Plan Sewer Pressure Main - Isolation Valves, Jan 2024

²⁷¹ ERA RFI Sewage Spill Infrastructure Maintenance

²⁷² List of ADR's as of 29th August 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>It would seem that inspections are being undertaken but from the evidence provided it is difficult to determine if they are being carried out in accordance with maintenance standards. Inspections cover SSE visual inspection and condition-based Asset Condition Assessments. Planned inspections are managed through Maximo and reactive inspections through the ADRep process. There is also not a central location to retain information; it is understood that Asset Condition Assessments are stored in the electronic document management system (EDMS) Nexus, but there is no central register and they are not linked back to functional location in SAP (i.e. the Asset Register). SSE inspection details are recorded in Sentinel, which is used to manage hazards, incidents, inspections and associated actions for Safety, Health, Environment & Quality issues.</p> <p>It is recommended in the elevated tank incident report²⁷³:</p> <p><i>“centralise condition data into a system which all teams involved in requesting, executing, and reviewing condition assessments use as the source of truth. This will allow the business to make more informed decisions on what assets require future ACAs [asset condition assessment], capital expenditure and create more accurate asset renewal forecasting.”</i></p> <p>Fragmentation of the system may be leading to differing approaches between regions and business units. The implementation of the Work Management Uplift and Asset Data Model projects will address this issue once complete; linkage of asset health information to functional locations is included within the digital roadmap.²⁷⁴ (refer Criterion 7.2).</p> <p>Recommendation – 04/2025</p> <p>Whilst it is acknowledged that Water Corporation is subject to a constrained budget, it should continue to take action as necessary to secure sufficient funding to fully provide for the operations and maintenance, administration and capital expenditure requirements of the services. The level of funding should be adequate to ensure that the risk of asset failure and impact on service is reduced to an acceptable level, i.e. it should be adequate to fully address the requirements for ongoing maintenance and the replacement of aging and/or deteriorating assets as necessary to meet this objective.</p>		
6.3	Maintenance plans (emergency, corrective and preventative) are documented and	4	<p>Summary:</p> <p>Water Corporation demonstrated that maintenance plans are developed and documented. However, it would appear that there is severe pressure on the maintenance budget resulting in not all of the cyclical maintenance being undertaken. There is an ever-growing amount of corrective maintenance due to an increasing number of asset deficiencies and failures. Reactive</p>	A	3

²⁷³ Fringe Suburb Elevated Tank Significant Operational Incident INC-075324, Doc # 188298262, 24 Sep 2025

²⁷⁴ Project Practical Completion Report - C-C00855 Work Management, Doc # 143583382, 9 Nov 2022

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
	completed on schedule.		<p>and planned maintenance are funded out of the same budget, so as reactive maintenance increases, planned maintenance is reduced.</p> <p>This criterion has been graded as a '3' for performance due to the significant maintenance debt.</p> <p>Process and policy: Maintenance activity is managed using a proprietary computerised maintenance management system (CMMS). Water Corporation finished migrating its work order management process from SAP to Maximo within the review period²⁷⁵. Maximo is Water Corporation's platform for managing work orders and work execution processes, whilst SAP remains the system of record for asset master data and related information.</p> <p>Maintenance plans are developed and incorporated (documented/programmed) within the CMMS. These plans are informed by the above referenced Maintenance Standards (refer Criterion 6.1 and 6.2) which detail the maintenance strategy for the particular asset type/components. Maintenance requirements are typically also reflected in/or can be derived from Operation and Maintenance Manuals (typically higher level/major maintenance requirements), supplier documentation and the accumulated knowledge of asset/maintenance managers.</p> <p>Maintenance plans/schedules define the maintenance activity that is required in respect of a particular asset and the frequency at which it must be performed. Specific work instructions are linked within the CMMS (where specific guidance/instruction is required).</p> <p>Guidance for identifying maintenance and related requirements is provided in a series of documents including (for example) the <i>Asset Maintenance Requirements FMEA/RCM Guideline</i>,²⁷⁶ which describes the application of Failure Modes and Effects Analysis (FMEA) and Reliability Centred Maintenance (RCM) principles in developing a maintenance plan.</p> <p>The <i>Planned Operations and Maintenance Prioritisation Guideline</i>²⁷⁷, describes how maintenance is prioritised. There are eight levels, which are as follows:</p> <ol style="list-style-type: none"> 1 Statutory 2 Business Licence 3 Business critical 4 Extreme risk assets 		

²⁷⁵ Project Practical Completion Report - C-C00855 Work Management, Doc # 143583382, 9 Nov 2022

²⁷⁶ Asset Maintenance Requirements FMEA-RCM Guideline.pdf.

²⁷⁷ Planned Operations and Maintenance Prioritisation Guideline, Doc # 58583163, 28 Oct 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>5 High risk assets 6 Medium risk assets 7 Low risk assets 8 not yet risk assessed</p> <p>The guideline lists task codes and provides the priorities that they can be assigned. Some are fixed while others are based on asset risk. Priority 1-3 are always scheduled, priority 4 tasks are also treated with high urgency and are generally scheduled unless constrained by exceptional circumstances. Priority 5-7 are only done as resource availability permits.</p> <p>Maintenance standards are prepared for asset classes; the Wastewater Pumping Stations and Pressure Mains maintenance standard²⁷⁸ was provided as evidence. The maintenance strategy combines Planned Preventive Maintenance (PM), Condition-Based Maintenance (CBM) and Corrective Maintenance. Corrective maintenance may be deferred where an immediate response is not required; in these cases it is prioritised against other CBM (“delayed permanent corrective maintenance” in the standard). The approach is intended to ensure reliable operation of wastewater pumping stations and pressure mains, prevent overflows, and comply with regulatory requirements.</p> <p>It is noted that:</p> <ul style="list-style-type: none"> • The strategy is formulated from business drivers (high-level and mid-level). For each component, section 10.2 (Table of maintenance strategies and drivers) identifies the component, strategy, and drivers. In some cases, the strategy/frequency varies based on overflow-risk level (high/medium/low). • The process includes interpreting drivers (e.g., national sewer overflow guidance, environmental policies, and licence obligations). • Criticality is assessed on overflow risk, considering pumping capacity, proximity to sensitive environments, emergency storage/power and response capability. • The strategy comprises PM, CBM and corrective maintenance, including deferred and delayed permanent corrective where appropriate. • Appendix A provides coding/quick-reference to translate the strategy into maintenance items with their frequency, grouped by discipline and FLER structure to support efficient scheduling; Chapter 11 covers Maintenance Planning and detailed SAP coding. 		

²⁷⁸ S414 Maintenance Standard Wastewater Pumping Stations and Pressure Mains, Doc # 314598, 1 Mar 24

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> Configuration/loading: maintenance items/Preventive Maintenance Instructions (PMI) are loaded in Maximo (CMMS), with SAP used as the asset master and for selected coding/reporting (e.g., business rules, BPR metrics) as per current Water Corporation practice and the FMEA-RCM guideline. <p>Performance:</p> <p>Examination of the Small Town WWTP facility work orders and maintenance plans for the financial year 2024/25²⁷⁹ shows that planned maintenance has been completed. Details are as follows:</p> <ul style="list-style-type: none"> 252 maintenance work orders were planned and all except the bund leak test for the alum tank were completed. All priority 1-3 work orders were undertaken There were 20 different maintenance activities: Priority 1 (3 items); Priority 2 (2 items); Priority 3 (5 items); Priority 5 (7 items); Priority 6 (2 items); and Priority 7 (1 item). <p>This shows that maintenance across multiple priority levels including safety inspections, RCD testing, and civil maintenance, is being conducted as scheduled at Small Town WWTP.</p> <p>Water Corporation has a Power BI Work Governance Report that it can run to track the implementation of maintenance; the Planned Maintenance Performance dashboard was provided including data for July 2023 to June 2025 for each region and whole of organisation. These reports show the completion of jobs by priority. It shows that 95% of priority 1-4 work orders are being completed, which would seem reasonable. For priority 5-7 work orders, these have completion rates >90%. There are monthly Work Program Governance Meetings by region that review these reports.²⁸⁰ These reports appear to show a positive picture for the completion of planned maintenance. The planned maintenance in the work program is that which can be funded on the constrained budget. Maintenance is prioritised based on the levels above. Water Corporation has identified that in 2025 ~65% of the Planned Cyclic Maintenance was funded and could be scheduled; this does not include all High risk items. In addition, only 5% of the Single Cycle Maintenance is funded; this leaves even some Extreme risk items unfunded.²⁸¹</p> <p>This clearly shows the amount of planned maintenance and the proportion that is funded. Maintenance that is not funded is carried as a risk and is known as the 'Maintenance Debt'.</p> <p>The <i>Levels of Service Performance Report 2023-24</i> provides a strategic performance summary, it states:</p> <ul style="list-style-type: none"> Corrective maintenance costs increased by 13% annually over the last five years. 		

²⁷⁹ WWWTP1 Small Town WWTP Maintenance Schedule 01-0702024 to 30-0602025

²⁸⁰ GOVERNANCE MEETING MAR 2025 – Perth Metro, Mar 2025

²⁸¹ Presentation: INC-075324 Failed Fringe Suburb Tank Update – 26 February 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> This increase has impacted the amount of planned maintenance that can be delivered, resulting in a substantial backlog, referred to as maintenance debt. The debt includes both single-cycle (once-off) and cyclic (routine) maintenance tasks that were not completed as scheduled. <p>The maintenance debt is discussed in the <i>Strategic Asset Plan</i>²⁸²; the backlog is growing due to:</p> <ul style="list-style-type: none"> Deferred capital renewals, which shift the burden to reactive maintenance. Escalating costs. Aging infrastructure. <p>This has a direct impact on delivery of the planned maintenance:</p> <ul style="list-style-type: none"> The number of asset deficiencies registered in the ADReg has grown and a significant portion have a risk of High or greater. These deficiencies are accumulating annually. Corrective maintenance has increased over the last 5 years. The backlog includes both single-cycle and cyclic maintenance tasks that were not completed as scheduled. Preventative budgets are increasingly being used to fund reactive work, undermining long-term asset reliability. The backlog contributes to service interruptions. Sewer main breaks and chokes have increased in certain areas. <p>The maintenance debt was identified in the 2021 AMSR and only seems to be progressively getting worse.</p> <p>Recommendation – 04/2025</p> <p>Whilst it is acknowledged that Water Corporation is subject to a constrained budget, it should continue to take action as necessary to secure sufficient funding to fully provide for the operations and maintenance, administration and capital expenditure requirements of the services. The level of funding should be adequate to ensure that the risk of asset failure and impact on service is reduced to an acceptable level, i.e. it should be adequate to fully address the requirements for ongoing maintenance and the replacement of aging and/or deteriorating assets as necessary to meet this objective.</p>		
6.4	Failures are analysed and operational/	2	<p>Summary:</p> <p>Water Corporation has systematic review processes for managing asset deficiencies, including asset failures, and for the investigation of such failures and emerging risks. This criterion was rated a '2' for implementation as investigations on one</p>	A	2

²⁸² Strategic Asset Plan 2025-26, Mar 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
	maintenance plans adjusted where necessary.		<p>pressure main were not completed by the due date, and it subsequently failed. It cannot be concluded that this contributed to the incident, but it is one example of where inspections have not been undertaken as planned and there are possible many more.</p> <p>Process and policy: Asset deficiencies, including asset failures, are managed in accordance with the <i>Manage Asset Deficiency Guideline</i>.²⁸³ As reported in respect of Criterion 3.1, this guideline details how the deficiency is recorded and managed, and how it is documented for further assessment in the Asset Investigation Process. The asset deficiency management process involves:</p> <ul style="list-style-type: none"> • For identified deficiencies, including those identified through asset failure (reactive) that cannot be resolved by Field Operations, an Asset Deficiency Report is prepared. • Asset Deficiency Reports are reviewed on the basis of risk to assess the need for, and prioritisation of, further investigation. • Issues identified for further investigation are captured in an Asset Deficiency Register. They are then prioritised for investigation using a collaborative, risk-based process, which is conducted monthly across all regions. • The status of deficiency investigations and outcomes is monitored to ensure that actions are captured and implemented through planned investment, and deficiencies are 'closed out' once all actions are complete. <p>Asset investigations are undertaken in accordance with the <i>Plan Asset Investigation Guideline</i>.²⁸⁴ This guideline describes Water Corporation's approach to the investigation and resolution of asset failures or emerging asset risks to ensure that asset management objectives are achieved.</p> <p>Asset investigations follow a three-stage process whereby an asset investment decision can be made at each stage. Where a decision cannot be made, the issue/risk or opportunity is escalated to the next stage:</p> <ul style="list-style-type: none"> • Stage 1 – Reactive Issue/Risk Identification and Investigation – undertaken by Service Delivery Partners (Field Operations), this stage typically involves initial investigation to fix the issue, often considering 'like-for-like' replacement, operational change or maintenance adjustment. Where Field Operations cannot resolve the issue, it is escalated to Operations Engineering for review and further action. • Stage 2 – Field Investigations – undertaken by Operations Engineering, these investigations address more complex issues. If an appropriate solution cannot be identified, the issue is escalated to the relevant Asset Performance Technical Advisor through the Deficiency Status Review process. 		

²⁸³ Manage Asset Deficiency Guideline, Doc # 58582506, 1 May 2025

²⁸⁴ Plan Asset Investigation Guideline, Doc # 58582518, May 2022

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Stage 3 – Asset Planning Investigation – undertaken by Asset Investment Planning teams (ISA, IWCP, CN), these investigations consider wider planning objectives. While these investigations can be initiated reactively, they are also triggered proactively through asset performance monitoring activities. <p>All investigations are prioritised on the basis of risk/benefit in respect of meeting Water Corporation's asset management objectives/maintaining levels of service. Accordingly, consideration is given to information including:</p> <ul style="list-style-type: none"> • Asset physical condition, which may be based on observation or a surrogate measure such as age if condition cannot be readily assessed. • Demand data and associated trends (growth or decline). • Asset reliability/operating performance (including, for example, failure data, flow yield, overflow frequency). • Levels of service data including, for example, water quality data, system flow and pressure, safety reporting data). <p>Investigations typically include the following (tailored to the specific case):</p> <ul style="list-style-type: none"> • Understanding of the issue/risk and work done to date. • Collection, rationalisation and validation of performance data. • Validation of asset investigation criteria (confirmation of drivers). • Liaison/engagement with internal stakeholders as required. • Identification of constraints and opportunities. • Identification of solutions. • Development of an implementation plan, which should address need, scope, timing, cost, triggers and risk). • Review/updating of risk assessments as a result of investigation decisions. <p>All Field and Asset Planning Investigations are documented in an Asset Investigation Report, which is required to include details in respect of: issue/risk description; background; need; evaluation to date; decisions (in respect of investment/operational issues/acceptance of higher risk); relevant contacts; and implementation priority.</p> <p>Performance:</p> <p>A recent example of a failure being investigated is the Significant Operational Investigation (SOI) conducted following the catastrophic failure of an elevated tank in December 2024²⁸⁵. This investigation employed the ICAM (Incident Cause Analysis Method) methodology to systematically analyse contributing factors across People, Environment, Equipment, Procedures, and Organizational dimensions.</p>		

²⁸⁵ Fringe Suburb Elevated Tank Significant Operational Incident INC-075324, Jan 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The investigation identified multiple systemic issues that contributed to the failure, including:</p> <ul style="list-style-type: none"> • Conflicts between Maintenance Standard S418 and condition assessment methodologies that resulted in no official civil/structural inspections being conducted by engineers. • Inadequate escalation of deteriorating asset condition despite corrosion being first identified in 2016. • A significant backlog of over 600 Asset Deficiency Reports for Perth Region Field Services that delayed investigation and corrective action. • Inaccurate master data that misrepresented the asset's age and remaining life. <p>In response to these findings, the investigation has recommended several adjustments to operational and maintenance plans:</p> <ul style="list-style-type: none"> • Maintenance Strategy Updates: Updating Maintenance Standard S418 to clearly define frequencies for civil/structural maintenance and ensure appropriate engineering inspections are undertaken. • Inspection Process Improvements: Tank cleaning and inspection report formats are to be revised to include clear recommendations for defect rectification, with enhanced training for teams conducting these assessments. • Risk-Based Prioritisation: Regular stakeholder meetings to discuss Asset Deficiency Reports (ADRep) and associated CRAC ratings. As well as training in the risk of elevated tanks. • Condition Assessment Single point of truth: The current approach is fragmented a central location is needed for condition data. This is to be delivered as part of the Maximo upgrade, however, this is taking some time. An interim solution is being recommended. • Resource Allocation: Greater funding is being recommended to reduce the ADRep backlog, as this was found to be a major issue in the failure. <p>It is noted that currently there is no central location to track to closure of these recommendations; an Excel spreadsheet is being used.</p> <p>This demonstrates that adjustments are being identified during failure investigations. Recommendations have been prioritised as either "Urgent" or "High", with clear assignment of responsibilities to specific departments and tracking of implementation status.</p> <p>Although not a specifically a recommendation in the report, it was considered that regular visual inspections would benefit elevated tanks, as many are remote and visited irregularly. As a result of this incident, SSE inspections have been reinstated. This is demonstrated by the planned maintenance for water storage complexes. An extract from SAP shows these for all locations with a priority rating of 4, critical²⁸⁶.</p>		

²⁸⁶ SSE inspections for water storage complex (WSC) sites

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>This investigation demonstrates that Water Corporation has processes in place to analyse failures and identify necessary improvements to operational and maintenance practices.</p> <p>The sewage overflow incident that has been previously mentioned in this report occurred at the end of the review period, and as such the incident report had not been finalised at the time of writing. However, there a number of asset deficiencies in the register²⁸⁷ that can be summarised as follows:</p> <ul style="list-style-type: none"> • Corrosion/Structural Degradation: 1 Extreme, 12 High, 1 Moderate, 1 no risk • Isolation Valve Failure: 3 High, 8 Moderate • Missing or Faulty Air Valve: 7 High, 9 Moderate • Pit and Access Hazard: 1 Moderate • Pressure Main Fragility/Failure: 1 High, 2 moderate • Other: 1 Moderate, 4 low. <p>Inspections undertaken in January 2025 identified six deficiencies; all had a High CRAC rating. These related to missing air valves, seized isolation valves and one noting the pressure main was fragile around the location air valve. Five of these required investigations due by March 2025 and one June 2025; none had been undertaken at the time of the AMSR. It would appear that the main failed before these identified investigations were completed. It is not to say that these investigations would have prevented the incident, as corrective maintenance work would still have been required to rectify the deficiencies. It is also noted that conduct of condition assessments/investigations is risk-ranked against other investigation requirements; there were approximately 90 pressure main assets with a higher CRAC risk rating than those involved in the incident.</p>		
6.5	Risk management is applied to prioritise maintenance tasks.	2	<p>Summary: Water Corporation has a robust risk-based process in place that facilitates prioritisation of both its operations and maintenance tasks which, in effect, are jointly managed. Completion of work order by priority indicates that risk management is being implemented for the scheduling of maintenance tasks.</p> <p>Process and policy: As reported in respect of Criterion 5.2, operations and maintenance tasks are prioritised in accordance with the <i>Planned Operations and Maintenance Prioritisation Guideline</i>.²⁸⁸ This guideline outlines a prioritisation process based on risk, taking into account that low priority work may need to be deferred in the short term in order to accommodate budget and other constraints.</p>	A	1

²⁸⁷ List of ADR's as of 29th August 2025

²⁸⁸ Planned Operations and Maintenance Prioritisation Process Guideline.pdf #58583163 01 November 2018.

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The Guideline describes a risk prioritisation framework whereby tasks/activity is to be undertaken in accordance with the following prioritisation:</p> <ul style="list-style-type: none"> • Priority 1 – activity that directly contributes to compliance with statutory obligations. • Priority 2 – activity that directly contributes to compliance with the requirements of Water Corporation’s business licences (licence and regulation). • Priority 3 – activity that is business critical in relation to the enabling of Priority 1 or 2 activities and level of service type activities (reliability, safety or compliance). • Priorities 4 to 7 – activities which, if not completed, would result in extreme, high, moderate or low risk (as assessed under the corporate risk profile). • Priority 8 – activities for which the risk (consequence/likelihood) has not yet been assessed. <p>Planned operation and maintenance tasks are risk assessed and given a priority 4 to 7, within an allowable risk range for the task. The priority of tasks associated with a statutory business licence or business critical (mandatory) activities are given priorities 1 to 3 accordingly. A prioritised tasks list, which identifies the priority for an extensive list of tasks, is included as an appendix to the Guideline.</p> <p>In summary, Water Corporation has guidance in place that facilitates the prioritisation of both operational and maintenance tasks.</p> <p>Performance: The evidence provided demonstrates implementation of the maintenance prioritisation framework outlined in the <i>Planned Operations and Maintenance Prioritisation Guideline</i> across multiple facilities.</p> <p>The Small Town WWTP Maintenance Schedule (July 2024 to June 2025)²⁸⁹ provides the most comprehensive evidence of priority implementation. Planned maintenance items (20 total) include the following:</p> <ul style="list-style-type: none"> • Priority 1 (Statutory): 3 items - including RCD testing and firebreak maintenance • Priority 2 (Licence/Regulation): 2 items - including effluent channel maintenance and sampling • Priority 3 (Business Critical): 5 items - including safety inspections and shower maintenance • Priority 5-7 (Risk-based): 10 items - including electrical and mechanical maintenance • Work Orders Created (271 total): <ul style="list-style-type: none"> • Priority 1: 18 work orders • Priority 2: 227 work orders 		

²⁸⁹ WWTP1 Small Town WWTP Maintenance Schedule 01-0702024 to 30-0602025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Priority 3: 1 work order • Priority 4: 3 work orders • Priority 5: 2 work orders • Priority 7: 16 work orders • Priority 8: 3 work orders (not yet risk assessed) <p>This demonstrates active implementation across the full priority spectrum, with appropriate emphasis on Priority 2 (licence/regulatory) activities for a wastewater treatment plant.</p> <p>City Groundwater Treatment Plant, work order extracts for two site assets show:</p> <ul style="list-style-type: none"> • Clear Water Pump No. 2 (23 work orders)²⁹⁰: <ul style="list-style-type: none"> • PM02 (Reactive): 12 work orders • PM04 (Planned): 11 work orders • Surge Vessel and Sub FL (13 work orders over 10 years)²⁹¹: <ul style="list-style-type: none"> • PM02 (Reactive): 1 work order • PM04 (Planned): 12 work orders <p>PM04 (Planned) work orders were provided for a sewer pump station²⁹², 67 activities covering grounds maintenance, air valve maintenance, and other activities from 2010-2025.</p> <p>City Bore J07 maintenance records (2021-2025) demonstrate focused priority implementation aligned with drinking water quality requirements. Work Orders Executed (231 total):</p> <ul style="list-style-type: none"> • PM02 (Reactive): 145 work orders (62.8%) • PM04 (Planned): 86 work orders (37.2%) <p>Temporal Distribution of work order types is shown below.</p>		

²⁹⁰ SVMETJG5 City CW pump #2 work orders

²⁹¹ SVMETJG6 City surge vessel and sub FL work orders for the last ten years

²⁹² 6.2f ERA RFI Sewage Spill Infrastructure Maintenance

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations					Process and policy rating	Performance rating	
			Year	Total	PM02	PM04	PM02%			
			2021	24	7	17	29.2%			
			2022	67	46	21	68.7%			
			2023	48	26	22	54.2%			
			2024	51	32	19	62.7%			
			2025	32	25	7	78.1%			
			<p>The increasing proportion of reactive work orders from 29.2% in 2021 to 78.1% in 2025 suggests a more difficult operating environment, however the number of planned maintenance activities has remained fairly constant (noting that 2025 is an incomplete year).</p> <p>Work Order Completion Status:</p> <ul style="list-style-type: none"> • Closed: 205 (88.7%) • Technically Complete: 13 (5.6%) • Released (created from a Maintenance Plan prior to the work start date): 13 (5.6%) <p>This demonstrates effective execution of prioritised maintenance.</p> <p>The evidence confirms:</p> <ul style="list-style-type: none"> • Statutory Priorities (Priority 1): RCD testing, firebreak maintenance, and other statutory requirements at Small Town WWTP. • Licence/Regulatory Priorities (Priority 2): Sampling activities, effluent management, and critical pump maintenance receive Priority 2 designation. • Business Critical Priorities (Priority 3): Safety inspections, operational data collection (ODSS), and critical shower maintenance are assigned Priority 3. • Risk-Based Priorities (4-7): Various maintenance activities are distributed across risk-based priorities. <p>Water Corporation has demonstrated implementation of its maintenance prioritisation framework across facilities, with clear evidence of statutory, regulatory, and business-critical activities receiving appropriate priority designations. The Small Town WWTP provides the strongest evidence of comprehensive framework implementation, with activities distributed across all priority levels consistent with the guideline requirements.</p> <p>These examples demonstrate that maintenance tasks for which work orders had been raised were assigned a priority, and that the assigned priority is taken into account when scheduling the work (i.e. allocating it to the available maintenance staff).</p>							

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
6.6	Maintenance costs are measured and monitored.	5	<p>Summary: Water Corporation has demonstrated that there is a detailed process to capture maintenance costs through work orders. Maintenance costs are monitored and reviewed using PowerBI dashboards, drawing on the data held in SAP.</p> <p>Process and policy: All costs, including operational and maintenance costs, are recorded in the SAP-FICO (SAP Finance and SAP Controlling) module, which is effectively Water Corporation’s general ledger, or single source of truth, for financial reporting. Irrespective of the way they are captured or to what activity they relate, all costs are ‘settled’ to FICO.</p> <p>Water Corporation measures maintenance costs through the following process:</p> <ul style="list-style-type: none"> • Create the work order with correct cost routing. Operational jobs are created in SAP (PM02/PM03/PM04/PM06/PM07/PM09). The creator sets the Functional Location (FL), Task/Work Centre, Maintenance Activity Type (MAT) and any WBS/settlement rules to ensure costs land correctly. Maximo does not create work orders. • Manage and complete in Maximo; feed to SAP for reporting. Once created, the order integrates to Maximo and is managed to COMP (completion) in Maximo; completion data then flows to SAP, which holds the reporting statuses (e.g., EXEC/REPO) used for corporate cost reporting. • Plan, schedule and assign with cost-integrity controls. Work is sequenced and assigned to qualified resources; orders that already have time or costs cannot be cancelled, preserving cost capture once activity has started. • Capture labour in real time against the work order. Field staff record time as it occurs using TRAVEL, WORK, PAUSE, INCOMPLETE, REASSIGN, COMPLETE so actual work and travel are distinguished; standing work orders are used for non-job time to protect unit-rate accuracy. • Apply the stoppage rule without losing the cost trail. Anyone may stop work for safety/asset risk/priority; the operator records work logs and photos and sets the appropriate assignment status (e.g. INCOMP/ONHOLD) to enable rescheduling while retaining captured time/costs on the order. • Complete field work and record all cost drivers. On completion, the operator records hours taken, materials used and required feedback (photos/permits etc.), synchronises the device, and—during system outages—uses Z paper dockets so the cost record can still be processed. • Close the financial window in SAP. After Maximo COMP, SAP progresses to REPO then TECO (auto after 30 days or manual): TECO stops new reservations/WBS changes but still allows late cost postings (e.g., invoices). CLSD (auto 	A	1

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>after 90 days or manual) prevents further postings, fixing the final measured cost. Maximo work orders auto-CLOSE one year after COMP.</p> <ul style="list-style-type: none"> Validate data and report. Data integrity/health checks (dashboards, Maximo–SAP reconciliation) are used to confirm that time, materials and statuses have been captured correctly for accurate maintenance cost reporting.^{293,294,295,296,297,298,299} <p>Performance: A Review of maintenance records from SAP for the Small Town WWTP (Jul 2024–Jun 2025)³⁰⁰ demonstrated the capture of costs associated with each work order. It is summarised as follows:</p> <ul style="list-style-type: none"> Coverage: 271 work orders with 100% having cost data recorded. Cost tracking categories (Budget vs Actual). Key features demonstrated: <ul style="list-style-type: none"> Comprehensive capture: Every WO holds cost data across 13 tracked fields (hours and \$). Budget vs actual: The schedule supports variance analysis at task/category level. Category detail: Separate capture for multiple labour classes, chemicals, materials and plant hire. Lifecycle traceability: Mix of REL/EXEC-REPO → TECO → CLSD statuses shows costs tracked through to SAP closeout. <p>This evidence demonstrates that Water Corporation has implemented a robust work order management system in SAP that captures detailed cost information for maintenance activities, enabling cost control, budget monitoring, and analysis of maintenance expenditure by priority and category.</p>		

²⁹³ Deliver Field Services Business Framework Lifecycle of a Work Order, Doc # 165939778, 31 Jan 2025

²⁹⁴ Deliver Field Services - Business Rule - Conduct Field Work, Doc # 161379372, 31 Jan 2024

²⁹⁵ Deliver Field Services - Business Rule - Creation of a Work Order, Doc # 163343573, 31 Jan 2024

²⁹⁶ Deliver Field Services - Business Rule - Complete Field Work, Doc # 161777337, 31 Jan 2024

²⁹⁷ Deliver Field Services - Business Rule - Conduct Field Work - Allocation of Time to a Work Order, Doc # 160295389, 31 Jan 2024

²⁹⁸ Deliver Field Services - Business Rule - Schedule Field Work guide, Doc # 159237632, 31 Jan 2024

²⁹⁹ Deliver Field Services Business Rule Manage Field Work Stoppage Event, Doc # 162186947, 31 Jan 2024

³⁰⁰ WWTP1 Small Town WWTP Maintenance Schedule 01-0702024 to 30-0602025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>There are many documents used in this review that use the costs of maintenance. As specific evidence for this criterion, details of the Operations Group Finance Review³⁰¹ have been summarised:</p> <ul style="list-style-type: none"> • A quarterly finance review is used to track Operations Group OPEX against target, with explicit coverage of corrective and preventative maintenance across all regions. The review calls out cost drivers, variance magnitudes and whether net contribution targets are still being met. • Unbudgeted/exceptional items affecting maintenance spend are itemised and quantified. • The review aggregates the above variances (stating unbudgeted impacts) and then assesses whether higher revenue and other offsets keep the Group on track—reporting that net contribution targets were exceeded (excluding ACWS), which shows maintenance costs are monitored in the context of overall operational performance. • Forward actions explicitly target the controllable cost levers that influence maintenance OPEX: optimising labour and leave, proactive management of corrective and preventative maintenance, energy use optimisation, and tight control of discretionary categories (e.g., training, travel, catering). There’s also a note to align O&M funding to improve asset health—linking cost monitoring to asset condition outcomes. <p>The Work Program – Governance Meeting³⁰² reviews work program delivery and includes a cost variation analysis for corrective maintenance tasks.</p> <ul style="list-style-type: none"> • Corrective spend tracking: <ul style="list-style-type: none"> • Monthly spend against budget. • Year-to-date analysis. • Variance reviews: <ul style="list-style-type: none"> • Ops variance reviews identify misallocations and funding corrections. • Unit rate analysis: <ul style="list-style-type: none"> • Top 25 corrective unit rates compared against budget. • After corrections, 7 unit rates below budget, 18 above budget due to: <ul style="list-style-type: none"> • Seasonal/weather-driven work (e.g., rain event monitoring). • Increased job counts (≈3,000 more than forecast). • High external supplier costs (reinstatements, traffic management, boring). 		

³⁰¹ Operations Group: Quarterly Finance Review June 2025, 29 July 2025

³⁰² GOVERNANCE MEETING MAR 2025 – Perth Metro

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Exceptional work orders. • Incorrect labour allocations (overtime rates applied during normal hours). • Impact: Highlights how cost drivers and anomalies are actively monitored and corrected. <p>These examples demonstrated that (operational and) maintenance costs are effectively captured via the work order system and are monitored.</p>		
7	Asset management information system An asset management information system is a combination of processes, data and software supporting the asset management functions.			B	2
7.1	Adequate system documentation for users and IT operators	4	<p>Summary: It was demonstrated that there is adequate documentation for both users and IT operators. It was noted during the interviews that staff were well versed in the systems they were using and documentation was easily retrieved.</p> <p>Process and Policy: Water Corporation has provided evidence for this criterion in relation to managing work orders and related operational activities. These resources are purposed to provide consistent, safe, and efficient use of enterprise systems such as Maximo and SAP, and support compliance with operational standards. SAP is still used as the core system storing asset records and Maximo is used for the execution of work orders.</p> <p>User guides provided are as follow:</p> <p>Work Execution Operator User Guide³⁰³</p> <ul style="list-style-type: none"> • Provides detailed instructions for field operators using the Work Execution application on Samsung tablets. It includes: <ul style="list-style-type: none"> • Start-of-shift checklist: Operators are guided to log into Work Execution, download their work list for offline access, and refresh system and lookup data to ensure accurate task execution. • Time recording: Operators are instructed on how to use the timer to book travel and work time, with clear steps for starting, pausing, and completing time entries. • Feedback and attachments: The guide explains how to attach before-and-after photos, complete mandatory feedback (e.g. XMTS, wastewater overflow), and use Field Maps integration to mark asset faults. • Pay claims and troubleshooting: Operators are supported with instructions for submitting pay claims and resolving common errors, including system refresh procedures and password resets. 	A	1

³⁰³ Work Execution User Guide, Doc # 145080986

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> This guide ensures that operators can perform their duties effectively, even in offline environments, and includes visual aids and process checklists to reinforce correct usage. <p><i>Deliver Field Services - Business Framework - Lifecycle of a Work Order</i>³⁰⁴</p> <ul style="list-style-type: none"> This outlines the full lifecycle of a work order, from creation to completion. It defines roles and responsibilities across various stages—planning, scheduling, execution, and closure—and links to relevant business rules and dashboards. Specific examples include: <ul style="list-style-type: none"> Work order creation: SAP PM orders are created using functional locations (FL) and assigned order types such as PM02 for corrective work or PM04 for planned maintenance. Field execution: Operators progress work orders using status transitions (e.g. TRAVEL, WORK) and record feedback directly on field devices. Completed work orders flow into SAP for reporting. Data integrity checks: The framework supports reporting through tools like the CIS Dashboard and Maximo SAP Reconciliation QRS, ensuring that work order data is accurate and auditable. This framework ensures that data captured during field operations flows correctly into SAP for financial and performance reporting. <p><i>Deliver Field Services - Business Rule - Conduct Field Work</i>³⁰⁵</p> <ul style="list-style-type: none"> This outlines expectations for conducting field work safely and reliably, and addresses: <ul style="list-style-type: none"> Safe Job Planning: Field Work Controllers must review the Safe Job Planning Pack, check the correct location, and manage any customer impact before starting work Work Execution: Staff are instructed to follow steps consistent with work instructions attached to the work order and update assignment statuses using the WEX-QRS-004 reference Support Channels: Operators are directed to contact the Operations Analytics and Support (OAS) team or local CIS/CWP for assistance. <p><i>Deliver Field Services - Business Rule - Creation of a Work Order</i>³⁰⁶</p> <ul style="list-style-type: none"> System Use: Customer work orders are created in Grange (e.g. CM01 for immediate dispatch), while operational work orders are created in SAP (e.g. PM02 for alarms, PM04 for planned maintenance) Data Requirements: Correct use of functional location, MAT codes, and WBS elements ensures accurate costing and asset tracking 		

³⁰⁴ Deliver Field Services Business Framework Lifecycle of a Work Order, Doc # 165939778, 31 Jan 2025

³⁰⁵ Deliver Field Services - Business Rule - Conduct Field Work, Doc # 161379372, 31 Jan 2024

³⁰⁶ Deliver Field Services - Business Rule - Creation of a Work Order, Doc # 163343573, 31 Jan 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Training Resources: Includes links to training videos on creating work orders, searching functional locations, and using task codes. <p><i>Deliver Field Services - Business Rule - Complete Field Work</i>³⁰⁷</p> <ul style="list-style-type: none"> • This document defines the completion process for field work: <ul style="list-style-type: none"> • Feedback Recording: Operators must upload photos (before, during, after), record materials used, complete permits, and log service interruptions • Reinstatement Triggers: If temporary reinstatement is performed, operators must notify affected customers and record details to trigger follow-up work • End-of-Shift Protocols: Staff must return unused materials, synchronise field devices, and manage outstanding assignments before time off. <p><i>Deliver Field Services - Business Rule - Conduct Field Work - Allocation of Time to a Work Order</i>³⁰⁸</p> <ul style="list-style-type: none"> • This guide ensures accurate time capture: <ul style="list-style-type: none"> • TRAVEL Time: Logged when travelling between sites, to suppliers, or returning to depot/home at day's end (but not from home to site at start of day) • WORK Time: Includes tool time, quoting, and sourcing parts for a specific job • Standing Work Orders: Used for activities like depot duties, toolbox meetings, and training under 1 hour. <p><i>Deliver Field Services - Business Rule - Schedule Field Work guide</i>³⁰⁹</p> <ul style="list-style-type: none"> • This supports planners and assigners of work orders: <ul style="list-style-type: none"> • Finalising Work Plans: Reactive work is added, and backlog is reviewed. Work orders with time/costs cannot be cancelled without approval • Sequencing Criteria: Includes fault urgency, customer expectations, geographic location, and resource capability • Assignment Confirmation: Considers callouts, fatigue, competency, and planned leave before confirming field work. 		

³⁰⁷ Deliver Field Services - Business Rule - Complete Field Work, Doc # 161777337, 31 Jan 2024

³⁰⁸ Deliver Field Services - Business Rule - Conduct Field Work - Allocation of Time to a Work Order, Doc # 160295389, 31 Jan 2024

³⁰⁹ Deliver Field Services - Business Rule - Schedule Field Work guide, Doc # 159237632, 31 Jan 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Deliver Field Services - Business Rule - Manage Field Work Stoppage Event²¹⁰</p> <ul style="list-style-type: none"> This provides clear protocols for managing field work stoppages. It empowers any site personnel to halt work when safety or asset risks are identified and provides structured steps for rescheduling or reassignment. Key examples include: <ul style="list-style-type: none"> Stop work authority: Any person at site may stop work due to safety concerns, asset risk, or priority conflicts. The guide outlines how to notify supervisors and document the stoppage with photos and work logs. Assignment status management: Stopped work is recorded as INCOMP or ONHOLD, with references to supporting QRS documentation for correct status application. Rescheduling and reassignment: Supervisors determine whether work should continue, end, or be reassigned, ensuring operational continuity and safety compliance. This rule supports operational integrity and ensures that stoppage events are documented and communicated effectively. <p>These documents collectively demonstrate that Water Corporation has implemented robust and accessible system documentation tailored to the needs of both users and IT operators. They support operational consistency, data integrity, and compliance with regulatory and safety standards.</p> <p>Performance: During the review interviews and inspections, it was evident that staff were well versed in the operation of the AMS software. All required information could be navigated to in a reasonable timeframe. All of the user guides are available through the Waterfront intranet for employees and contractors, which was demonstrated during the interviews.</p> <p>In order to ensure that these core systems are managed effectively, Water Corporation IT staff administrating SAP and Maximo are certified users.</p> <p>Water Corporation’s Digital Uplift Program is a multi-year transformation initiative aimed at modernising enterprise systems, improving asset performance, and enhancing technology governance. The training of staff and development of user information will be an important component of this program. The <i>Strategic Asset Plan³¹¹</i> includes “Uplifting people, culture, and services” as a core investment priority. It states that digital transformation will enable staff to better service the business and manage schemes more effectively. This will need to be an ongoing component of the Digital Uplift Program to ensure success.</p>		
7.2	Input controls include suitable verification and	2	<p>Summary: Water Corporation has a number of processes in place to verify and validate data, however, fragmented asset data systems and legacy information lead to potential data integrity risks. The Work Management Project has been implemented, however</p>	B	3

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
	validation of data entered into the system		<p>the Asset Data Model was rescoped as a separate project and these issues are yet to be completely resolved. Accordingly, this criterion has been rated 'B3'.</p> <p>Process and Policy:</p> <p>Water Corporation has established a suite of policies and standards that define expectations for data quality, classification, and lifecycle management. These documents collectively describe the organisation's approach to ensuring that data entered into systems is appropriately verified, validated, and managed.</p> <p>The <i>Information Management Policy</i>³¹² outlines the overarching principles for managing data as a corporate asset.</p> <p>The <i>Data Quality Standard</i>³¹³ provides more detailed requirements. It mandates that data must meet stakeholder requirements for validity, completeness, accuracy, consistency, timeliness, and uniqueness.</p> <p>The <i>Information Sensitivity Classification Standard</i>³¹⁴ sets out rules for classifying data based on sensitivity, aligned with the WA Government Information Classification Policy.</p> <p>The <i>Records Management Standard</i>³¹⁵ describes controls for managing records across their lifecycle, including creation, storage, access, and disposal.</p> <p>The <i>Artificial Intelligence & Information Management Framework</i>³¹⁶ reinforces the principles of data ownership, classification, and fitness for purpose.</p> <p>Following on from criterion 7.1 using the example of the work order lifecycle, it incorporates structured input controls and validation mechanisms at both the creation and closure stages. These controls are designed to ensure that data entered into operational systems is complete, accurate, and fit for purpose.</p> <p>The process for creating a work order is governed by <i>Deliver Field Services - Business Rule - Creation of a Work Order</i>³¹⁷. It mandates the use of correct foundational data, including:</p>		

³¹⁰ Deliver Field Services Business Rule Manage Field Work Stoppage Event, Doc # 162186947, 31 Jan 2024

³¹¹ Strategic Asset Plan 2025-26

³¹² Information Management Policy, Doc # 180154575, 5 Sep 2024

³¹³ Data Quality Standard, Doc # 136728004, 15 May 2025

³¹⁴ Information Sensitivity Classification Standard, Doc # 58538760, 16 Jan 2024

³¹⁵ Records Management Standard, Doc # 58583186, 14 Apr 2025

³¹⁶ Artificial Intelligence & Information Management Framework, Doc # 153769518, 27 Feb 2025

³¹⁷ Deliver Field Services - Business Rule - Creation of a Work Order, Doc # 163343573, 31 Jan 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Functional Location: Must be selected to the appropriate asset level. • Task Type and MAT Code: Chosen from dropdown lists to ensure consistent classification and costing. • Work Centre and Risk Type: Auto-populated or selected based on task and asset parameters. • Notifications and Comments: Used to capture job-specific details and support field execution. <p>These engineered controls, such as dropdown fields and system-generated defaults, help standardise data entry and reduce the risk of errors. While not all fields are explicitly marked as mandatory, the guidance implies that key fields must be completed for the work order to be valid. Users are also instructed to check for duplicate entries and ensure clarity in free-text fields.</p> <p>The closure process, detailed in <i>Deliver Field Services - Business Rule - Complete Field Work</i>³¹⁸, acts as a final validation checkpoint. This process ensures that the work order reflects the actual work performed and that all required data is captured and verified. It also supports downstream reporting, asset management decisions, and compliance obligations.</p> <p>Water Corporation’s work order lifecycle demonstrates a clear commitment to data integrity through structured input controls and post-entry validation. While the documentation confirms the use of dropdown fields and mandatory data elements, the extent of automated validation (e.g. error prompts or conditional logic) is not fully detailed. These engineered controls at creation and procedural checks at closure establish a solid basis for data entry and validation.</p> <p>The <i>Information Governance Policy</i>³¹⁹ sets the direction for data quality; it states:</p> <p><i>“Process Managers and Data Custodians will take all reasonable steps to ensure the quality, validity and relevance of information assets within their processes or data domains (subject areas).”</i></p> <p>Water Corporation has also established the <i>Information Management – Data Policy</i>³²⁰ this specifies the minimum requirements for data quality, which include data validity and integrity.</p> <p>Performance:</p> <p>During the interviews it was noted that there are automated validation processes between Maximo and SAP, whereby the total number of records and completeness of those records are verified. The <i>Business Framework - Lifecycle of a Work Order</i>³²¹ confirms that work orders are progressed through Maximo into SAP for final completion. It includes a detailed</p>		

³¹⁸ Deliver Field Services - Business Rule - Complete Field Work, Doc # 161777337, 31 Jan 2024

³¹⁹ PCY237 Information Governance #55603 (previously sighted)

³²⁰ S062 Information Management – Data #384094. (previously sighted)

³²¹ Deliver Field Services Business Framework Lifecycle of a Work Order, Doc # 165939778, 31 Jan 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>mapping of terminology between the two systems. This suggests that there is a structured reconciliation process between the systems, but it does not describe how completeness or total record counts are validated.</p> <p>The Coordinator Information Systems (CIS) dashboard highlights errors in work orders. These errors are resolved via regional support coordinators. This was viewed during the interviews. This demonstrates there is a process to address potential incomplete data in WOs.</p> <p>This criterion is specific to the verification and validation of data that is input into the AMS. This would appear to be maturing, however there are still data quality risks- that stem from legacy asset registration and fragmented systems rather than input validation errors. Asset ages are often inaccurate or assumed due to undocumented refurbishments, which inflates probability-of-failure estimates and risk profiles; there is a planned response to correct SAP and AMOSS with accurate age and condition information.³²²</p> <p>Core attributes are missing for some units (e.g., current replacement cost and criticality), and certain components (e.g. pump supports, soft starters, VSDs) were not modelled as official units in SAP at the time, limiting visibility and contributing to a C4 confidence rating in the quality of data for wastewater pump stations and pressure mains. In addition, undocumented refurbishments/replacements in SAP/AMOSS have impacted asset age information and has resulted in an overstated probability of failure (PoF), inflating High/Extreme risk tallies and unconstrained renewal forecasts. As a result of data quality issues, investment based on analysis using it requires it to be validated by an SME prior to approval.³²³</p> <p>Previous Recommendation R2/2018 <i>Engineer out drivers of errors</i></p> <p>The Works Management Project - Project Practical Completion Report (PPCR)³²⁴ deployed the field mobility solution Maximo Anywhere, which was integrated with ESRI (the GIS) to provide geospatial information. This statewide rollout has optimised and enhanced operational and maintenance processes, allowing field users to carry out their tasks on handheld mobile devices. The project has delivered a platform that supports improved data quality, accessibility, and feedback through a single data model. However, the back-end component, specifically the Asset Data Model, has not been delivered. The design and scoping of the Asset Data Model have been completed, but its delivery will be undertaken as a separate project with a preliminary completion date in 2028. This means that while the front-end improvements are in place, the comprehensive</p>		

³²² WWPS and SPM Asset Class Management Plan 2020-30, Doc # 96372224, 19 Apr 2020

³²³ WWPS and SPM Asset Class Management Plan 2020-30, Doc # 96372224, 19 Apr 2020

³²⁴ Project Practical Completion Report C-C00855 Work Management, Doc # 143583382, 10 Jan 2022

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>back-end integration is still pending. It is considered that until there is a single source of truth using the new Asset Data Model, this part of the recommendation is only partially complete.</p> <p><i>Provide real-time validation on entry</i> A suite of <i>Deliver Field Services - Business Rules</i> have been developed and discussed above, these indicate that data is being validated at the point of input. However, there is limited detail on the extent of the validation in the PPCR or guides. The PPCR was also unable to quantify any data quality improvements as no measures of success for the project were identified. This leaves this component also partially complete.</p> <p><i>Refine data integrity monitoring</i> The requirement to refine data integrity monitoring can now be considered closed, as a live Process Health and Data Integrity Metrics dashboard is in place. This enables tracking of key indicators such as missing planned mileage, inspections with no action, and follow-up requirements. This demonstrates that systematic monitoring of work order data quality is operational and embedded in BAU, as was viewed during the interviews.</p> <p>It was also demonstrated during the review interviews that there is a process for the update of geospatial data. Corrections can be marked up in the ESRI software and noted for change. Likewise, there is a process to confirm asset information in a WO upon closing. Changes that are requested are validated by Asset Registration and they make the required changes. Role out of the Asset Data Model will present new challenges that will need to be addressed during project delivery.</p> <p><i>Status summary:</i></p> <ul style="list-style-type: none"> • <i>Engineer out drivers of errors</i> – Partially closed (pending ADM rollout) • <i>Provide real-time validation on entry</i> – Partially closed (validation rules and metrics not evidenced) • <i>Refine data integrity monitoring</i> – Closed (integrity monitoring evident). <p>Recommendation – 05/2025</p> <p>The Asset Data Model (ADM) has not been delivered, leaving no single source of truth for asset master data. This creates ongoing risk of duplicate records, inconsistent hierarchies, and manual corrections. The gap should be closed by completing ADM implementation and integration with Maximo and ESRI, or by adopting another suitable approach to engineer out sources of error in the work order lifecycle and ensure the completeness and integrity of all asset data. This should include real-time validation of data at the point of entry. Once these initiatives are complete, their effectiveness should be validated through defined success measures.</p>		
7.3	Security access controls appear adequate, such as passwords	4	<p>Summary: Based on the documentation that is in place, and by observing the information management systems during the review interviews and site inspections, it could be seen that the systems were secure.</p>	A	1

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Process and Policy:</p> <p>Water Corporation demonstrates a mature and comprehensive approach to security access controls with the following strategies and standards:</p> <ul style="list-style-type: none"> • <i>Identity and Access Management Standard</i>³²⁵ • <i>Remote Access Using Technology Assets Standard</i>³²⁶ • <i>Security Zoning Standard</i>³²⁷ • <i>Operational Technology Security Management Strategy</i>³²⁸ • <i>Cyber Security Policy</i>³²⁹ • <i>Identity and Access Management Standard</i>³³⁰ <p>Water Corporation’s security access controls appear to be adequate. These controls are supported by comprehensive standards and regular review processes, providing confidence in the adequacy of access controls.</p> <p><u>Note:</u> details in this section are limited so as not to compromise cybersecurity.</p> <p>Performance:</p> <p>During the review interviews and site inspections, access to the systems and processes was observed and it could be seen that the systems were secure and protected by usernames and passwords.</p>		
7.4	Physical security access controls appear adequate	4	<p>Summary:</p> <p>There is a standard for the physical security of locations that contain Water Corporation data. Based on observations made at the locations inspected, it appeared that controls were adequate.</p> <p>Process and Policy:</p>	A	1

³²⁵ S545 Identity and Access Management Standard, Doc # 153942435, 1 Sep 2024

³²⁶ Remote Access Using Technology Assets Standard, Doc # 149783576, 24 Apr 2025

³²⁷ Security Zoning Standard, Doc # 155867259, 2 May 2025

³²⁸ Operational Technology Security Management Strategy, Doc # 9832921.v6, 3 Jan 2019

³²⁹ Cyber Security Policy, Doc # 138471363, 20 Jan 2025

³³⁰ Identity and Access Management Standard, Doc # 153942435, 19 Sep 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Water Corporation applies has the following controls in place to manage access control:</p> <ul style="list-style-type: none"> • <i>Access & Key Standard</i>³³¹ • <i>Control Room Personnel Access</i>³³² • <i>Operational Technology Management Strategy</i>³³³ • <i>Alarm Philosophy</i>³³⁴ • <i>SCADA & ADEMCO Alarm Severities & Corrective Action Response Standard</i>³³⁵ • web-based reporting tool (DynAMo)³³⁶ <p>In combination, this framework provides evidence that physical security access controls are adequate.</p> <p><u>Note:</u> details in this section are limited so as not to compromise security.</p> <p>Performance: Access to the data centre and Operational Technology assets are controlled. Data centres are located in a manner to reduce risk. During the inspections the Control Room was visited and it could be seen that strict access controls were in place. Also, at the treatment plants, Coastal WRRF and City GWTP, that the sites were secure and access to the operational technology was protected.</p>		
7.5	Data backup procedures appear adequate and backups are tested	4	<p>Summary: Water Corporation has a comprehensive data backup process, which appears adequate, and backups are tested.</p> <p>Process and Policy: The <i>Backup and Archiving Standard</i>³³⁷ is an organisation-wide standard that sets clear, testable backup requirements and controls. The disaster recovery plan explains how backups and recovery work in practice.³³⁸ For SCADA operations, the SCADA</p>	A	1

³³¹ S549 Access & Key Standard, Doc # 158227211, 31 Jan 2024

³³² S517 Control Room Personnel Access, Doc # 58584562, 2 Nov 2020

³³³ Operational Technology Security Management Strategy, Doc # 9832921.v6, 3 Jan 2019

³³⁴ Design Standard DS 40-10 - Alarm Management Philosophy, Version 6, Oct 2024

³³⁵ SCADA & ADEMCO Alarm Severities & Corrective Action Response Standard Operations Centre, Doc # 1202798.v10, 30 Apr 2014

³³⁶ DynAMo Alarm Reporting Tool - Access, Capability and Utilisation in WC

³³⁷ S519 Backup and Archiving Standard, Doc # 142579599, 18 Sep 2024

³³⁸ Disaster Recovery Plan - Operational Technology – MDT AutoSave, 21 Jun 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>disaster-recovery procedure defines backup prerequisites and provides step-by-step restoration, including verified backup locations, plus decision trees to restore service in the right order.³³⁹</p> <p>Based on the policy controls and the detailed, current disaster recovery procedures, Water Corporation’s backup procedures appear adequate.</p> <p><u>Note:</u> details in this section are limited so as not to compromise cybersecurity.</p> <p>Performance:</p> <p>The <i>Work Management GIS Disaster-Recovery Test Plan</i>³⁴⁰ shows that backups are tested as required by the <i>Backup and Archiving Standard</i>³⁴¹. A planned drill was undertaken in March 2025.³⁴²</p>		
7.6	Computations for licensee performance reporting are accurate	5	<p>Summary:</p> <p>On review of the documentation and a sample of the data transformation, the computations for licence performance reporting appear to be accurate. This is also backed up by the 2021/22 NPR Audit Report, which found that all the indicators had been prepared and reported in accordance with the handbook.</p> <p>Process and Policy:</p> <p>Water Corporation’s approach to managing the accuracy of performance reporting to both the ERA and the NWI NPR is based on a documented framework of procedures and controls. Reporting processes are governed by detailed work instructions and manuals, which specify the steps for data collation, validation, approval, and submission, and are designed to align with the definitions and calculation methods set out in the ERA and Bureau of Meteorology handbooks, which include:</p> <ul style="list-style-type: none"> • National Performance Report Framework: Water and wastewater service providers³⁴³ • Annual ERA Performance Reporting Work Instruction³⁴⁴ • Performance indicators and definitions handbook – water service providers³⁴⁵ • Annual ERA Performance Reporting Manual 24/25 reporting period.³⁴⁶ 	A	1

³³⁹ Disaster Recovery SCADA - Disaster Recovery Procedure UWSS - Geo SCADA Server, 26 Apr 2023

³⁴⁰ Work Management GIS - Disaster Recovery Test Plan

³⁴¹ S519 Backup and Archiving Standard, Doc # 142579599, 18 Sep 2024

³⁴² ITSCM Test Completion Report for WM GIS DR FY24-25

³⁴³ National Performance Report Framework: Water and wastewater service providers – Performance indicators and definitions handbook 2023, Version 1.2, Sep 2023

³⁴⁴ Annual ERA Performance Reporting Work Instruction, Doc # 48505167, 16 Jul 2024

³⁴⁵ Performance indicators and definitions handbook – water service providers, Doc # D290199, May 2025

³⁴⁶ Annual ERA Performance Reporting Manual 24/25 reporting period, Doc # 59034083, 18 Feb 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>For large urban centres, defined as schemes with more than 10,000 connections, performance data is reported directly to the Bureau of Meteorology (BoM) via the NPR portal, covering the full suite of national indicators as specified in the National Performance Framework. For smaller centres, those with between 1,000 and 10,000 connections, a subset of indicators is reported to the ERA, as outlined in the ERA’s annual handbook and aligned with the NPR definitions. The reporting requirements for these smaller centres are a subset of the national indicators, and from 2024/25, minor towns are included in the NPR dataset but only for the relevant indicators. The minor town data will be reported directly to the BoM as part of the NPR dataset, rather than being submitted separately to the ERA.</p> <p>Data is extracted from core corporate systems such as SCADA, SAP BW, and the Operational Data Storage System (ODSS), with initial validation performed by business units and data coordinators, followed by further review and summarisation by central teams. Key controls in the process include:</p> <ul style="list-style-type: none"> • Use of standardised templates and checklists for data collection and reporting • Requirement for explanatory commentary on significant year-on-year variances (typically >10%) • Multi-level review and sign-off, including General Manager and Executive Team approval prior to submission. <p>Performance:</p> <p>Performance data is subject to regular independent audit, with the most recent long-form audit being undertaken of the major towns data for the 2021/22 financial year. The audit methodology includes sampling, cross-checking, and formal grading of each indicator’s reliability and accuracy, with findings used to inform process improvements. Most indicators received grades of A2 or B2, indicating that data was based on sound records and procedures, with accuracy within ±10%. Where inconsistencies were identified, these were most often attributed to data extraction issues, timing differences, or minor discrepancies in the classification of properties or staged developments. The audit required Water Corporation to review and, where necessary, correct data entries, such as adjusting for duplicated records, aligning property boundaries, or clarifying the treatment of staged developments. In all cases, the actions taken were documented, and the audit concluded that the remaining discrepancies were not material to the overall accuracy of the reported data.³⁴⁷</p> <p>Procedures and templates are reviewed annually to reflect changes in regulatory requirements or indicator definitions. This approach is intended to provide reasonable assurance regarding the accuracy and reliability of Water Corporation’s reporting to both the ERA and NWI NPR.³⁴⁸</p>		

³⁴⁷ National Performance Report (NPR) - Long Form Audit Report 2021/2022

³⁴⁸ Annual ERA Performance Reporting Manual 24/25 reporting period, Doc # 59034083, 18 Feb 2023.

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
7.7	Management reports appear adequate for the licensee to monitor licence obligations	5	<p>Summary: Water Corporation appears to have adequate mechanisms to monitor licence obligations. Although there is a trend to an increase in non-compliances with obligations, Water Corporation continues to identify and self-report non-compliances. This was supported by the 2024 Operational Audit.</p> <p>Process and Policy: ERA has developed the <i>Water Compliance Reporting Manual</i>, which provides licensees with:</p> <ul style="list-style-type: none"> • A consolidated list of the licence obligations relevant to all licensees • Categorisation of licence conditions to assist with reporting obligations • A self-assessment framework for licensees to facilitate compliance with licence conditions and report non-compliances to the ERA. • The format and timing of the reports that licensees must provide to the ERA. <p>Water Corporation has a <i>Corporate Compliance Breach Reporting Framework</i>³⁴⁹. The breach reporting process is part of the Corporate Compliance Framework. Staff are required to identify reportable breaches, report them through line management, and record them in the Corporate Breach Register. The Risk and Assurance team monitors these reports and ensures appropriate actions are taken. Details are reported to the Executive and Audit & Review Committee (A&RC) (a sub-committee of the Board) four times per year.</p> <p>Water Corporation also uses a web-based tool to monitor licence obligations, as well as other internal and external measures and ensure that internal measures align with corporate objectives. The Business Performance Reporting (BPR) system has numerous reports and reporting packs, which aim to streamline the reporting process. Administration of the BPR system is detailed in the <i>BPR System Administration Manual</i>.³⁵⁰ This system draws data from across the organisation to develop the reports. Finance is the custodian of the system and there are various data custodians across the business that need to update data across the business.</p> <p>The BPR Board/Executive Reporting Pack has a documented approval process³⁵¹ to ensure that the Executive Committee supports any changes to reporting.</p>	A	1

³⁴⁹ S332 Corporate Compliance Breach Reporting Framework, Doc # 845435, 17 Jun 24

³⁵⁰ System Administration Manual - Business Performance Reporting (BPR), Doc # 373140-v5, 7 Mar 2006

³⁵¹ Approval Process for BPR Board/Executive KPI Reporting #1744243 (previously sighted)

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Performance:</p> <p>A Sample BPR report was provided³⁵²; it shows that KPIs such as:</p> <ul style="list-style-type: none"> • DWER compliance reporting on time • Water source compliance breaches issued by the regulator • Compliance of water quality monitoring <p>This report was specific for the Head of Asset Strategy; reports are specific to the owner of the KPI.</p> <p>A sample of the quarterly reporting to the A&RC³⁵³ contained licence issues, such as breaches of the Corporation’s <i>Family Violence Policy</i>. A sample of the <i>Annual Compliance Report</i> was also provided as evidence, this report details the obligations that Water Corporation did not comply with during the reporting period.³⁵⁴</p> <p>The <i>2024 Operational Audit Report</i>³⁵⁵ was provided to demonstrate compliance with licence performance standards. The report stated:</p> <p><i>“The Water Corporation maintains a strong positive and responsive culture of compliance, including timely breach remediation. Specifically, the Water Corporation has maintained the following in relation to its internal control procedures, structure and environment, compliance culture and information systems, relevant to the WL32 obligations subject to the Audit.”</i></p> <p>There were some non-compliances with licence obligations identified in the audit, however the vast majority of these were self-reported by Water Corporation.</p> <p>Compliance with the licence is reported annually to the ERA; the following reports were provided:</p> <ul style="list-style-type: none"> • 2021-22 Annual ERA Compliance Report³⁵⁶ • 2022-23 Annual ERA Compliance Report³⁵⁷ • 2023-24 Annual ERA Compliance Report.³⁵⁸ 		

³⁵² BPR - Head of Asset Strategy Pack - Viewing Performance Scorecard

³⁵³ Breach Reporting Audit & Risk Committee, Doc # 190489549

³⁵⁴ 2021-22 Annual ERA Compliance Report (23 Aug 2022); 2023-24 Annual ERA Compliance Report (29 Aug 2024)

³⁵⁵ Operational Audit Report - Water Corporation Water Services Licence (WL32), 19 Nov 2024

³⁵⁶ Compliance Report – 1 July 2021 to June 2022, 23 Aug 2022

³⁵⁷ Compliance Report – 1 July 2022 to June 2023, 31 Aug 2023

³⁵⁸ Compliance Report – 1 July 2023 to June 2024, 29 Aug 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>As noted above, a number of licence non-compliances were identified by Water Corporation; the number of distinct obligations reported as breached in the review period are as follows:</p> <ul style="list-style-type: none"> • 2021-22 – 8 • 2022-23 – 17 • 2023-24 – 24. <p>This appears to be trending in the wrong direction, with some licence clauses being repeatedly breached:</p> <ul style="list-style-type: none"> • Failure to Obtain Meter Readings for All Properties (Clause 98A) • Failure to Provide 48 Hours’ Notice to Road Owners Before Works (Section 141(1)) • Notification Card Not Detailing Employee’s Full Name/Title (Section 175(5)) • Ombudsman Referral Notice Not Provided in All Complaints (Clause 149A) • Bill Review Not Completed Within 15 Business Days (Clause 117) • Billing Issues: Not Issuing Bills to Correct Address or at Required Frequency • Family Violence Policy/Notification Issues. <p>Based on the evidence, management reports are broadly adequate for monitoring licence obligations.</p>		
7.8	Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation	4	<p>Summary: Water Corporation has implemented a suite of measures to protect asset management data from unauthorised access or theft by persons outside the organisation. These measures are multi-layered and address physical, technical, and procedural risks, in line with industry best practice and regulatory requirements and are considered to be adequate.</p> <p>Process and Policy: Physical access to critical infrastructure and technology assets is controlled through established security policies and standards, with regular risk assessments for offices, depots, treatment plants, and other sites^{359 360}. Network segregation and segmentation are enforced through the <i>Security Zoning Standard</i>³⁶¹.</p>	A	1

³⁵⁹ Board Submission: Security of Critical Infrastructure Act 2018 Critical Infrastructure Risk Management Plan, 24 Apr 2024

³⁶⁰ Board Submission: Security of Critical Infrastructure Act 2018 Critical Infrastructure Risk Management Plan, 16 May 2025

³⁶¹ S560 Security Zoning Standard, Doc # 155867259, 2 May 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Access to asset management systems is governed by the <i>Identity and Access Management Standard</i>³⁶², which requires unique identification and authentication for all users and service accounts, including contractors and third parties. Remote access is managed through a dedicated standard that requires the use of only approved methods³⁶³.</p> <p>Cyber threat management is also controlled through specific standards³⁶⁴ and potential vulnerabilities are assessed³⁶⁵. The overarching Cyber Security Policy sets out the commitment to protecting the confidentiality, integrity, and availability of all technology assets, including asset management data. All staff, contractors, and third parties are required to comply with this policy and supporting standards. Regular cyber security awareness training is mandatory for all personnel, with onboarding, annual, and role-specific modules, as well as regular phishing simulations and awareness campaigns.^{366 367}</p> <p><u>Note:</u> details in this section are limited so as not to compromise cybersecurity.</p> <p>Performance: At the governance level, the Board annually attests that the <i>Critical Infrastructure Risk Management Plan</i> (CIRMP) is up to date and that there have been no significant cyber breaches. The CIRMP and supporting controls are aligned with the <i>Security of Critical Infrastructure Act 2018 (Cth)</i> and are subject to independent third-party review and continuous improvement. ^{368 369}</p>		
8	Risk management Risk management involves the identification of risks and their management within an acceptable level of risk.			A	2
8.1	Risk management policies and procedures exist and are applied to minimise internal and external risks	2	<p>Summary: Water Corporation’s risk management policies and procedures are comprehensive, Board-approved, and aligned with international standards. They are actively applied and regularly reviewed to minimise internal and external risks, with clear governance, accountability, and reporting structures in place at all levels of the organisation. It is considered that the response to corporate risk for the failure to manage asset reliability, is adequately escalated through the risk management process. The</p>	A	2

³⁶² S545 Identity and Access Management Standard, Doc # 153942435, 19 Sep 2024

³⁶³ S037 Remote Access Using Technology Assets Standard, Doc # 149783576, 24 Apr 2025

³⁶⁴ S559 Cyber Security Threat Management Standard, Doc # 144366525, 13 Mar 2025

³⁶⁵ S129 Vulnerability Management, Doc # 143666751, 6 Feb 2025

³⁶⁶ PCY400 Cyber Security Policy, Doc # 138471363, 20 Jan 2025

³⁶⁷ S120 Cyber Awareness Standard, Doc # 144655685, 26 May 2025

³⁶⁸ Board Submission: Security of Critical Infrastructure Act 2018 Critical Infrastructure Risk Management Plan, 24 Apr 2024

³⁶⁹ Board Submission: Security of Critical Infrastructure Act 2018 Critical Infrastructure Risk Management Plan, 16 May 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Board has a Cautious risk appetite in regard to this, however this risk is set to rise to Extreme over the 5 and 10 year risk horizons. It is for this reason that performance against this criterion has been graded '2'.</p> <p>Process and Policy:</p> <p>Water Corporation has established a risk management framework which aims to minimise both internal and external risks across all levels of the organisation. The Board-approved <i>Corporate Risk Management Policy</i>³⁷⁰ sets out the commitment to a whole-of-organisation approach, aligned with ISO 31000:2018, and requires that risk management is embedded in all planning, operational and recovery activities. The policy mandates a risk-based approach, referencing the Corporate Risk Assessment Criteria³⁷¹, and requires that all activities are prioritised and managed in line with relevant standards, legislation and regulatory requirements. The policy applies to all employees, contractors and partners, and is supported by a suite of standards and guidelines covering incident, emergency, crisis and business continuity management.</p> <p>The <i>Board Risk Appetite Statement</i>³⁷² provides guidance on the level of risk the Board is willing to accept across a range of strategic and operational themes and is reviewed and endorsed by the Audit & Risk Committee and Board. It provides a directional threshold for risk acceptance (e.g., "Cautious"), but the actual decision to accept a risk, especially if it is assessed as "High" requires professional judgement, and appropriate governance oversight. The appetite statement guides, but does not dictate, risk acceptance. Executive Process Custodians (usually General Managers) and Process Custodians are fully accountable for identifying and managing risks for their process, within the parameters of the Board-approved Risk Appetite Statement. The Board, via the Audit & Risk Committee, receives regular risk reports and is responsible for oversight of risk acceptance at the highest level.³⁷³</p> <p>Risk management processes are supported by the <i>Corporate Risk Reporting Procedure</i>³⁷⁴, which defines the roles and accountabilities for risk identification, assessment, reporting and review. Corporate risks are recorded in the Corporate Risk Information System (CRIS), which serves as the primary repository for corporate, business unit and project risk assessments. All employees have read-only access to risk information, while editing rights are controlled through an approval process. The CRIS system enables regular updates, real-time dashboards, and structured reporting to the Audit & Risk Committee and</p>		

³⁷⁰ PCY135 Corporate Risk Management, Doc # 58548888, 27 Feb 2024

³⁷¹ Corporate Risk Assessment Criteria, Doc # 58553636, 11 Feb 2025

³⁷² Board Paper: Board Risk Appetite Statement, 16 May 2025; Board Risk Appetite Statement for Board Approval

³⁷³ PCY135 Corporate Risk Management, Doc # 58548888, 27 Feb 2024

³⁷⁴ Corporate Risk Reporting Procedure, Doc # 48637587, 11 Jul 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Board. The procedure mandates regular (cycle-based) and annual updates to risk summaries, with clear accountabilities for risk owners, coordinators and the Risk & Assurance Business Unit (RABU).³⁷⁵</p> <p>At the asset level, the <i>Asset Risk Assessment and ORA Manual</i>³⁷⁶ describes the ORA methodology, which provides consistent and objective screening-level risk assessments for all assets. The ORA process is aligned with the CRAC and is used to support investment prioritisation and asset management decisions. Each risk in the ORA risk library is defined in terms of a risk event, risk pathway and asset class, together with standard criteria for assessing consequence and likelihood. Each pathway links an asset class and a failure mode to the risk event. Each of the defined ORAs are assigned consequence and likelihood ratings from the CRAC using metrics in the AMS which have been aligned to the various levels. For instance, a bore failure may use flow rate for the consequence of failure and condition as the likelihood of failure. Risk for each asset is recalculated quarterly, and the quality of the risk rating is also assessed (i.e. how dependable is the risk rating, based on the quality of the data).</p> <p>The framework also includes a dedicated <i>Disruption Risk Management Standard</i>³⁷⁷, which integrates crisis management, incident management, emergency management and business continuity management. This standard ensures that the organisation is prepared to respond to both sudden shocks and gradual threats, and that lessons from disruption events are incorporated into ongoing risk management and planning.</p> <p>Performance: The following evidence was reviewed to determine implementation of the risk assessment framework:</p> <ul style="list-style-type: none"> • Risk Profile City GWTP ADReps • Risk Profile Major Dam • Risk Profile Small Town Drainage Bridge • Risk Profile Small Town Service Tank • Risk Profile Small Town WWTP • Risk Profile Coastal WRRF • WWPS and SPM Asset Class Management Plan 2020-30³⁷⁸ • Line of Sight Framework.³⁷⁹ 		

³⁷⁵ Corporate Risk Information System – Quick Reference Sheet, Doc # CRIS-QRS-001, 4 Oct 2023

³⁷⁶ Objective Risk Assessment Manual, 27 Jun 2023

³⁷⁷ S542 Disruption Risk Management, Doc # 117556799, 13 Feb 2024

³⁷⁸ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan, Doc # 96372224, 19 Apr 2020

³⁷⁹ Line of Sight Framework, Version 1.6, 12 Aug 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Based on a review of these it seems that the ORA method, definitions and risk library are defined and aligned to the CRAC. Risk pathways (asset class + failure mode → risk event) are explicit, with data confidence consideration. The Asset Class Management Plan references and uses specific ORA events to drive planning.</p> <p>Risk Profiles were provided for the sites inspected, these show:</p> <ul style="list-style-type: none"> • AReg entries with individual CRAC ratings: <ul style="list-style-type: none"> • Coastal WRRF: multiple High/Extreme items across EPS, SDOOL, PSTs, digesters, and ERF • Major Dam: High risk on dosing/sampling spears • Small Town Drainage Bridge: High, structural distress and load posting • City GWTP: multiple Moderate–High items across clarifier reliance, chemical dosing duty/standby gaps, instrumentation, and road/drainage issues. • Small Town Service Tank and Small Town WWTP show no AReps. • Summary of relevant ORAs, including: <ul style="list-style-type: none"> • Risk level • Rank • Assessment period • Data quality • Risk exposure is visualised on a risk matrix heat map; these appear to be a combination of ORA and ARep risks. <p>The Asset Class Management Plan explicitly flags incomplete component/age data (SAP/AMOSS not updated after refurbishments), missing CRC/criticality for segments, and sets C4 overall data quality, indicating that the risk rating MUST not be used without further validation. The Asset Class Management Plan highlights that High/Extreme risk counts are inflated by assumed ages and lack of condition data, reinforcing that data quality is a first-order constraint on PoF and hence ORA outcomes.</p> <p>The Asset Class Management Plan maintenance section reports that the Metro Preventive Maintenance to Corrective Maintenance ratio is approximately 1:1 over 5 years; Regions approximately 3:2, with Single Cycle Plans being the largest cost driver, which are primarily reactive. It also notes ‘Investment in preventive inspections and pump testing seems low compared to corrective maintenance’. It would seem that the scheduling of high-risk activities and the competition of planned maintenance with Single Cycle Plans are contributing to the maintenance debt, which over time increases the PoF and the risk of the asset base. This is a self-reinforcing loop, reactive work reduces resources for planned maintenance, growing maintenance debt and increasing PoF, feeding back into more reactive work. Short-term risk management is creating a long-</p>		

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>term risk to the corporate objectives of Reliable Services and Meaningful Relationships with Customers and Communities (based on value for money).</p> <p>The Coastal WRRF ADReps exhibit evidence of deferred planned maintenance, repeatedly reference reactive conditions and expired/noncompliant inspections (e.g., crane 10year inspection not done; seized valves; air valves & PTs lacking maintenance plans; repeated failures of blowers/pumps with long repairs; lack of critical spares).</p> <p>The <i>Corporate Risk Report</i>³⁸⁰ provides an annual summary of the organisation’s residual risk profile, including material risks, risk velocity, consequence drivers, and alignment to strategic objectives. In relation to the issues mentioned above, the following is mainly identified in risk ‘12. <i>Failure to manage asset reliability</i>’. This shows that the residual risk will increase over the 5 and 10 year risk horizons from ‘High’ to ‘Extreme’. The Board Risk Appetite states that it is ‘<i>Cautious</i>’ regarding this risk and ‘<i>accept minimal level of risk when performing this activity</i>’.</p> <p>Asset deterioration, reduced asset performance and funding constraints are all listed as causal factors to the Corporate Risk: Failure to manage asset reliability. These causal factors are addressed by critical controls including:</p> <ul style="list-style-type: none"> • Asset deficiency register • Scheme performance dashboard • Operational and maintenance programs <p>Risk is being managed within current resource constraints through targeted interventions that include the risk treatment and actions noted. Residual risk remains due to funding gaps, which is highlighted in the key message section of the Summary, and is being monitored and escalated as part of ongoing risk governance.</p>		
8.2	Risks are documented in a risk register and treatment plans are implemented and monitored	2	<p>Summary: The risk assessment process seems to be robust. Risk is regularly reviewed and risks are reported to the CEO and the Board for approval. The ADReg is effectively the risk register for assets</p> <p>Process and Policy: CRIS is Water Corporation’s central, Board-mandated system for documenting, managing, and reporting risks at the corporate, business unit, and project levels. All corporate risk information, including causes, controls, treatments, and actions, is maintained in CRIS, which serves as the “source of truth” for risk reporting to the Board and Audit & Risk Committee.^{381,382}</p>	A	2

³⁸⁰ 2024 Corporate Risk Report, Nov 2024

³⁸¹ Corporate Risk Reporting Procedure, Doc # 48637587, 11 Jul 2024

³⁸² Corporate Risk Information System – Quick Reference Sheet, Doc # CRIS-QRS-001, 4 Oct 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Access to CRIS is controlled: all employees have read-only access, while editing rights are granted through a licence approval process. CRIS supports navigation by business area, project, or risk type, and provides dashboards and reporting tools for real-time oversight.</p> <p>The Corporate Risk Reporting Procedure mandates regular (cycle-based and annual) updates to risk registers and treatment actions in CRIS. These updates are used to compile the Corporate Risk Report and ensure that risk information is current, accurate, and aligned with business and Board requirements, including the status of risk treatments and actions.</p> <p>The Corporate Risk Reporting (CRR) process includes three update cycles per year: two interim updates and one comprehensive annual update. Each cycle involves review and challenge by the Risk & Assurance Business Unit (RABU), engagement with risk owners and coordinators, and final approval by the CEO and Board.</p> <p>The CRR also includes analysis of business unit risks and their linkages to corporate risks, ensuring that risks are managed consistently across the organisation and that unlinked high/extreme risks are identified and addressed.</p> <p>The Objective Risk Assessment (ORA) methodology provides³⁸³ a consistent, evidence-based approach to screening and assessing risks across the asset portfolio. The ORA risk register, managed in Power BI, documents risk levels for individual assets, supporting investment prioritisation and ongoing risk monitoring.</p> <p>Asset class management plans use ORA outputs to identify and prioritise risk treatments, with actions and improvement initiatives tracked and reviewed as part of the asset management cycle.³⁸⁴</p> <p>The ADReg serves as a centralised risk register for infrastructure assets by systematically capturing and managing issues, risks, and opportunities that may impact Asset Management Objectives (AMO). Each ADRep entered into the ADReg includes detailed information on asset location, deficiency description, risk level, criticality, likelihood of failure, and potential corrective actions. The register facilitates prioritisation and escalation of risks through structured engagements, enabling teams to focus resources on the highest priority deficiencies. It also supports ongoing risk monitoring, investment decision-making, and closure tracking, thereby aligning operational risk management with corporate objectives.³⁸⁵</p> <p>Performance:</p> <p>During the audit interviews, the objective risk assessment process and Power BI Dashboard was reviewed. The risk profile for portfolios, risk pathways and the metrics that are used to calculate risk were sighted.</p>		

³⁸³ Objective Risk Assessment Manual, 27 Jun 2023

³⁸⁴ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan, Doc # 96372224, 19 Apr 2020

³⁸⁵ Manage Asset Deficiency Guideline, Doc # 58582506, 1 May 25

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>A quarterly review of extreme risks is detailed in the Objective Risk Assessment (ORA) methodology³⁸⁶. Each quarter, the systemised ORA risk register is updated using automated data extraction and transformation processes. Asset owners are expected to review these updated risk levels and identify any new or emerging risks. Where extreme risks are identified, asset owners are required to propose new or revised risk treatments. This ensures that the ORA remains current and actionable, supporting investment prioritisation and risk mitigation planning.</p> <p>Although the <i>WWPS and SPM Asset Class Management Plan 2020-30</i>³⁸⁷ (for example) does not explicitly state that the ADReg is increasing, the plan's renewal modelling indicates a growing backlog of unresolved risks that would likely be captured in the ADReg. The constrained funding scenario, which is the selected implementation path, leaves a substantial portion of risk unaddressed due to a considerable annual funding shortfall, compared to the unconstrained need. The increasing renewal demand, coupled with constrained funding, implies that the ADReg will continue to grow as new risks emerge faster than they can be treated.</p>		
8.3	Probability and consequences of asset failure are regularly assessed	2	<p>Summary:</p> <p>The ORA process is used to determine the risk associated with assets using probably and consequence. The risk of assets is updated quarterly and is visible in a Power BI dashboard.</p> <p>Process and Policy:</p> <p>Water Corporation regularly assesses the probability and consequences of asset failure through its structured ORA methodology and the implementation of risk-based Asset Class Management Plans.</p> <p>The ORA process³⁸⁸ provides a consistent, evidence-based framework for screening risks across the asset portfolio. Each ORA is defined by:</p> <ul style="list-style-type: none"> • A risk event and pathway linked to asset classes. • Standardised criteria for consequence and likelihood, aligned to the CRAC. • A systemised risk register that is updated quarterly, with risk levels calculated for each asset based on current data inputs. <p>This process ensures that both the PoF and the consequence of failure (CoF) are objectively assessed and recorded. The <i>Wastewater Pump Station and Sewer Pressure Main ACMP</i>³⁸⁹ states they are calculated as follows:</p>	A	1

³⁸⁶ Objective Risk Assessment Manual, 27 Jun 2023

³⁸⁷ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan, Doc # 96372224, 19 Apr 2020

³⁸⁸ Objective Risk Assessment Manual, 27 Jun 2023

³⁸⁹ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan, Doc # 96372224, 19 Apr 2020

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> PoF: <ul style="list-style-type: none"> Sewer pressure mains - derived from material and age-based deterioration curves and historical failure rates. Wastewater pump stations - Wastewater pump station Overflow Risk Model (WORM) and different aged-based deterioration curves for the civil, mechanical and electrical units. CoF: <ul style="list-style-type: none"> Sewer Pressure Mains - environmental and community impacts Wastewater pump stations - environmental impacts <p>Performance:</p> <p>The ORAs are automatically updated every quarter. Data from source systems is extracted and transformed to calculate risk levels for each asset, and these updates are reflected in the ORA risk register in Power BI. During the review interviews, the ORA process and Power BI Dashboard were reviewed. The risk profile for portfolios, risk pathways and the metrics that are used to calculate risk were sighted.</p> <p>Asset Class Management Plan³⁹⁰ operationalise the ORA outputs by:</p> <ul style="list-style-type: none"> Ranking all of the asset class components by CRAC value, calculated using consequence (CoF) and likelihood (PoF). Identifying those assets with an almost certain probability of failure. Detailing the risk, including a significant portion in the High and Extreme risk categories. <p>Asset Class Management Plan use the PoF and asset risk to prioritise:</p> <ul style="list-style-type: none"> Maintenance, planned maintenance on High and Extreme risk units is prioritised. Renewals, interventions are modelled on risk-based decision criteria (i.e. modified ORA64 & 66). Business outcomes focus on the reduction of risk including reducing Extreme risk assets and addressing assets with an almost certain PoF. <p>As discussed in 8.1 this process is hampered by the quality of data, asset age and condition.</p>		
9	Contingency planning Contingency plans document the steps to deal with the unexpected failure of an asset.			A	2
9.1	Contingency plans are documented, understood and	2	<p>Summary:</p> <p>Water Corporation has a portfolio of Operational Contingency Plans (OCP) including 'Custom' plans that are applicable to unique and/or more complex facilities and 'Standard' plans that are applicable to specific asset classes. The requirement for</p>	A	2

³⁹⁰ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan, Doc # 96372224, 19 Apr 2020

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
	tested to confirm their operability and to cover higher risks		<p>and type of OCP for a facility is dependent upon the assessed criticality (level of risk of failure). To ensure their effectiveness, periodic testing of OCPs is required; this may be undertaken as 'Functional' (practical) and/or 'Discussion' (desktop) exercises, depending on the criticality rating of the facility. Plans are updated to reflect any improvements identified through the testing process. It was observed that the quality of some information OCPs, especially in regional areas, need some improvement, which was why this criterion was graded '2'.</p> <p>Process and Policy:</p> <p>The Water Corporation's contingency planning process is governed by a suite of Board-approved policies and standards, the <i>Risk Management Policy</i>³⁹¹ and <i>Operational Contingency Planning Standard</i>³⁹². These documents establish a risk-based, whole-of-organisation approach, developed to be consistent with ISO 31000:2018 and ISO 55001.</p> <p>All critical facilities (rated 3–5 for criticality) and complex/unique assets must have an Operational Contingency Plan (OCP) that is routinely tested. OCPs are developed, reviewed, and approved through a structured process involving Asset Managers, Regional Managers, and subject matter experts. Plans are stored in the corporate document management system (CorDocs) and hard copies are kept on site for immediate access.</p> <p>The process for developing and maintaining OCPs includes:</p> <ul style="list-style-type: none"> • Critical Facilities Assessment (CFA): Determines which assets require advanced OCPs based on their criticality and complexity. • Business Impact Analysis (BIA): Identifies critical processes, plausible failure modes, consequences, outage durations, and mitigations. • Plan Documentation: OCPs are concise, practical, and tailored to the facility, covering preparedness, response, and recovery actions. They include clear roles, escalation criteria, resource requirements, and communication protocols. <p>Types of OCPs:</p> <ul style="list-style-type: none"> • Advanced OCP: For critical, unique, or complex facilities—requires BIA and regular exercises. • Intermediate OCP: For facilities with some complexity—exercised at region's discretion. • Basic OCP: For standard asset classes—generic response to typical failure modes. 		

³⁹¹ PCY135 Corporate Risk Management, Doc # 58548888, 27 Feb 2024

³⁹² S498 Operational Contingency Planning, Doc # 58581863, 30 Sep 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Communication and understanding:</p> <ul style="list-style-type: none"> OCPs are communicated to all relevant staff through training, site inductions, and operational briefings. Hardcopies are maintained on site, and digital versions are accessible via CorDocs. The <i>Emergency preparedness and response procedure</i>³⁹³ ensures that all workers understand their roles in an emergency, with regular training and drills mandated for key roles (e.g., wardens, first aiders). <p>All advanced OCPs are exercised at least every three years (annually for catastrophic criticality), as documented in the <i>Advanced Operational Contingency Plans Program</i>³⁹⁴. Exercises include both discussion-based and functional (field simulation) formats. Lessons learned from exercises and real incidents are incorporated into OCP updates. All actions and improvements are documented and tracked, ensuring plans remain current and effective.</p> <p>OCPs are to be reviewed every three years or after significant events, modifications, or exercises. The process is subject to internal and external audit (e.g., ERA reviews), ensuring compliance with regulatory and best practice standards.</p> <p>Performance:</p> <p>Water Corporation has implemented its contingency planning process in line with documented standards and policies.</p> <p>The OCPs for Coastal WRRF³⁹⁵ were provided and the following was noted:</p> <ul style="list-style-type: none"> The plan covers all major failure modes (structural, mechanical, electrical, power, process, environmental) for each process area (preliminary, primary, secondary, sludge, odour, site services). For each failure mode, the OCP specifies: <ul style="list-style-type: none"> Activation criteria Immediate actions Escalation and communication protocols Recovery and workaround options. Debrief and continuous improvement: After any activation, a structured debrief, root cause analysis, and corrective action process is required, with updates to the OCP as needed. The OCP references supporting documents and is aligned with the <i>Operational Contingency Planning Standard</i>. 		

³⁹³ Emergency preparedness and response procedure, Doc # 58727445, 29 Apr 2024

³⁹⁴ Advanced Operational Contingency Plans E&T Program FY24_25

³⁹⁵ Operational Contingency Plan: Coastal WRRF, Doc # 58586319, 26 Jun 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>As noted above, only critical facilities have specific OCPs. The standard wastewater pump station OCP³⁹⁶ was provided as evidence of a basic OCP; the following was noted:</p> <ul style="list-style-type: none"> • The Basic OCP provides a standardised, risk-based decision tree for common failure modes. • For each failure mode, the OCP guides operators through a series of escalating options. • Each pump station entry includes asset-specific data, and links to custom OCPs for critical sites. • The OCP provides a link to SAP and AMOSS for asset details, and references as-constructed drawings and spares lists. • Continuous review: Notes and actions are included to ensure new stations and upgrades are captured, and that OCPs are reviewed as part of asset handover and project close-out. • Custom OCPs: Critical sites have custom OCPs linked from the basic plan, ensuring higher-risk assets have tailored contingency arrangements. <p>Although this is a basic plan, as can be seen above it does have key information needed for sewage pump stations in the event of an incident. It was noted that the quality of the information was a lot less complete for regional areas in relation to power requirements for backup generators, overflow location etc. It was discussed during the interviews that Water Corporation is planning to review backup power requirements and improve contingency measures as this is a key risk in many areas due to prolonged power outages.</p> <p>During the interviews a Time to Overflow and Inflow Summary Dashboard was observed. This provides average inflow and time to overflow diurnal curves for each pump station based on real-time data.³⁹⁷ There was also a dashboard that shows the number of facilities that backup generator information is held in the AMS, 1004 out of 3712.³⁹⁸</p> <p>Details of a critical contingency initiative designed to ensure the continued transfer of sewage flows during catastrophic pump station failure were reviewed. This demonstrates that Water Corporation is building contingencies into the sewage collection system.³⁹⁹</p>		

³⁹⁶ Wastewater Pump Stations- Basic OCP, Doc # 58585221, 26 May 2023

³⁹⁷ Time to Overflow PowerBI Image

³⁹⁸ Backup Power PowerBI Image

³⁹⁹ PRFS - s2003571 - Large SPS - Bypass Pipework Installation - Meeting Notes 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>As an example of the annual testing of the OCPs, in October 2024 an exercise⁴⁰⁰ tested the OCP under a realistic scenario, involving field teams, operational managers, and external observers. The exercise identified strengths and areas for improvement, with actions tracked in Sentinel and updates made to the OCP.</p> <p>There was a sewage spill in in the review period due to a burst pressure main; this same incident resulted in a secondary overflow due to a subsequent pressure main burst, as a result of the first. It should be noted that at the time of writing this the report the incident investigation is not completed. However, we must consider if contingency planning played a part in this incident as best we can.</p> <p>The infrastructure is question was not considered complex or unique, therefore the basic OCP was the plan in place at the time.⁴⁰¹ Based on the evidence provided and interviews it can be seen that the OCP⁴⁰² was followed, but due to a number of unknowns was not as effective as expected and resulted in the secondary pressure main burst.</p> <p>One of the contributing factors was the deferral of inspections and condition assessment of this section of main (as discussed in respect of criterion 6.2. During an incident, if the condition and operational status of the assets was known, it may have reduced the severity of the incident.⁴⁰³</p>		
10	Financial planning Financial brings together the financial elements of the service delivery to ensure its financial viability over the long term.			B	2
10.1	The financial plan states the financial objectives and identifies strategies and actions to achieve those	4	<p>Summary:</p> <p>During the review period, Water Corporation prepared annual Budget submissions, which were submitted to the Western Australia Treasury, together with a <i>Strategic Asset Plan</i>. Both support the <i>Statement of Corporate Intent</i> and <i>Strategic Development Plan</i>, which together outline Water Corporation’s financial objectives and identify actions to achieve strategic objectives.</p> <p>It is noted, however, that the financial plan is prepared to be consistent with funding levels agreed with Government, and does not necessarily provide for the full and effective implementation of the strategies identified to achieve its asset management objectives. The process in-turn has been graded ‘B’. As a consequence, the financial plan is constrained and unable to achieve the financial objectives and identified strategies and performance has been graded ‘3’.</p>	B	3

⁴⁰⁰ OCP Testing Exercise (Field Simulation) – OCP Exercise Plan, Doc # 180211886, 8 Oct 2024

⁴⁰¹ Critical Facilities Register, Doc # 15506096, Mar 2020 (Previously Sighted)

⁴⁰² Wastewater Pump Stations- Basic OCP, Doc # 58585221, 26 May 2023

⁴⁰³ Sewer main and pump station inspection and maintenance reports

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Process and Policy:</p> <p>The <i>Strategic Development Plan</i>⁴⁰⁴ and <i>Statement of Corporate Intent</i>^{405,406} are principal documents that outline Water Corporation performance objectives; these objectives provide the basis for its annual financial planning.</p> <p>The <i>Strategic Development Plan 2021-22 to 2025-26</i> "... represents an agreement between the Board and Minister for Water on Water Corporation's expected level of performance for the period 1 July 2021 to 30 June 2026, and meets the requirements of the <i>Water Corporations Act 1995</i>". It provides an overview of the Operating Environment, sets out a 'Statement of Expectations' (i.e. Government expectations); and outlines the Business Objectives and Approach.</p> <p>The <i>Statement of Corporate Intent 2023-24</i> similarly "...represents an agreement between the Board and Minister for Water, on Water Corporation's expected level of performance for the 2023-24 financial year and meets the requirements of the <i>Water Corporations Act 1995</i>". It identifies 'Drivers of Change' for the forecast year, confirms the Corporation's purpose, vision and goals (which are encapsulated in the Thrive2035 Strategic Plan), identifies the Corporation's Service goals, outlines the Asset management and investment proposals for the year, details the Governance and structure arrangements, and presents a financial forecast and identifies associated KPIs.</p> <p>The financial plan is developed in accordance with the <i>Macro Budgeting Guidelines</i>⁴⁰⁷ which are prepared to ensure that Water Corporation undertakes the budget process in line with the Whole of Government Budget Cycle. These <i>Guidelines</i> set out the relevant information and guidance for the next budget to be prepared, including:</p> <ul style="list-style-type: none"> • Key messages: Business Case Process Change; Operating Expenditure Model Rebase; Accountabilities Framework; Indicative & Final Allocations; Potential Efficiency Dividends; Efficiency; Key Assumptions. • Introduction & Overview: Introduction; Purpose of the Guidelines; Budget Process – Key Milestones. • Key assumptions: Inflation; Efficiency targets; Water production strategy; Metropolitan WWTPs - Wastewater flows; Growth in the Number of Services. • Other inputs: 		

⁴⁰⁴ Strategic Development Plan (including Statement of Expectations) 2021-22 to 2025-26, 27 Apr 2021

⁴⁰⁵ Statement of Corporate Intent 2023-24

⁴⁰⁶ The *Statement of Corporate Intent* was replaced by the *Annual Performance Statement* in 2024/25.

⁴⁰⁷ Macro Budgeting Guidelines 2025/26

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Asset Investment Program - Financial Impact Statements; Support Allocated to Capital; Depreciation; Fleet and Plant.</p> <ul style="list-style-type: none"> Additional Information: Operational Growth Impacts; Organisational Restructures/Budget Transfers; Revenue Information; Severance Costs; Classifying Expenditure as Capital or Operating; Controllability Principles. Appendix: The Budgeting Financial Model (BFM). <p>The <i>Micro Planning Guidelines</i>^{408,409,410} are prepared to assist Groups/Regions/Business Units with preparation of operating expenses and revenue (excludes capital expenditure). The required information is input into the <i>Corporate Financial Model</i>⁴¹¹ (also referred to as the BFM), which is a bespoke spreadsheet based financial modelling/budgeting tool.</p> <p>Upon completion of the budget, it is incorporated into the <i>Statement of Corporate Intent</i> and <i>Strategic Development Plan</i> for Board approval and submission to the Minister, subject to the Treasurer's concurrence.</p> <p>Water Corporation advised that there has been a change to the financial planning process going forward (not relevant to the review period). It now prepares Annual Performance Statements (APS) and Statement of Expectations (once every term of Government), replacing the previous annual Statement of Corporate Intent and Strategic Development Plans.</p> <p>Performance:</p> <p>The <i>Statement of Corporate Intent</i> for the 2023/24 financial year was endorsed by both the Board Chairperson and Chief Executive Officer. Together with the <i>Strategic Development Plan</i> for the period 2021-22 to 2025-26, this details high-level strategic priorities based on the Corporate Objectives (goals), and actions to achieve those objectives are identified.</p> <p>The above referenced macro and micro budgeting guidelines (samples from the review period) have been prepared and based on the onsite interviews and review of the <i>Corporate Financial Model</i>, appear to be adequate for the development of the financial plan/budget submission; however, there is concern as to whether the financial plan appropriately addresses the identified objectives and strategies.</p> <p>A key observation from this review (discussed in respect of multiple criteria) is that Water Corporation is not adequately funded to effectively manage its asset portfolio in accordance with its identified objectives, particularly from a maintenance and renewals/augmentation perspective, and the situation appears to be worsening. It is apparent that Water Corporation is</p>		

⁴⁰⁸ Water Corporation Micro Planning Guidelines – Operating Budget 2023/24 Key Assumptions & Inputs – Part 1, Doc # 150615902, 20 Apr 2023

⁴⁰⁹ Water Corporation Micro Planning Guidelines - Operating Budget 2025/26 – Base Loaf Information – Part 2, Doc # 137799739, 20 Jun 2025

⁴¹⁰ Micro Budget Timetable 2021/22

⁴¹¹ Corporate Financial Model 2023/24

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>aware of its funding needs; however, it is understood that the financial plan is prepared to be consistent with funding levels agreed through negotiation with Government.</p> <p>Water Corporation is taking action to address the shortfall; for example, the <i>Water Corporation Operations & Maintenance Business Case FY26-FY29</i>,⁴¹² which sets out a plan for a staged increase in investment, demonstrates that Water Corporation is actively seeking additional funding to adequately support its objectives in respect of operation and maintenance of the assets, including to address the backlog of known extreme and high risk asset deficiencies. Notwithstanding, given the situation during the review period a performance rating of 'B3' is assigned to reflect the deficiency and the following recommendation is made.</p> <p>Recommendation – 06/2025</p> <p>Whilst it is acknowledged that Water Corporation is subject to a constrained budget, in addition to structuring the financial plan to be consistent with funding levels agreed through negotiation with Government, the plan should also set out the funding required to fully and effectively implement the strategies identified to achieve its asset management objectives.</p>		
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs	4	<p>Summary:</p> <p>The financial plan identifies the source of funds for capital expenditure and recurrent costs, both in the <i>Corporate Financial Model</i> and the <i>Statement of Corporate Intent</i>. The source of funding is principally self-generated (rates and volumetric charges, developer headworks) with minor borrowings.</p> <p>Process and Policy:</p> <p>Water Corporation is state owned. Funding for capital expenditure and recurrent costs is self-generated through customer charges (rates and volumetric charges) and developer headworks charges. There is a small amount sourced through loans for capital projects; borrowing amounts are, which are approved by Government, are sourced through the Western Australian Treasury Corporation.</p> <p>The budgeting processes outlined in respect of Criterion 10.1 identify the source of funds, which are used to finance both capital expenditure and recurrent costs. The <i>Macro Budgeting Guidelines</i>⁴¹³ identify Regulated Revenue (rates, fees and charges), developer contributions, special agreements (through customer and industry partnerships) and other revenue (typically identified through business case or Financial Impact Statement).</p>	A	1

⁴¹² Water Corporation; Operations and Maintenance Program Business Case, March 2025

⁴¹³ Macro Budgeting Guidelines 2025/26

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Performance: The source of funds is identified by category in the <i>Corporate Financial Model</i>.⁴¹⁴ These amounts are summarised in the <i>Statement of Corporate Intent</i>.⁴¹⁵</p> <p>The <i>Statement of Corporate Intent</i> for 2023-24 further indicates that:</p> <ul style="list-style-type: none"> In respect of borrowings: “Our Asset Investment Program is funded from operational cash flows, borrowings and a financial arrangement under a Public Private Partnership for the Fringe Suburb Water Treatment Plant.” The financial forecast identifies \$206 million of borrowings for 2023-24. Operating subsidies are provided in respect Country Water Pricing Subsidy; Revenue concessions; and Metropolitan Operations (subsidy for Coastal receival facility). <p>It is noted that the potential external funding sources and external funding that has already been secured is reported in the <i>Strategic Asset Plans</i> that are also prepared annually for submission to Treasury. This was demonstrated by the Plans submitted for both 2024-25 and 2025-26.</p>		
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	5	<p>Summary: Financial projections are included in the <i>Corporate Financial Model</i>, which includes a detailed Profit and Loss statement and Balance Sheets that outline the Corporation's financial position.</p> <p>Process and Policy: The <i>Corporate Financial Model</i>,⁴¹⁶ Water Corporation’s bespoke spreadsheet-based financial modelling tool, is used to forecast Water Corporation’s financial position. It is updated annually by implementation of the budgeting processes outlined in respect of Criterion 10.1.</p> <p>Required financial information, including operating statements (profit and loss) and statements of financial position (balance sheets), is prepared within the model. These statements can be extracted as stand-alone reports.</p>	A	1

⁴¹⁴ Corporate Financial Model 2023/24

⁴¹⁵ Statement of Corporate Intent 2023-24

⁴¹⁶ Corporate Financial Model 2023/24

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Once the <i>Corporate Financial Model</i> is prepared/updated each year, outputs are submitted to the Board for approval and then submitted to the Minister through/in support of the <i>Statement of Corporate Intent</i>^{417,418} (which includes summary statements).</p> <p>Performance:</p> <p>Review of the <i>Corporate Financial Model</i> confirms that it includes/provides for the extract of both a Profit and Loss Statement and Balance Sheet. Figures are included for a total of ten (10) years, including the previous, current (for the budget/forecasts are being prepared) and next eight (8) financial years; the 2023/24 model covers the 2022-23 through to 2031-32 financial years.</p> <p>Water Corporation referenced the <i>State Budget Papers</i>⁴¹⁹ as the ‘source of truth’ in respect of the financial plan. Review of the Water Corporation section of the Budget Statements confirms that it includes both an Income (Profit and Loss) Statement and Statement of Financial Position (Balance Sheet). Each covers the period 2023-24 (actual), 2024-25 (estimated actual), 2025-26 (budget year) and 2026-27, 2027-28 and 2028-29 (out-years).</p> <p>These records demonstrate that the financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets).</p>		
10.4	The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period	2	<p>Summary:</p> <p>The last (2021) AMS review found that there was a need for performance improvement against this criterion; the financial plan did not include reasonable predictions on income beyond the next five years.</p> <p>The <i>Corporate Financial Model</i> provides firm projections of income over a total of ten (10) years, the previous, current and next 5 years plus an additional 3 years. It is understood that, consistent with Treasury requirements, forecasts for the next 5 years only are formally submitted. Only the Budget year figures plus those for the next 3 years are included in the published <i>State Budget Papers</i>.</p> <p>Process and Policy:</p> <p>Income (revenue) predictions are captured in the <i>Corporate Financial Model</i>,⁴²⁰ which as previously reported is Water Corporation’s bespoke spreadsheet-based financial modelling/budgeting tool that is updated annually by implementation of the budgeting processes outlined in respect of Criterion 10.1.</p>	A	1

⁴¹⁷ Statement of Corporate Intent 2023-24

⁴¹⁸ The *Statement of Corporate Intent* was replaced by the *Annual Performance Statement* in 2024/25.

⁴¹⁹ WA State Budget 2025-26; Budget Paper No. 2; Budget Statements Volume 2 (available at: <https://www.ourstatebudget.wa.gov.au/budget-papers.html>).

⁴²⁰ Corporate Financial Model 2023/24

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Water Corporation noted that there is: “No requirement from Department of Treasury and Finance for us to do the income projection beyond 5 years”.</p> <p>Performance:</p> <p>Review of the <i>Corporate Financial Model</i> reveals that it includes forecasts/predictions of income for a total of ten (10) years, including the previous, current (for the budget/forecasts are being prepared) and next eight (8) financial years; the 2023/24 model covers the 2022-23 through to 2031-32 financial years. It is understood that predictions for the next 5-years only are formally submitted.</p> <p>As previously reported, Water Corporation referenced the <i>State Budget Papers</i>⁴²¹ as the ‘source of truth’ in respect of the financial plan. Review of the Water Corporation section of the Budget Statements confirms that it includes revenue predictions covering the period 2023-24 (actual), 2024-25 (estimated actual), 2025-26 (budget year) and 2026-27, 2027-28 and 2028-29 (outyears). These figures can be considered firm.</p> <p>It is further noted that the <i>Strategic Development Plan</i>⁴²² for the period 2021-22 to 2025-26 includes a ‘Statement of Income’ showing predicted income for the period 2020-21 to 2025-26, which would have been applicable at the time and subject to update.</p>		
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	4	<p>Summary:</p> <p>The <i>Strategic Development Plan</i> and the <i>Statement of Corporate Intent</i> are underpinned by the <i>Corporate Financial Model</i>. The corporate budget is prepared on a 5-year rolling program (with some visibility beyond that timeframe).</p> <p>Each year, a macro level budget is developed based on an internal review and adjustment of the previous year’s budget. Following approval by the Board and agreement with Government through submission of the <i>Statement of Corporate Intent</i> (and supporting information), the detailed operating budget is developed using a bottom-up approach based on operational and maintenance programs in SAP. Capital funding is allocated to projects included in the Asset Investment Program.</p> <p>Notwithstanding the approach used to develop the budget/financial plan, it is apparent that it does not adequately provide for the operations and maintenance, administration and capital expenditure requirements of the services, performance of this criterion has been subsequently graded ‘3’.</p>	A	3

⁴²¹ WA State Budget 2025-26; Budget Paper No. 2; Budget Statements Volume 2 (available at: <https://www.ourstatebudget.wa.gov.au/budget-papers.html>).

⁴²² Strategic Development Plan (including Statement of Expectations) 2021-22 to 2025-26, 27 Apr 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Process and Policy: As previously reported, the <i>Strategic Development Plan</i>⁴²³ and <i>Statement of Corporate Intent</i>^{424,425} are the principal financial plan/budget documents. They are underpinned by the <i>Corporate Financial Model</i>,⁴²⁶ in which all expenditure and revenue requirements/forecasts are collated.</p> <p>Water Corporation advised that: <i>“Operational expenditure is based on Activity Based Planning (ABP). This is a bottom-up budget build by count, activities and risk-based prioritisation approach.</i> <i>Administration is conducted through a centralised Labour Based Model (representing an estimated 40% of our total budget/expenses).</i> <i>Capital expenditure requests are captured in a Board Memo with the 5 YR capital program.”</i></p> <p>Development of the operating budget is detailed collectively in the <i>Macro Budgeting Guidelines</i>⁴²⁷ and <i>Micro Planning Guidelines</i>.^{428,429}</p> <p>The macro budgeting process involves development of a high-level operating budget using a budget-on-budget approach, i.e. taking the previous year’s budget and adjusting it for inflation, growth, efficiency, efficiency exclusions and any additional items. Efficiency requirements are prescribed by Treasury; efficiency exclusions relate to pass-through costs that are in addition to the base Operating Expenditure. The sources of water for drinking water and volumes of wastewater are estimated, as these can have a significant impact on the cost of treatment and distribution/collection.</p> <p>Administration budgeting is also covered in the macro budgeting process. As noted above, this is conducted through a centralised Labour Based Model and represents an estimated 40% of total budget/expenses.</p> <p>The capital budget includes an allowance for base capital maintenance that is for works required for renewal, repair or improvement of assets to maintain condition or performance, as well as general capital expenditure/acquisition of new assets. Projects are approved (based on submission of an <i>Asset Improvement Plan</i>,⁴³⁰ typically at asset/investment planning stage)</p>		

⁴²³ Strategic Development Plan (including Statement of Expectations) 2021-22 to 2025-26, 27 Apr 2021

⁴²⁴ Statement of Corporate Intent 2023-24

⁴²⁵ The *Statement of Corporate Intent* was replaced by the *Annual Performance Statement* in 2024/25.

⁴²⁶ Corporate Financial Model 2023/24

⁴²⁷ Macro Budgeting Guidelines 2025/26

⁴²⁸ Water Corporation Micro Planning Guidelines – Operating Budget 2023/24 Key Assumptions & Inputs – Part 1

⁴²⁹ Water Corporation Micro Planning Guidelines - Operating Budget 2025/26 – Base Load Information – Part 2

⁴³⁰ Asset Investment Plan Template

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>and included in the <i>Asset Investment Program</i>, and once approved, the associated capital costs and additional operating costs are added to the budget. As discussed in respect of criterion 10.1, the financial plan (including the capital budget) is prepared to be consistent with funding levels agreed with Government, and does not necessarily provide for all planned/required expenditure.</p> <p>Corporate Finance agrees the macro budget with the Board and with Government through the <i>Statement of Corporate Intent</i>⁴³¹ (and supporting information).</p> <p>Once the macro budget has been agreed, the funds are allocated at the unit level using the <i>Micro Planning Guidelines</i>. This is a bottom-up process whereby the baseload operating (operation and maintenance) expenditure requirements are compiled from business unit submissions entered into SAP using the work breakdown structure for items coded as: Operations; Planned; Unplanned; Reimbursements; and Operational support.</p> <p>Performance:</p> <p>Operating (operation and maintenance), administration and capital expenditure allowances are captured in the <i>Corporate Financial Model</i>,⁴³² having been compiled from the detailed breakdown held in SAP (operating and administration) and the <i>Asset Investment Plan</i> (capital).</p> <p>Summary figures are presented in the annual <i>Statement of Corporate Intent</i> and the previously referenced the <i>State Budget Papers</i>.⁴³³ More extensive detail in respect of the <i>Asset Investment Program</i> (capital expenditure) is included in the <i>State Budget Papers</i>.</p> <p>The <i>Strategic Asset Plan</i>, which as previously reported is also submitted to Government annually, provides budgeted/forecast operating and capital expenditure over a 5-year forecast period.</p> <p>Collectively, these records demonstrate that financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services provided by Water Corporation. However, as previously reported (criterion 10.1), the financial plan is prepared to be consistent with funding levels agreed with Government, and does not necessarily provide for the full and effective management of the asset portfolio. Water Corporation outlined the prioritisation process that is implemented in respect of (for example) operation and maintenance expenditure⁴³⁴ (refer criterion 6.5 for further discussion); however, this does not address the fact that the financial plan does not fully provide for the operations and maintenance, administration and capital expenditure requirements of the services.</p>		

⁴³¹ Statement of Corporate Intent 2023-24

⁴³² Corporate Financial Model 2023/24

⁴³³ WA State Budget 2025-26; Budget Paper No. 2; Budget Statements Volume 2 (available at: <https://www.ourstatebudget.wa.gov.au/budget-papers.html>).

⁴³⁴ Planned Operations and Maintenance Priority Process Guideline, Doc # 58583163, 26 Oct 2021

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Accordingly, a performance rating of 'A3' is assigned to reflect the impact of the funding shortfalls and the following recommendation is made.</p> <p>Recommendation – 04/2025</p> <p>Whilst it is acknowledged that Water Corporation is subject to a constrained budget, it should continue to take action as necessary to secure sufficient funding to fully provide for the operations and maintenance, administration and capital expenditure requirements of the services. The level of funding should be adequate to ensure that the risk of asset failure and impact on service is reduced to an acceptable level, i.e. it should be adequate to fully address the requirements for ongoing maintenance and the replacement of aging and/or deteriorating assets as necessary to meet this objective.</p>		
10.6	Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	4	<p>Summary:</p> <p>Actual versus budget performance is monitored and reported both internally within Water Corporation and externally to the Minister. Review of a sample of reporting presented both within and external to Water Corporation confirms that this monitoring facilitates identification of variances and the need for corrective action.</p> <p>Process and Policy:</p> <p>Variances between actual/budget income and expenses are monitored at a number of levels; actual versus budget performance is monitored and reported both internally within Water Corporation and externally to the Minister.</p> <p>The <i>Statement of Corporate Intent</i>⁴³⁵ states:</p> <p><i>“Reports which monitor performance against the targets outlined under the SCI [Statement of Corporate Intent] are provided to the Minister quarterly. In addition, the Board and Chief Executive Officer advise the Minister of any significant variations in our performance.</i></p> <p><i>Reporting of operational performance to various authorities and departments of Government occurs in addition to this. The Corporation’s Annual Report is provided to the Minister within the timeframe specified by the Water Corporations Act 1995.”</i></p> <p>Water Corporation advised that internal monitoring includes:</p> <p><i>“Board and Executive:</i></p> <ul style="list-style-type: none"> - CFO Report each month and there is an Annual results pack. - Quarterly Forecast to Board - OPEX and CAPEX. 	A	1

⁴³⁵ Statement of Corporate Intent 2023-24

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> - <i>Corporate Objectives report captures high level non-financial and some financial information and includes Corrective Action Plans (CAP) as required.</i> <p><i>Business Unit level:</i></p> <ul style="list-style-type: none"> - <i>Business Performance Reporting portal - reports on variance to budget and reasons for variance.</i> - <i>Activity based planning operating expenditure - can track variances (e.g., work orders not completed) and is reviewed monthly by Operating Group at Business Unit and Lead Team level. This also includes monitoring of unit rates and where big variation this is investigated."</i> <p>Water Corporation further advised that expenditure forecasts are updated quarterly, and monthly during the final quarter of each financial year.</p> <p>Performance:</p> <p>Records demonstrating that monitoring and reporting of performance against budget, including analysis of variances, is undertaken include (for example):</p> <ul style="list-style-type: none"> • <i>Interim Report December 2024⁴³⁶ (together with Briefing Note from the Water Corporation CFO to the Minister and Cover letter from Minister for Water to Treasurer) – sets out summary Financial Results (actual versus budget) for the 6 months to December 2024, together with performance against Financial Performance Measures and Performance Indicators. Variances from budget/target are shown and explanatory commentary provided.</i> • <i>Quarterly Performance Report March 2023⁴³⁷ - quarterly reports which provide the same information as the Interim Report, are submitted to the Water Corporation Executive and Board and to Government (Minister/Treasurer).</i> • <i>Operations Group Monthly Report June 2025⁴³⁸ - provides a detailed analysis of performance against budget for the month and year-to-date. Analysis is provided for the group together with detailed breakdown by region/service group. Drivers of variance in both revenue and expenditure are identified; emerging issues and their potential impact are identified and discussed. Targets for 'Finding Five', an expenditure reduction initiative aimed at 5% reduction were also presented.</i> • <i>Operations Group Quarterly Review June 2025⁴³⁹ - similarly provides ana analysis of financial performance, which in this case was an end of financial year (whole of year) analysis.</i> 		

⁴³⁶ Interim Report December 2024: Briefing Note GTE Interim Report 2024 - BN from CEO to Minister, 30 Jun 2025; and Cover Letter: GTE Interim Report 2024 - Cover Letter from Minister – Treasurer.

⁴³⁷ Quarterly Performance Report March 2023

⁴³⁸ Operations Group Monthly Report June 2025

⁴³⁹ Operations Group Quarterly Review June 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> <i>GAR Financial Update - RLT⁴⁴⁰</i> - a similar analysis to that provided in the Operations Group reports is also undertaken at Region and Service Group level; in this case (for example) the June 2024 report for the Goldfields and Agricultural Region. A link to a Power BI corrective analysis dashboard (not viewed) is provided. 		
11	Capital expenditure planning The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure for these works over the next five or more years. Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates.			A	2
11.1	There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates.	4	<p>Summary:</p> <p>Water Corporation has a rolling 5-year capital expenditure plan, and a 10-year investment forecast, that are documented at a macro level in a <i>Strategic Asset Plan</i>. This <i>Plan</i> is prepared annually and submitted to Government for approval.</p> <p>The <i>Strategic Asset Plan</i> is underpinned by project identification, evaluation and prioritisation undertaken as part of the ‘Asset creation and acquisition process’ (which has been previously discussed). Specific investment requirements (projects and timing) are captured and managed in SAP, with forecast requirements also reflected in <i>Asset Class Management Plans</i>.</p> <p>Process and policy:</p> <p>Capital expenditure planning is undertaken in accordance with the <i>Program Management Guideline</i>,⁴⁴¹ which provides clear guidance in respect of the overall Program Management process, including program formulation, program delivery and program monitoring/reporting. The Capital Investment Program details proposed expenditure in respect of individual projects, programs (which comprise a group of projects that are managed under a single profit centre) and portfolios (which comprise a group of investments related to a Strategic Business Case, which is in turn aligned to one of the five reporting categories/primary areas of business, i.e. water, wastewater, irrigation, drainage or corporate).</p> <p>The need for specific capital investment projects is identified, evaluated and prioritised through the ‘Asset planning’ and ‘Asset creation and acquisition’ asset management processes, which are discussed in detail previously in this report. More specifically, the project evaluation processes discussed in respect of Criteria 2.1 and 2.2 ensure the justification and risk-prioritisation of projects for inclusion in the forward capital program.</p> <p>The Capital Investment Program is prepared on a rolling 5-year basis, with a forward look over the remainder of a 10-year forecast period. The program is presented at high (portfolio) level in the annually prepared <i>Strategic Asset Plan</i>,⁴⁴² which</p>	A	1

⁴⁴⁰ GAR Financial Update June 2024

⁴⁴¹ Program Management Guidelines, Doc # 58563713, 3 Mar 2024

⁴⁴² Strategic Asset Plan 2024-25, Dec 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>together with the <i>Statement of Corporate Intent</i>,⁴⁴³ is submitted to Government for approval. The 5-year investment plan correlates with the strategic direction outlined in the <i>Strategic Development Plan</i>,⁴⁴⁴ which is also submitted to Government for approval.</p> <p>The Capital Investment Program is managed through the SAP-IM (Investment Management) and SAP-PS (Project System) modules, in which a 'live' capital program that aligns to the 5-year Board-Approved Budget is maintained. More specific detail of programs is also found in the relevant Asset Class Management Plans.</p> <p>Performance:</p> <p>Water Corporation's <i>Strategic Asset Plan 2024-25</i> provides details of its investment program for the 5-year period 2024/25 to 2028/29 and an overview of the 10-year program to 2033/34. Supporting information, including a breakdown of the 5-year program by investment portfolio and year of expenditure, is provided in (for example) a detailed submission of the <i>5Yr Capital Program Formulation (FY24-FY28) Infrastructure Funding Proposal</i> to the Water Corporation Executive and Strategic Investment Committee.⁴⁴⁵</p> <p>Extracts from SAP-PM showing <i>Project/Appropriation Summary Reports</i> in respect of the Small Town WWTP Upgrade⁴⁴⁶ and Coastal WRRF Sludge Upgrade⁴⁴⁷ projects were provided for review. Review of the extracts reveals that each expenditure item is coded to identify the investment reason, an Objective Risk Assessment number and milestone dates (the forecast investment was not included in the extracts provided).</p> <p>Information at asset/project level is also provided in (for example) the <i>Water Storage Facility</i>⁴⁴⁸ and <i>Wastewater Pump Station and Sewer Pressure Main</i>⁴⁴⁹ <i>Asset Class Management Plans</i>, which both identify capital expenditure requirements over a 10-year forecast period (from FY19/20).</p>		

⁴⁴³ Statement of Corporate Intent 2023-24

⁴⁴⁴ Strategic Development Plan (including Statement of Expectations) 2021-22 to 2025-26, 27 Apr 2021

⁴⁴⁵ 5Yr Capital Program Formulation (FY24-FY28) Infrastructure Funding Proposal to the Water Corporation Executive and Strategic Investment Committee

⁴⁴⁶ Project/Appropriation Summary Report – Small Town WWTP Upgrade (SAP Extract)

⁴⁴⁷ Project/Appropriation Summary Report – Coastal WWTP Sludge Upgrade (SAP Extract)

⁴⁴⁸ Water Storage Facility Asset Class Management Plan 2019-28, Doc # 8069647, 2 Sep 2019

⁴⁴⁹ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan 2020-30, Doc # 96372224, 19-Apr-20

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
11.2	The capital expenditure plan provides reasons for capital expenditure and timing of expenditure	4	<p>Summary: Water Corporation identifies the reasons for and timing of capital expenditure from a high level (macro) perspective in its <i>Strategic Asset Plan</i>. More specific details are provided in the underlying business cases through which the requirements in terms of both purpose and timing are justified.</p> <p>Process and policy: The <i>Strategic Asset Plan</i>,⁴⁵⁰ which reflects the proposed Asset Improvement Plan, provides a high level (macro) view of the reasons for capital expenditure and the required timing. The <i>Plan</i> is, however, informed by the outcomes of the ‘Asset planning’ and ‘Asset creation and acquisition’ asset management processes during which the need for specific capital investment projects is identified, evaluated and prioritised.</p> <p>The project evaluation processes previously discussed in respect of Criteria 2.1 and 2.2 ensure the justification and risk-based prioritisation of projects for inclusion in the forward capital program. More specifically, investment projects are justified through the series of approval gateways as they pass through the initial phases of the asset acquisition and investment process, as follows:</p> <ul style="list-style-type: none"> • Asset Investment Planning Phase – this phase involves planning activities to ensure that both existing and future assets have the capacity to meet the current and future expectations of Water Corporation’s customers. This phase culminates in the preparation of an <i>Asset Investment Plan</i>⁴⁵¹ and leads to the Appropriation Request Approval gateway. • Select and Program Formulation (Prioritisation) Phase – this phase involves confirmation, through a prioritisation process, of projects to be included in the 5-year Asset Investment Plan. This phase leads to the Approval to Develop gateway. <p>Project justification is reaffirmed during subsequent phases of the asset creation and acquisition process, until such time as the project is approved for delivery, as follows:</p> <ul style="list-style-type: none"> • Development Phase – this phase involves the development of projects that have been accepted into the 5-year Asset Investment Plan to a sufficient level of detail and certainty that a robust single option can be taken forward into the Engineering and Delivery phases. This phase leads to the Approval to Invest gateway. • Engineering Phase – involves the detailed work required to further develop the project in preparation for the Delivery Phase. This phase leads to the Approval to Deliver gateway. 	A	1

⁴⁵⁰ Strategic Asset Plan 2024-25, Dec 2023

⁴⁵¹ Asset Investment Plan Template

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>These processes ensure that capital investments and their timing are justified before prioritisation for inclusion in the 5year Asset Investment Plan, and that justification is reaffirmed at each stage of progression until approved for delivery.</p> <p>Performance:</p> <p>Water Corporation’s <i>Strategic Asset Plan 2024-25</i>⁴⁵² (for example), in conjunction with the <i>Statement of Corporate Intent</i>,⁴⁵³ provides a high-level overview of the drivers of capital investment during the 5-year period 2024/25 to 2025/26 and extending to the 10-year program to 2033/34. Additional detail is provided in respect of each investment portfolio including Corporate Goal alignment, expected portfolio investment outcomes, key acquisitions (investments) within the 5-year forecast period, and investment priorities for the following 5-years.</p> <p>Examples of business case approvals at the various asset creation and acquisition process gateways for the following projects have been discussed in some detail in respect of the asset creation and acquisition process (Criteria 2.1 and 2.2), so are not repeated here:</p> <ul style="list-style-type: none"> • Coastal WRRF Sludge Treatment Upgrade • Small Town WWTP Upgrade project • Oceanside Seawater Desalination Plant Stage 1 • Regional City Sewer Pressure Main Replacement <p>These examples demonstrate that reasons for and timing of capital expenditure are provided either in the capital expenditure plan and/or supporting documentation.</p>		
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	2	<p>Summary:</p> <p>Capital investments for asset intervention (refurbishment/renewal) projects are based on assessments of asset condition and remaining life, which inform the investment prioritisation process through the submission of asset investment plans and business cases. Linkages between asset age/condition and investment requirements and are identified through Asset Class Management Plans.</p> <p>There is, however, concern that the investment program is not adequate to fully address the requirements for replacement of aging and/or deteriorating assets to an extent that reduces risk of failure and impact on service to an acceptable level. Although it is acknowledged that Water Corporation is subject to a constrained budget, a performance rating of ‘A3’ is assigned to reflect the potential impact.</p>	A	3

⁴⁵² Strategic Asset Plan 2024-25, Dec 2023

⁴⁵³ Statement of Corporate Intent 2023-24

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>Process and policy: As outlined in detail in respect of the ‘Asset creation and acquisition’ and ‘Asset disposal’ asset management processes, asset condition is a primary consideration when assessing existing asset intervention (refurbishment/renewal) projects for inclusion in the Asset Investment Program. This process invariably includes an assessment of remaining life. As reported above (Criterion 11.2), project justification is documented initially in an asset investment plan and subsequently in the relevant business cases. Asset condition is discussed in detail in cases where it is a contributing factor. The linkage between capital investments and asset condition/remaining life is identified/highlighted in the various Asset Class Management Plans. These provide a summary assessment of the state of the assets, including an assessment of asset age profile and health, as well as outlining the required capital investment requirements over a 5/10-year forecast period. Asset Class Management Plan supporting information provides a more detailed assessment of asset condition/remaining life, and the associated expenditure requirements, at asset level.</p> <p>Performance: An example of a project in which asset condition was the primary driver of investment, the <i>Regional City Sewer Pressure Main Replacement Delivery Business Case</i>⁴⁵⁴ indicated (as did the Development and Investment business case) that: <i>“An asset condition assessment (ACA) on the [example] Sewer Pressure Main was completed in 2020 (98435414), which detailed the presence of internal pipe wall degradation and pipe fatigue. The ACA concluded that the pipe no longer had adequate structural integrity to withstand operating conditions. Additionally, it was determined that the pressure contributing to the burst was a combination of...”</i> pumping station <i>“...pressures”</i>. The [example] Sewer Pressure Main was originally designed to withstand operational pressure from one but not both pumping stations. <i>Based on repeated bursts, the pipe is past its service life (Investment Evaluation Memo 111879633). The pressure main is 24 years into a design life of 50 years but due to a combination of defective pipe and change in operating conditions since the original design the pipeline requires replacement.”</i> The business case further indicated that: <i>“The current risk has been assessed as ‘High’ against ORA#66. Pressure main failure releases wastewater and will be reduced to ‘Low’ following completion of this project.”</i></p>		

⁴⁵⁴ Regional City SPM Replacement Delivery Business Case, 17 Mar 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The <i>Water Storage Facility</i>⁴⁵⁵ and <i>Wastewater Pump Station and Sewer Pressure Main</i>⁴⁵⁶ <i>Asset Class Management Plans</i> both provide an assessment of remaining life and condition for the asset class and outline a forward investment program. The <i>Water Storage Facility ACMP</i> includes (for example) the Regional Town Tank 3 Upgrade project, which is referenced in respect of Criterion 2.2. The <i>Asset Commissioning Report</i>⁴⁵⁷ indicates that commissioning was undertaken in June 2024, which is consistent with the delivery timeline in the <i>Asset Class Management Plan</i>.</p> <p>The above examples demonstrate consistency between the capital investment program and the life and condition of assets as identified in the asset management plan; however, there is information to suggest that the investment program is not adequate to fully address the requirements for replacement of aging and/or deteriorating assets. For example:</p> <ul style="list-style-type: none"> A significant and growing portion of the asset portfolio is nearing or has exceeded its expected life. Information in the <i>Strategic Asset Plan 2024-25</i>⁴⁵⁸ indicates that approximately 7.5% of the asset base has exceeded its economic life and 3% are within 10% thereof (June 2023 figures); the <i>Strategic Asset Plan 2025-26</i>⁴⁵⁹ indicates that this had increased to 10% and 3.5% respectively (June 2024 figures) and is expected to continue growing. It is noted that actual useful asset life may vary from its expected life (for example, the Sewer Pressure Main referenced above required replacement after approximately half of its expected life), so this assessment is indicative only. The ADReg backlog is increasing. An indicator of overall asset condition is the number and risk rating of identified asset deficiencies. The number of registered asst deficiencies has grown from approximately 900 in 2020 to almost 5,000 in 2024, approximately half of which carry extreme or high risk.^{460,461} The potential impact on the capital investment program is dependent upon the nature of the deficiencies and, if required, the outcome of Asset Condition Assessments. <p>These observations suggest that the capital investment program is not fully consistent with the asset life and condition identified in the asset management plan, in that it does not fully address the requirements for replacement of aging and/or deteriorating assets to an extent that risk of failure and impact on service is reduced to an acceptable level. Although it is</p>		

⁴⁵⁵ Water Storage Facility Asset Class Management Plan 2019-28, Doc # 8069647, 2 Sep 2019

⁴⁵⁶ Wastewater Pump Station and Sewer Pressure Main Asset Class Management Plan 2020-30, Doc # 96372224, 19-Apr-20

⁴⁵⁷ Asset Commissioning Report: Regional Town Tank 3 Renew (CW03705), Doc # 161247415, 25 Sep 2024

⁴⁵⁸ Strategic Asset Plan 2024-25, Dec 2023

⁴⁵⁹ Strategic Asset Plan 2025-26

⁴⁶⁰ INC-075324: Failed Fringe Suburb Tank Update – 26 February 2025

⁴⁶¹ Strategic Asset Plan 2025-26

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>acknowledged that Water Corporation is subject to a constrained budget, a performance rating of '3' is assigned to reflect the potential impact and the following recommendation is made.</p> <p>Recommendation – 04/2025</p> <p>Whilst it is acknowledged that Water Corporation is subject to a constrained budget, it should continue to take action as necessary to secure sufficient funding to fully provide for the operations and maintenance, administration and capital expenditure requirements of the services. The level of funding should be adequate to ensure that the risk of asset failure and impact on service is reduced to an acceptable level, i.e. it should be adequate to fully address the requirements for ongoing maintenance and the replacement of aging and/or deteriorating assets as necessary to meet this objective.</p>		
11.4	There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented	2	<p>Summary:</p> <p>Water Corporation implements a robust monitoring and reporting regime in respect of performance against its Asset Investment Program (capital expenditure plan). With focus on both the current year and the forward 5-year plan, monthly and quarterly reporting/reviews include mechanisms for re-prioritisation both within and across investment portfolios.</p> <p>Process and policy:</p> <p>Water Corporation advised that:</p> <p><i>“The ‘capital expenditure plan’ is reviewed and updated monthly if required by Program Managers and the Asset Manager and constrained to the 5-year Board Approved Budget (BAB). The implementation is reported on monthly, including through \$ spent and milestones achieved to the Infrastructure Investment Management Committee (IIMC), Investment Governance Committee (IGC) and Board. There is also (new) quarterly reporting to Board on progress with 14 large/significant projects/programs.”</i></p> <p>The <i>Program Management Guideline</i>⁴⁶² outlines a robust capital program monitoring and reporting and regime, with focus on both the current year and 5-year scenarios.</p> <p>Monitoring and reporting in respect of the current year program includes:</p> <ul style="list-style-type: none"> • Monthly progress reporting of performance against a number of metrics, which is used to identify variance in actual spend, project plan or project activations compared to the baseline for the year. The reasons for variances are to be investigated, trends across projects or programs identified and corrective action initiated where appropriate. • Quarterly program reviews involve a review of current year spend for each profit centre. This includes a review of planned spend, monthly cashflow, milestone dates, etc.; discussion of progress of active projects to confirm progress against schedule, that the plan is up-to-date, contingency is appropriately profiled, etc.; estimates of 	A	1

⁴⁶² Program Management Guidelines, Doc 58563713, 5 Mar 2024

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>capital spend for the current and following year for each project and appropriation request; and identification of opportunities and risks to current spend at a project level.</p> <p>This review results in an end of year forecast for each profit centre, which is then reported to and reviewed with the Head of Asset Investment Business Unit.</p> <p>Monitoring and reporting in respect of the 5-year capital program includes:</p> <ul style="list-style-type: none"> • Monthly report of performance against a number of metrics including 5-year total plan (total and by portfolio) against Board-approved budget, and total plan by year (total and by portfolio) against Board-approved budget. This report, which is distributed to all relevant stakeholders, is used to identify variance in profit centre plans compared to the Board-approved budget. Where any variance exceeds 5% above the approved budget, reprioritisation of the respective profit centre projects is to be facilitated to reduce the overall plan to within the 5% tolerance. • An outcomes report that describes but is not limited to: Planned spend for each portfolio outcome compared to baseline; Performance of each outcome compared to baseline; Commentary on the performance of each outcome, is to be prepared at the beginning of each financial year. This information is used to inform formulation of the rolling 5-year capital program. By aligning projects to corporate outcomes, the compiled data enables a proxy assessment of whether portfolio outcomes have been achieved, and the forward program adjusted accordingly. <p>Performance:</p> <p>Implementation of the capital program monitoring and reporting requirements is demonstrated by a sample of records including:</p> <ul style="list-style-type: none"> • <i>Monthly Portfolio Meeting Minutes</i>⁴⁶³ - this spreadsheet-based artefact provides an ongoing record, capturing decisions and escalations from monthly major infrastructure program meetings. A tab for each portfolio (e.g. 546 Metro Wastewater Networks), each 'Decision', 'Escalation', 'Risk' or 'Opportunity' is detailed, including a Description; Action/comment; who raised the issue and relevant meeting attendees; Meeting date; Status of issue; and Impact. <p>It is noted that 'Decisions' and 'Escalation' often involve deferment or defunding of projects in repose to the program being overbid. For example, entries against the 546 Metro Wastewater Networks portfolio include:</p> <ul style="list-style-type: none"> • Decision (at meeting 28 February 2024): <ul style="list-style-type: none"> • Description -CS03655 Suburban St Sewer Pump Station Upgrade defer delivery dollars two years, to outside the 5 yr program. 		

⁴⁶³ Monthly Portfolio Meeting Minutes Spreadsheet

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<ul style="list-style-type: none"> • Action/comment - Program is overbid. [staff member] advised a recent Asset Condition Assessment shows the cracks to be superficial. Recommend to take it to the end of design if commenced and defer delivery dollars outside the 5 yr program. [staff member] will advise if better to pause at the end of design brief if not yet issued. • Status - Closed. • Escalation (at meeting 7 March 2024): <ul style="list-style-type: none"> • Description - CS03655 Suburban St SPS Upgrade Deferred 1 year as part of the \$100m reduction action plan for FY24 & FY25. • Action/comment - Review of latest Asset Condition Assessment report by Perth Region Field Services (PRFS) Snr Engineer Civil 11/03: <i>“the SPS wet well wall thickness loss is 43% based on the ACA [Asset Condition Assessment] report, structurally, it is unsafe to work in 6.2m deep drywell”</i>. Subsequently all access to the dry well was removed for all PRFS Staff 11th March. Project resumed in June 2024 at direction of Investment Governance Committee. • Status - Closed. • Impact - PRFS is no longer able to operate or maintain the pump station. Given PRFS are no longer able to enter the dry well for safety reasons, PRFS will be obliged to install a temporary bypass pumpstation proactively or install a bypass pump reactively when the dry well pump fails. • These and other records demonstrate a robust approach to monitoring and adjusting the capital program. • <i>Asset Investment Monthly Report</i>⁴⁶⁴ - this report for March 2025 provides summary data in both dashboard and tabular format. Variances from budget and both mid-year report and third quarter forecasts are shown with commentary provided. Performance against target for number of projects achieving Approval to Develop, Approval to Invest, Approval to Deliver, and Project Practical Completion is also monitored and analysed. • <i>Reporting to Investment Governance Committee (IGC)</i>⁴⁶⁵ – a selection of slides in respect of Forecast 3 (third quarter forecast) reporting to the IGC include (for example): Asset Investment Program – Forecast 3, which provides a comparison between budget and the various progressive forecasts; An overview of the drivers underpinning the Forecast 3 figures; and summary details of the Planned Renewals Program. <p>These examples demonstrate that there is an adequate process to ensure the capital expenditure plan is regularly updated and implemented.</p>		

⁴⁶⁴ Asset Investment Program Reporting Extract, Mar 2025

⁴⁶⁵ Reporting to for Investment Governance Committee – Snapshots

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
12	Review of AMS		The asset management system is regularly reviewed and updated.	A	2
12.1	A review process is in place to ensure the asset management plan and the asset management system described in it remain current	2	<p>Summary: There are a number of processes that have been put in place to ensure that the AMS remains current. The framework for this is established by the <i>Infrastructure Asset Management Policy</i> and implemented through the <i>Asset Management Strategy</i> and <i>Asset Management System Manual</i>.</p> <p>Throughout the audit it was noted that most documents had been reviewed and were up to date. Key documents are in the CorDocs system managed through the <i>CorDocs Document Control Procedure</i>. The review process is managed through monthly emails.</p> <p>Actions in the Improvement Plan were at risk of slipping past the due date and it was noted that certain documents do not appear to have been reviewed by the due date. It is noted that there are a lot of engineering documents and some are very technical and don't need to be changed unless there has been a regulation change. However, a review can occur and not change the document. For these reasons this criterion has been allocated a '2' for performance.</p> <p>Process and Policy: The review process for the AMS and associated plans is underpinned by the <i>Infrastructure Asset Management Policy</i>⁴⁶⁶. This policy mandates regular assessment and continuous improvement of the AMS, with explicit governance oversight by the Asset Management Committee (AMC). Key principles include:</p> <ul style="list-style-type: none"> • Regular assessment of the effectiveness and performance of the AMS, with oversight and reporting to the AMC. • Continuous improvement through innovation and application of industry best practice. <p>The <i>Asset Management Strategy</i>⁴⁶⁷ translates policy intent into strategic direction and sets out the governance and review arrangements for asset management. The strategy is:</p> <ul style="list-style-type: none"> • Governed by the AMC, which provides strategic oversight and assurance that the AMS and its supporting plans remain aligned with corporate objectives and ISO 55001. • Subject to annual review, with major revisions as required and approval by the Executive. • Monitored through periodic oversight, completion of priority initiatives, and continuous improvement in maturity, as measured by periodic assurance processes 	A	2

⁴⁶⁶ PCY392 Infrastructure Asset Management, Doc # 102902595, 31 Jul 2024

⁴⁶⁷ Asset Management Strategy 2022 - 2042, 26 Feb 2025

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The <i>Asset Management System Manual</i>⁴⁶⁸ and supporting plans operationalise the review process:</p> <ul style="list-style-type: none"> The <i>AMS Manual</i> outlines the multi-layered review framework, including annual internal reviews, four-yearly external reviews, and ongoing internal audits. It specifies that improvement actions arising from reviews are tracked and monitored, with clear governance by the Asset Strategy Business Unit and AMC. The <i>Strategic Asset Plan</i> and <i>AMS Improvement Plan</i> are both subject to regular review and update, ensuring alignment with current standards, business priorities, and regulatory requirements. Improvement initiatives are tracked, with progress reported to the AMC at least every six months. The improvement plan is updated following major governance reviews or changes in standards. <p>Document control at Water Corporation is governed by <i>CorDocs Document Control Procedure</i>⁴⁶⁹, which establishes CorDocs (within Nexus) as the single source of truth for key corporate documents and defines the roles, workflow approvals and methods to ensure content is accurate, complete, up-to-date and accessible. It applies enterprise-wide to preparing, approving, registering, naming, distributing, storing, reviewing and withdrawing documents.</p> <p>Publication requires Nexus workflow approval appropriate to the document type (e.g., Board/Executive for policies; Process Manager for frameworks/standards/guidelines), with the CorDocs Administrator verifying correct naming, metadata, formatting and approvals prior to release. To help manage currency, distribution must link directly to the master CorDocs item; printed or copied versions are “uncontrolled when printed,” and a sunset/print-date footer is required. Currency is maintained via a default 36-month review cycle with ad-hoc revisions raised as needed, audit-trailed in the revision history, and supported by CorDocs Support reporting on review progress and trends.</p> <p>Performance:</p> <p>All controlled documents are managed in CorDocs, the corporate document management system. An extract from the system showing overdue documents was sighted; a number were identified as being overdue as negotiations were underway with the regulator, which were mainly water allocation licences.</p> <p>There were also 30 overdue documents for the Engineering Business Unit; 14 design standards and specifications were overdue by more than 91 days. The Engineering Business Unit has provided a detailed breakdown for this by document category, noting that “these overdue documents represent about 5% of all of the documents on the register for Engineering”. The EBU further states that “Design Standards are updated by custodians based on triggers such as an update to an Australian Standard, change in legislation, safety incident, usability enhancement, or learnings from other utilities. All of these drivers are</p>		

⁴⁶⁸ Asset Management System Manual, Doc # 58587247, 30 Jan 2025

⁴⁶⁹ CorDocs Document Control, Doc # 58529603, 27 Mar 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			regularly monitored and discussed by the Standards Custodian and the stakeholder reference group". They are only changed when there is a trigger to change it. There is a significant number of technical documents that require regular review, however, the document should still be reviewed by the review date in CorDocs. That review can be simply state that no changes were made. This indicates that it is current as of that date in accordance with the triggers mentioned above. The use of CorDocs (Nexus) was observed during the audit interviews and it could be seen that documents were accessible. The Waterfront intranet, via which staff could access relevant CorDocs, was also observed.		
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system	5	<p>Summary: The Management Review & Audit framework sets out how internal audits are conducted on elements of the business such as the AMS. These are conducted on a regular basis in accordance with the Management Review and Audit Program.</p> <p>Process and Policy: The Water Corporation's internal audit function, Management Review & Audit (MR&A) operates under an Internal Audit Framework⁴⁷⁰ aligned to the Institute of Internal Auditors' IPPF standards and sets out "the processes, procedures and guidelines that govern the conduct of internal audit work." It is reviewed at least annually to reflect new or amended IIA standards.</p> <p>Independence is established through governance and reporting: MR&A sits within Risk & Assurance (Finance Group) but has a functional reporting line to the Chair of the Audit & Risk Committee (A&RC) and CEO, and an administrative line to the CFO. The A&RC comprises three non-executive Board members (Chair & two directors). MR&A reports to the A&RC at least four times per year on significant risk/control issues, audit program status, and recommendation follow-ups.</p> <p>MR&A runs a rolling three-year Strategic Review & Audit Program with a fully detailed annual plan. Planning is risk-based and aligns with corporate strategy (<i>Thrive2035</i>), the Corporate Risk Report, the Corporate Assurance Map (CAM) and prior audit actions. A draft program is submitted to the A&RC each May for approval; once approved, it is published internally and distributed to senior managers.</p> <p>The <i>Corporate Assurance Map FY22/23</i>⁴⁷¹ (CAM) provides a view of assurance activities across corporate risks and Level 1 processes. The assurance activities include independent assurance (line 3) which is the internal audit function (MR&A). This map is produced biennially and helps direct MR&A effort to areas with partial/limited coverage. Level 1 processes include a category of Asset Planning and Delivery, it includes 'Manage infrastructure assets' and 'Plan infrastructure assets'.</p>	A	1

⁴⁷⁰ MR&A Internal Audit Framework, Doc # 171364890, Apr 2024

⁴⁷¹ Corporate Assurance Map FY2022/2023, Aug 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p>The <i>Asset Management Maturity Assessment Procedure</i>⁴⁷² provides a formal, step-by-step process for evaluating the maturity and effectiveness of the AMS. The procedure includes:</p> <ul style="list-style-type: none"> • Annual internal maturity assessments, supplemented by four-yearly external reviews (AMSR by ERA, and WSAA benchmarking). • Defined roles and responsibilities for assessment, approval, and reporting of results. • Continuous improvement mechanisms, including debriefs, participant surveys, and recording of improvement opportunities. • Integration with improvement planning, where assessment outcomes are endorsed by the AMC and feed directly into the AMS Improvement Plan. <p>Performance:</p> <p>The review and audit program states that it was developed in consultation with the Board, Audit & Risk Committee, Executive, and business units. The MR&A 2024/25 program includes a schedule of projects grouped to look at external trends, business focus, core practices, and additional support projects. The 2025/25 plan also includes projects for the following two years. In 2024/25 projects include:</p> <ul style="list-style-type: none"> • Accuracy & Effectiveness of ESG and Climate Change measures • Water Carting • Status of Delivery to Remote Aboriginal Communities • Budget Allocation / Prioritisation of Investments. <p>The program also includes a list of Critical Controls Reviews these include:</p> <ul style="list-style-type: none"> • Assets Failures – root cause analysis • Business Continuity Planning • Inventory Management • Contractors’ Safety. <p>The MR&A program states that “<i>The status of implementation of management actions to address all audit findings is monitored and subsequently reported to the Audit & Risk Committee. Where applicable, the risk profiles are adjusted, and</i></p>		

⁴⁷² Asset Management Maturity Assessment Procedure, Doc # 58584004, 31 Oct 2023

Reference no.	Asset management process or effectiveness criterion	Review priority	Observations and Recommendations	Process and policy rating	Performance rating
			<p><i>mitigation plans updated to reflect significant audit findings</i>". Appendix B of the MR&A program presents a corporate-wide assurance map, mapping the corporate risks to the level of assurance activities and future planned projects.^{473,474,475,476}</p> <p>The Asset Management Committee provides strategic oversight and oversight for the management of infrastructure assets. The <i>Asset Management Committee (AMC) Terms of Reference</i>⁴⁷⁷ require the committee to "endorse asset management improvement proposals, target asset management maturity and asset strategies", and to "govern performance relevant to asset management maturity". The AMC is required to meet at least every two months, with a quorum and formal minuting of actions and decisions. The Executive Officer is responsible for ensuring actions arising from meetings are progressed, and for preparing an Executive Paper summarising key outcomes for the Executive Performance Committee.</p> <p>Water Corporation participated in the WSAA Asset Management Customer Value (AMCV) 2024⁴⁷⁸ benchmarking, which included a rigorous self-assessment, executive engagement, and two rounds of on-site consultant verification. The AMCV report confirms that "AMS monitoring is carried out annually and is supported by an improvement plan to target uplift areas. The AMS is clearly defined through the AM Policy and the AM Manual, which is assessed through the internal maturity assessment process and Economic Regulation Authority (ERA) of WA audit".</p> <p>The AMCV 2024 report states that regular benchmarking of the AMS against the WSAA Assessment Tool is conducted (every four years), which is externally verified as part of the process. This report includes the outcomes of the assessment in 2024 and references changes from the 2020 review. The AMCV 2024 assessment found that "Water Corporation has improved its conditional score in 25 subjects since 2020, with the biggest increases in AMS Monitoring, Fault & Incident Response, and Systems Engineering. The improvements in the scores of the majority of subjects is an illustration of the benefits of ongoing investments in the Water Corporation AMS". It found that "although Water Corporation has shown improvements since 2020, it is improving at a slower rate than its peer group," and that "all the subjects in the AM Decision-Making are more than 0.25 points below the industry average." It also states the asset information management was one of the lower scoring subjects, this can be related to decision-making. If the asset information is incorrect or missing then implementing reliability engineering, as the report identifies, is difficult.</p>		

⁴⁷³ MR&A 2024/25 Review and Audit Program, May 2024

⁴⁷⁴ MR&A 2022/23 Review and Audit Program, Jun 2022

⁴⁷⁵ MR&A 2023/24 Review and Audit Program, Jun 2023

⁴⁷⁶ MR&A 2021/22 Review and Audit Program, Jun 2021

⁴⁷⁷ Asset Management Committee, Doc # 123531019, 28 Feb 2025

⁴⁷⁸ Asset Management Customer Value 2024 Benchmarking – FINAL Utility Report, Dec 2024

8. RECOMMENDATIONS

Recommendations can be seen in Table 9 below.

Table 9 Recommendations to address current asset system deficiencies

A. Resolved during current review period			
Reference / Recommendation reference from previous review (if applicable)	Process and policy deficiency / Performance deficiency (Rating / Asset management process & effectiveness criterion / Details of deficiency)	Date resolved & action taken by the licensee	Auditor's Comments
n/a			
B. Unresolved at end of current review period			
Recommendation reference (no./year)	Process and policy deficiency / Performance deficiency (Rating / Asset management process & effectiveness criterion / Details of deficiency)	Auditor's recommendations	Action taken by the licensee by the end of the audit period
01/2025	<p>B3</p> <p>(1.9) Asset planning – <i>Asset management plan is regularly reviewed and updated</i></p> <p>Asset Class Strategies and Asset Class Management Plans have not been updated as required.</p>	Water Corporation should take action to review, and update as necessary, its Asset Class Strategies and Asset Class Management Plans in accordance with CorDocs and other relevant guidance, thereby ensuring that the forward plans remain up-to-date.	Water Corporation is aware that these documents are overdue and have commenced a review process. They have also indicated that they have <i>“updated the Levels of Service Performance Hierarchy which is a key component of asset class strategies and management plans.”</i>
02/2025	<p>C2</p> <p>(3.1) Asset disposal – <i>Under-utilised and under-performing assets are identified as part of a regular systematic review process.</i></p> <p>Water Corporation does not have a systematic review process for under-utilised assets. They are currently identified opportunistically through project delivering and reporting processes.</p>	Water Corporation must establish a regular systematic review process to identify under-utilised assets. Current processes rely on the diligence of staff to identify under-utilised assets opportunistically through capital projects or reporting activities. An option would be to embed criteria for the identification of under-utilised asset in the existing processes.	n/a

Recommendation reference (no./year)	Process and policy deficiency / Performance deficiency (Rating / Asset management process & effectiveness criterion / Details of deficiency)	Auditor's recommendations	Action taken by the licensee by the end of the audit period
03/2025	<p>B3 (4.2) Environmental analysis - <i>Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved</i></p> <p>There has been negative trend in some key performance indicators, such as the number of unplanned interruptions per 1,000 properties for water supplies.</p> <p>B3 (4.4) Environmental analysis - <i>Service standard (customer service levels etc) are measured and achieved</i></p> <p>Many of the corporate Levels of Service are not being achieved and many also have a negative trend.</p>	<p>Performance standards and Levels of Service must be tracked and where necessary strategies put into place to ensure that targets are met. For example, the number of unplanned interruptions per 1,000 properties for water supplies needs to be addressed to ensure that the negative trend is reversed.</p>	<p>Asset deficiencies are being identified and ranked by risk, to address those with the greatest potential to impact on performance standards and levels of service.</p>

Recommendation reference (no./year)	Process and policy deficiency / Performance deficiency (Rating / Asset management process & effectiveness criterion / Details of deficiency)	Auditor's recommendations	Action taken by the licensee by the end of the audit period
04/2025	<p>A3 (6.2) Asset maintenance – <i>Regular inspections are undertaken of asset performance and condition.</i> Inspection programs are not being fully implemented, due to a lack of budget.</p> <p>A3 (6.3) Asset maintenance - <i>Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule</i> Maintenance plans are not being fully implemented, due to a lack of budget, resulting in a maintenance debt.</p> <p>A3 (10.5) Financial planning – <i>The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services.</i> Notwithstanding the approach used to develop the budget/financial plan, it is apparent that it does not adequately provide for the operations and maintenance, administration and capital expenditure requirements of the services.</p> <p>A3 (11.3) Capital expenditure planning - <i>The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan</i> The investment program is not adequate to fully address the requirements for replacement of aging and/or deteriorating assets to an extent that reduces risk of failure and impact on service to an acceptable level.</p>	<p>Whilst it is acknowledged that Water Corporation is subject to a constrained budget, it should continue to take action as necessary to secure sufficient funding to fully provide for the operations and maintenance, administration and capital expenditure requirements of the services. The level of funding should be adequate to ensure that the risk of asset failure and impact on service is reduced to an acceptable level, i.e. it should be adequate to fully address the requirements for ongoing maintenance and the replacement of aging and/or deteriorating assets as necessary to meet this objective.</p>	<p>Water Corporation is working within a constrained budget and must prioritise the delivery of services to conform to these financial parameters. Capital project delivery and maintenance are prioritised based on risk to gain the greatest risk reduction possible through the implementation of the reduced programs.</p> <p>It has been demonstrated that Water Corporation is actively seeking additional funding through strategic engagement with Government in an attempt to address budget shortfalls.</p>

Recommendation reference (no./year)	Process and policy deficiency / Performance deficiency (Rating / Asset management process & effectiveness criterion / Details of deficiency)	Auditor's recommendations	Action taken by the licensee by the end of the audit period
05/2025	<p>B3 (7.2) Asset management information system <i>- Input controls include suitable verification and validation of data entered into the system</i></p> <p>The recommendation from a previous review was not closed out regarding the engineering out the source of data error and providing real-time data entry validation.</p>	<p>The Asset Data Model (ADM) has not been delivered, leaving no single source of truth for asset master data. This creates ongoing risk of duplicate records, inconsistent hierarchies, and manual corrections. The gap should be closed by completing ADM implementation and integration with Maximo and ESRI, or by adopting another suitable approach to engineer outsources of error in the work order lifecycle and ensure the completeness and integrity of all asset data. This should include real-time validation of data at the point of entry. Once these initiatives are complete, their effectiveness should be validated through defined success measures.</p>	<p>During the review period the Work Management Project was completed to implement Maximo as the work order platform, this will improve the quality of data in work orders. The Enterprise Resource Planning Program is now responsible for delivering the ADM in support of a single source of truth for asset master data. In addition, through the Information Management (IM) Program the IM1 Foundations & Tools project, has deployed an Information Management Framework in FY24/25 to enable and mature data ownership, classification and quality management through its lifecycle. Roll-out across the business is in progress.</p>
06/2025	<p>B3 (10.1) Financial planning – <i>The financial plan states the financial objectives and identifies strategies and actions to achieve those.</i></p> <p>The financial plan is prepared to be consistent with funding levels agreed with Government, and does not necessarily provide for the full and effective implementation of the strategies identified to achieve its asset management objectives.</p>	<p>Whilst it is acknowledged that Water Corporation is subject to a constrained budget, in addition to structuring the financial plan to be consistent with funding levels agreed through negotiation with Government, the plan should also set out the funding required to fully and effectively implement the strategies identified to achieve its asset management objectives.</p>	<p>Internal documentation demonstrates that Water Corporation does develop “needs based” budgets as part of its internal analysis and prioritisation processes. Water Corporation also prepares and submits business plans that show “needs based” funding requirements as part of its negotiations with Government.</p>

9. APPROVAL OF THE REPORT BY THE AUDITOR

We confirm that the review of Water Corporation's AMS and documented in this report is an accurate presentation of our findings and opinions.

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DOCUMENT HISTORY AND TRACKING

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Version	Section/s Modified	Brief Description of Amendment	Author	Approver	Issue Date
0.1	All	New draft document	James Howey Jim Sly	n/a	n/a
0.2	All	Internal review	James Howey Jim Sly	James Howey	1/9/2025
0.3	All	Response to comments from Water Corporation and ERAWA	James Howey Jim Sly	James Howey	15/12/2025
0.4	Executive summary Sections 7 & 8	Removal of commercial in confidence detail, minor clarifications and merging similar recommendations	James Howey Jim Sly	James Howey	23/01/2026
1.0	Section 7	Replaced real place names with anonymised locations.	James Howey Jim Sly	James Howey	11/02/2026

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