

Report 4 of 2023

Management of Community Wastewater
Management Systems



Report of the Auditor-General

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Management of Community Wastewater Management Systems

Tabled in the House of Assembly and ordered to be published, 30 May 2023

First Session, Fifty-Fifth Parliament

By authority: M. Dowling, Government Printer, South Australia

*The Auditor-General's Department acknowledges and respects
Aboriginal people as the State's first people and nations, and
recognises Aboriginal people as traditional owners and occupants of
South Australian land and waters.*



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29 May 2023

President
Legislative Council
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Speaker
House of Assembly
Parliament House
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Dear President and Speaker

**Report of the Auditor-General:
Report 4 of 2023 *Management of Community Wastewater Management Systems***

Under section 32(1)(c) of the *Public Finance and Audit Act 1987* (PFAA), I have conducted a review of the community wastewater management services provided by the Berri Barmera Council and the Yorke Peninsula Council.

I present to each of you my independent assurance report on the findings of the review.

Copies of this report have also been provided to the Berri Barmera Council and the Yorke Peninsula Council.

Content of the report

Our review assessed whether the Berri Barmera Council and the Yorke Peninsula Council effectively managed their Community Wastewater Management Systems (CWMS) networks in a way that demonstrated:

- a safe and reliable service was provided
- financial sustainability over the network's useful lives.

Berri Barmera Council

We concluded that the Berri Barmera Council had successfully removed and treated wastewater collected from properties connected to its CWMS network over the period we reviewed.

We also concluded that some fundamental areas of its management of its CWMS network were not operating effectively. They are summarised in section 4.1.2.

Consequently, the Berri Barmera Council is not able to demonstrate that its CWMS network is being managed in a way that is financially sustainable over its useful life. This increases the risk of its CWMS network failing to provide a safe and reliable level of service in the medium to long term.

Yorke Peninsula Council

We concluded that the Yorke Peninsula Council had successfully removed and treated wastewater collected from properties connected to its CWMS network over the period we reviewed.

We also concluded that some key areas of its management of its CWMS network were not operating effectively. They are summarised in section 5.1.2.

My responsibilities

Reviews conducted under section 32(1)(c) of the PFAA are assurance engagements that assess whether a publicly funded body is achieving economy, efficiency and effectiveness in its activities. These engagements conclude on the performance of the activities evaluated against identified criteria.

The Auditor-General's roles and responsibilities in undertaking reviews are set out in the PFAA. Section 32(1)(c) of the PFAA empowers me to conduct this review while sections 32(4) to (6) deals with the reporting arrangements.

The review was conducted in line with the Standard on Assurance Engagements ASAE 3500 *Performance Engagements*. We complied with the independence and other relevant ethical requirements for assurance engagements.

Acknowledgements

The audit team for this report was Salv Bianco, Iolanda Telford and Sue Forder. They were assisted by Kellogg Brown & Root Pty Ltd.

We appreciate the cooperation and assistance given by the staff of the Berri Barmera and Yorke Peninsula Councils.

Yours sincerely



Andrew Richardson
Auditor-General

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1 Report overview

1.1 Introduction

This review assessed whether two councils – the Berri Barmera Council and the Yorke Peninsula Council – effectively managed their Community Wastewater Management Systems (CWMS) networks in a way that demonstrated:

- a safe and reliable service was provided
- financial sustainability over the network’s useful life.

It is important that all South Australians have access to safe, reliable and affordable sewerage services no matter where they live. The SA Government is responsible for providing this service and for many years it has funded councils to provide these services in regional areas through the CWMS subsidy program.¹ These councils are responsible for managing the CWMS schemes in their council areas. They recover the costs of operating and maintaining these schemes through an annual service charge paid by those receiving the CWMS services. There are 179 CWMS schemes managed by 48 of the 68 councils across South Australia.

The CWMS network costs in South Australia in 2020-21 were \$70 million (both operating and capital) and CWMS income was \$68 million (which includes service charges, grants and developer contributions).²

1.2 Audit conclusions

1.2.1 Berri Barmera Council

We concluded that the Berri Barmera Council had successfully removed and treated wastewater collected from properties connected to its CWMS network over the period we reviewed.

We also concluded that some fundamental areas of its management of its CWMS network were not operating effectively. They are summarised in section 4.1.2.

Consequently, the Berri Barmera Council is not able to demonstrate that its CWMS network is being managed in a way that is financially sustainable over its useful life. This increases the risk of its CWMS network failing to provide a safe and reliable level of service in the medium to long term.

We also identified some areas where the Berri Barmera Council was effectively managing its CWMS network.

Our full conclusion is in section 4.1.2.

¹ Refer to the Auditor-General’s Report 11 of 2021 *Examination of the Community Wastewater Management Systems Program* for information about the CWMS subsidy program.

² Source: South Australian Local Government Grants Commission, from councils’ submitted 2020-21 Supplementary Returns to the Annual Financial Statements.

1.2.2 Yorke Peninsula Council

We concluded that the Yorke Peninsula Council had successfully removed and treated wastewater collected from properties connected to its CWMS network over the period we reviewed.

We also concluded that some key areas of its management of its CWMS network were not operating effectively. They are summarised in section 5.1.2.

We also identified some areas where the Yorke Peninsula Council was effectively managing its CWMS network.

Our full conclusion is in section 5.1.2.

1.3 Why the effective management of a CWMS network is important

Providing access to safe and reliable sewerage services to all South Australians, no matter where they live, is an essential service that impacts:

- an individual's quality of life by reducing the health risk of exposure to untreated wastewater
- the economic growth and development of communities
- the environment.

The SA Government is responsible for providing this service across South Australia and has a specific policy on providing CWMS schemes in areas of the State not serviced by the South Australian Water Corporation. However for many years it has funded regional councils to manage and operate these services through the CWMS subsidy program,³ on the basis that this is more cost effective in regional areas.⁴

The *Local Government Act 1999* (LG Act) enables councils to impose an annual service charge on those receiving CWMS services to recover the costs of operating and maintaining them. Appendix 2 provides further information about the law and industry guidance on asset management.

Councils must manage their CWMS networks effectively to ensure they deliver the required levels of service, are financially sustainable and meet current and future community needs. The risks of not effectively managing them include:

³ Schedule 2 to the funding deed between the Minister for Local Government and the Local Government Association of South Australia, 13 December 2017, Community Wastewater Management Systems State Government Policy.

⁴ Auditor-General's Report 11 of 2021 *Examination of the Community Wastewater Management Systems Program* provides further information about the CWMS subsidy program.

- increased deterioration if appropriate and timely maintenance and renewal is not performed
- reduced levels of service. This may lead to community dissatisfaction and the council being subject to public criticism and mistrust
- an increase in future costs. This may place financial burden on the future generation of ratepayers and impact a council's long-term financial sustainability
- a negative impact on the quality of community life and economic activity within the council area
- potential environmental hazards and ramifications for public safety.

1.4 The structure of this report

This report details our review approach and results (including audit conclusions, findings and recommendations) for the two regional councils we reviewed as follows:

- section 2 provides an overview of CWMS networks and the challenges of managing them
- section 3 provides our review mandate, objectives and approach
- section 4 provides an overview of the Berri Barmera Council's management of its CWMS network, the results of our review and the Council's responses
- section 5 provides an overview of the Yorke Peninsula Council's management of its CWMS network, the results of our review and the Council's responses.

2 Background

2.1 Asset management principles and framework

Asset management is a systematic, structured process covering the whole life of an asset by which councils manage infrastructure assets, like a CWMS network.

The aim of asset management is to meet a required level of service in the most cost-effective way. For a CWMS network this involves managing the network over its expected useful life for current and future community members, managing risks and achieving long-term financial sustainability. A council must also manage its CWMS network effectively to deliver a safe and reliable service to its community.

The asset management practices of the two councils we reviewed are guided by the Institute of Public Works Engineering Australasia's (IPWEA's) *International Infrastructure Management Manual* (IIMM), International Edition 2015. Appendix 3 provides more details on asset management principles and framework.

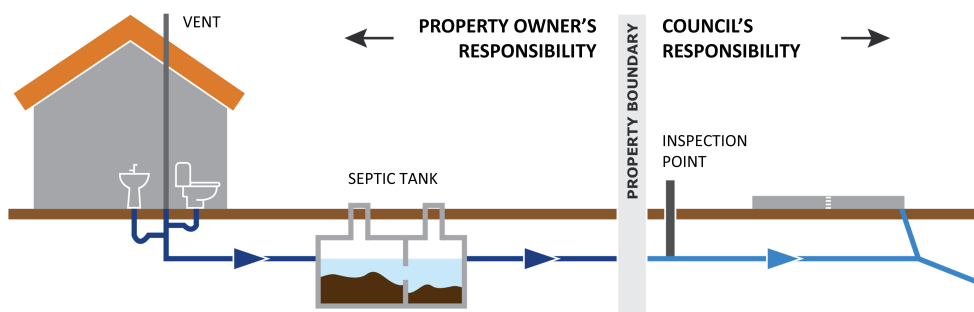
2.2 The components of a CWMS network

A CWMS network is a collection system made up of pipes and pump stations that transport effluent from a property owner's septic tank to the council's wastewater treatment plant.

As figures 2.1 and 2.2 show, the council owns the assets beyond the property boundary, but its CWMS services may include emptying the septic tank every few years. When a council installs a new CWMS scheme within the network, it is the property owner's responsibility to install and pay for the piping from the septic tank to the inspection point.

Some networks include infrastructure to enable the treated wastewater to be reused.

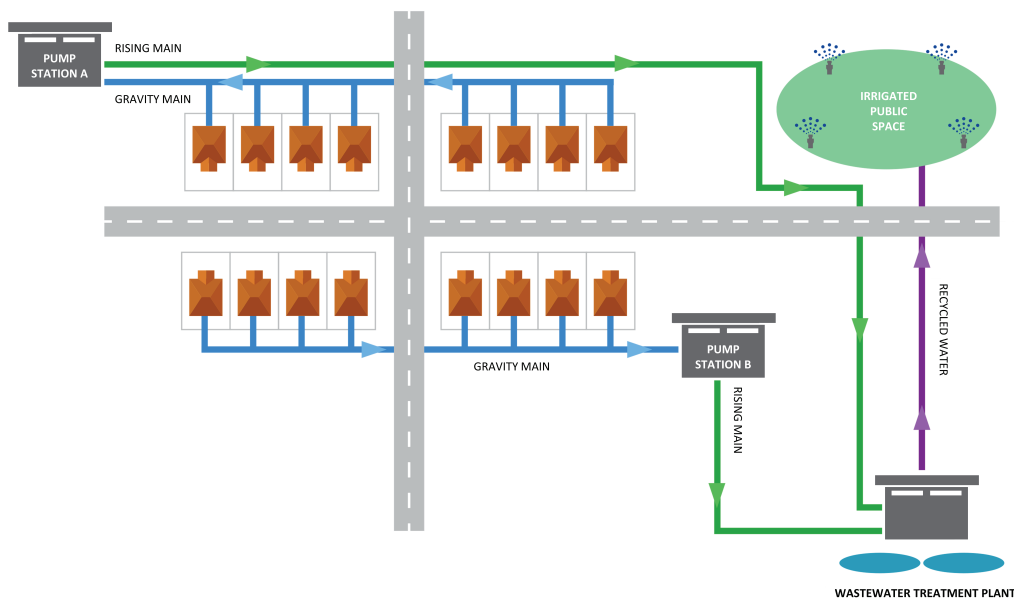
Figure 2.1 Typical household connection to the CWMS network



Source: Local Government Association of South Australia.

Figure 2.2 is a diagram of a typical layout of a scheme within a council's CWMS network showing the pipes and pump stations. Some CWMS schemes do not require pump stations because the collection system operates by gravity.

Figure 2.2 Typical layout of a CWMS scheme



Source: Local Government Association of South Australia.

Photos in Appendices 4 and 5 show the components of a CWMS network.

2.3 Challenges of managing a CWMS network

Councils face many significant challenges in managing long lifecycle infrastructure, like a CWMS network. They include:

- ensuring the existing CWMS network is maintained to a safe and serviceable standard
- ensuring inspections of the existing CWMS network are performed
- unforeseen events that are not covered by mitigation strategies (eg insurance)
- under/over achievement of growth targets
- under/over capitalisation of infrastructure
- uncertainty about construction costs
- future demand for treated wastewater
- additional regulation and compliance costs
- asset valuations and asset lives
- technical and commercial obsolescence
- attracting and retaining experienced specialist staff to manage them.

These challenges intensify during extreme weather events like the recent River Murray floods. The floods had a significant impact on the Berri Barmera Council's management of its assets and resources. This is because it had to immediately respond to protect and reduce damage to its assets (including the CWMS network) and community properties, and to the welfare of community members.

The Berri Barmera Council identified that its CWMS network assets in Berri and Barmera were at risk from the flood. The Barmera pump station, if damaged by flood waters, had the potential to displace about 4,000 residents. Barriers were installed to prevent the flood water inundating Lake Bonney and damaging pump stations across the council area.

At the time of this report, the Berri Barmera Council was assessing the damage caused by the flooding and prioritising resources to carry out remedial works across all affected infrastructure.

3 Audit mandate, objective and scope

3.1 Our mandate

The Auditor-General has authority to conduct this review under section 32(1)(c) of the *Public Finance and Audit Act 1987*.

3.2 Our objective

We assessed whether the two councils we reviewed effectively managed their CWMS networks in a way that demonstrated:

- a safe and reliable service was provided
- financial sustainability over the network's useful life (and the full recovery of associated costs).

3.3 What we reviewed and how

Our review covered the period from July 2018 to November 2022.

To meet our objective we assessed whether the two councils we reviewed had:

- clearly defined management's roles and responsibilities and implemented governance arrangements for managing their CWMS networks and, where relevant, their contract arrangements with service providers
- established and documented required levels of service and performance measures for their CWMS networks
- consulted with their communities in establishing the required levels of service for their CWMS network
- adopted objectives, strategies, policies and strategic management plans⁵ for maintaining their CWMS networks to achieve their service delivery requirements and demonstrate the full recovery of CWMS service costs
- performed asset condition assessments and used these to plan and prioritise maintenance and renewal/upgrade activities
- established systems to capture key information on their CWMS networks to inform strategic, financial and operational plans and performance reporting
- established a process to identify, assess and monitor risks in maintaining their CWMS networks
- established systems and processes to identify and manage CWMS network activities and monitor and report on their outcomes.

⁵ Strategic management plans include a council's infrastructure and asset management plans and long-term financial plan.

3.4 What we did not review

We did not assess the validity of the Local Government Association of South Australia's (LGA's) budget model.

We did not assess the activities of the councils' service contractors.

We did not assess the councils' risk management practices across all their functions. We focussed on the management of CWMS network risks.

4 Berri Barmera Council

4.1 Executive summary

4.1.1 What we did

We assessed the effectiveness of the Berri Barmera Council's management of its CWMS network over the four-year period we reviewed against our review objective in section 3.2.

4.1.2 Audit conclusion

We concluded that the Berri Barmera Council had successfully removed and treated wastewater collected from properties connected to its CWMS network over the period we reviewed.

We also concluded that some fundamental areas of its management of its CWMS network were not operating effectively. These were:

- asset management planning and funding of CWMS service costs
- assessing the physical condition of CWMS network assets
- management of its main CWMS service provider
- identifying preventative maintenance requirements for all CWMS assets
- recording information on CWMS assets
- setting CWMS performance measures and targets
- evaluating and reporting on CWMS performance and renewal activity
- identifying, assessing and documenting CWMS-related risks.

Consequently, the Council is not able to demonstrate that its CWMS network is being managed in a way that is financially sustainable over its useful life. This increases the risk of the CWMS network failing to provide a safe and reliable level of service in the medium to long term.

We also identified some areas that were operating effectively, where the Council had:

- an adequate asset management policy in place
- sound practices to ensure planned maintenance activities for pump stations were completed as scheduled to support a safe and reliable CWMS service.

4.1.3 What we found

The key findings from our review of the Berri Barmera Council's management of its CWMS network were that:

- its CWMS asset management plan did not include adequate information on the assets it owns and manages, how they are managed, their condition and the CWMS network's capability to meet required levels of service (sections 4.3.1 and 4.3.3)
- it could not demonstrate that the CWMS asset cost requirements will be fully funded, and a funding shortfall is likely (section 4.3.2)
- it had not assessed the physical condition of all components of its CWMS network (section 4.3.4)
- it did not have processes to evaluate and monitor its main CWMS contractor's performance (section 4.4.2)
- payments to the main contractor were not approved in line with delegations of authority and were not verified for accuracy (sections 4.4.3 and 4.4.4)
- preventative maintenance reports were not maintained for all assets (section 4.5.1)
- it had not fully identified, assessed and documented the CWMS network management risks (sections 4.6.1)
- the asset register did not record key information about its CWMS network assets (section 4.7.1)
- it did not prepare reports on the operational and financial performance of the CWMS network and its performance against CWMS objectives and required levels of service (section 4.8.1).

4.1.4 What we recommended

We recommended that the Berri Barmera Council:

- update its CWMS asset management plan to ensure the key requirements are addressed
- review its financial strategy and determine how and by when it will address the projected funding shortfall and achieve full CWMS recovery cost. It should identify its asset requirements and funding needs to support the financial forecasts in its long-term financial plan
- develop and implement an approach to assessing the asset condition of its CWMS network, and monitor and report on the actions and outcomes. The asset register should be updated for the results of the asset condition assessments

- implement a contract management process to ensure CWMS contractors are meeting agreed service and contract requirements. It should develop a contract management plan to help manage the long-term contract with its main contractor
- ensure all payments are approved in line with delegations of authority and verified for accuracy
- complete preventative maintenance reports for all asset classes in its CWMS network
- rigorously analyse its asset information and asset management practices to identify and assess all risks specific to its CWMS network. The CWMS asset management plan should document a detailed and complete assessment of these risks
- set clear performance measures and targets for its CWMS network that are then monitored, evaluated and reported against
- prepare separate management reports on the operations, finances and service performance of its CWMS network.

4.1.5 Berri Barmera Council's response

The Berri Barmera Council accepted our recommendations and advised us how it would action them. Its response to each recommendation is provided in sections 4.3 to 4.8.

Appendix 6 contains the Council's response to this report.

4.2 Overview of the Berri Barmera Council

4.2.1 Berri Barmera Council's CWMS network

The Berri Barmera Council is in the Riverland, approximately 220 km north-east of Adelaide. Its resident population is around 10,000 and it provides CWMS services to 3,184 residential customers and 490 non-residential customers.

The Council's CWMS network comprises six schemes across the council area of 508 km² as shown in figure 4.1, with 31 pump stations and 119 kms of pipes.

The Council has a 25-year arrangement with a service provider to build, operate and maintain three wastewater treatment plants and three pump stations for treated wastewater. Ownership of these assets will be transferred to the Council when the contract ends in 2032. The Council sells the treated wastewater to the Berri and Barmera golf clubs at minimal cost for irrigation.

Figure 4.1: Location of the Berri Barmera Council's CWMS schemes



Source: Based on information provided by the Berri Barmera Council.

4.2.2 Asset management roles and responsibilities

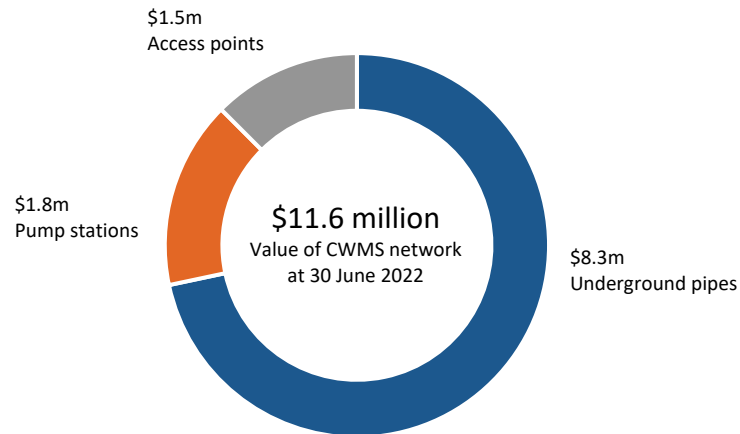
The Council's Manager for Environment and Regulatory Services and the Manager Infrastructure and Operations are jointly responsible for managing its CWMS network and services. It has engaged contractors to provide specialist services to manage components of the CWMS network.

Appendix 4 details the Council's governance structure for asset management.

4.2.3 Financial overview of the CWMS network

The Council’s CWMS network is valued at \$11.6 million, which is 8.5% of its physical assets, and comprises the asset components shown in figure 4.2.⁶

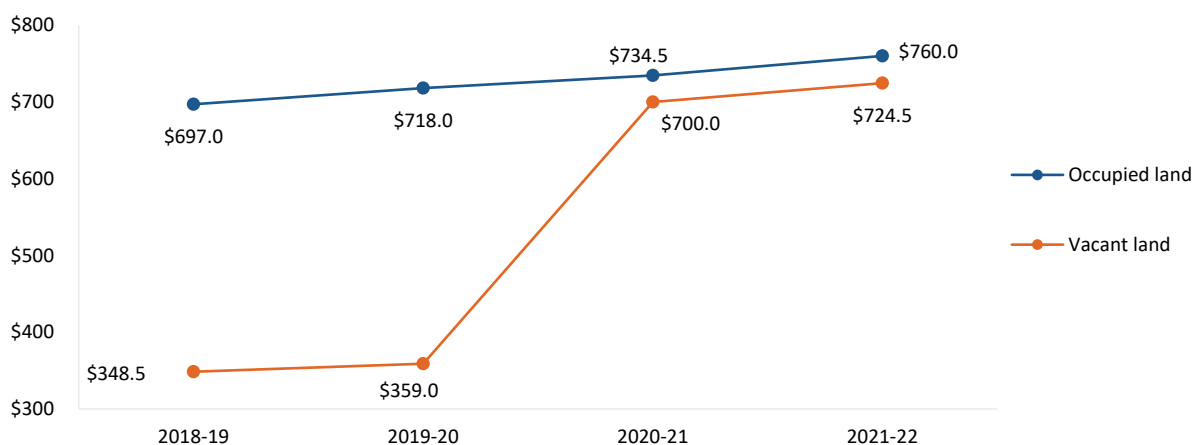
Figure 4.2: Value of the CWMS network asset components



Source: Berri Barmera Council’s detailed asset movement report for 2021-22 (unaudited).

The Council levies an annual service charge on connected properties to recover the cost of providing the CWMS service. A lower amount is charged for vacant land where a connection to the CWMS is available. The service charge is applied consistently across the six CWMS schemes. Figure 4.3 shows the amounts charged since 2018-19.

Figure 4.3: CWMS service charges since 2018-19

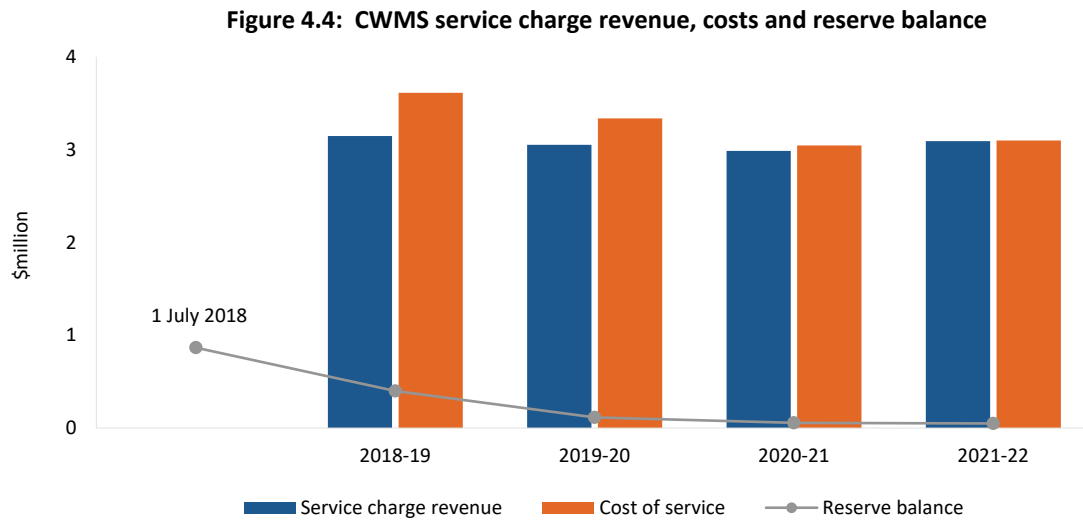


Source: Berri Barmera Council’s annual business plans (unaudited).

⁶ Berri Barmera Council’s annual financial statements for the year ended 30 June 2022, Note 7 – Infrastructure, Property, Plant & Equipment.

Figure 4.3 shows a 95% increase in the CWMS service charge applied to vacant land in 2020-21. This was to raise additional funds needed to address the shortfall in revenue caused by a decrease in CWMS services provided to some commercial properties.

The revenue raised from CWMS service charges, cost of providing the CWMS service and funds held in reserve over the past four years are shown in figure 4.4.

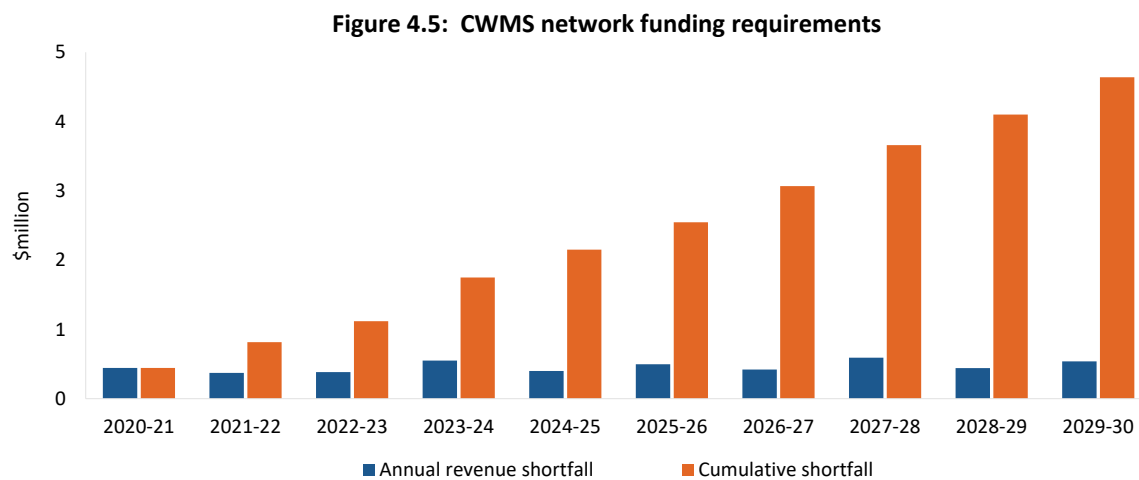


Source: Berri Barmera Council’s audited annual financial statements.

Figure 4.4 shows that CWMS network costs decreased from \$3.612 million in 2018-19 to \$3.098 million in 2021-22, a reduction of 14.2%. Service charge revenue decreased by 1.7% from \$3.145 million in 2018-19 to \$3.091 million in 2021-22. Both decreases are due to a contract to provide CWMS services to commercial properties being cancelled.

Figure 4.4 also shows that since 1 July 2018 the reserve has decreased by \$816,000 (94%) to \$49,331 on 30 June 2022⁷ to fund CWMS network costs not covered by the service charge revenue.

The Council’s CWMS network funding requirements are shown in figure 4.5.



Source: Based on information provided by the Berri Barmera Council (unaudited).

⁷ Berri Barmera Council’s annual financial statements for the year ended 30 June 2022, Note 9 – Other Reserves: District CWMS Reserve.

Figure 4.5 shows a continued shortfall in forecast CWMS funding each year, reaching a cumulative total of \$4.6 million by 2029-30. This suggests that the service is not financially sustainable unless service charges are increased and/or costs are significantly reduced.

Since we completed our review, Council management has advised us that these forecasts have been revised and the forecast shortfall for CWMS services for the period 2020-21 to 2029-30 is now \$2.2 million. Council management also advised us that the change in the forecast is due to a reduction in CWMS services to some commercial properties.

4.2.4 Berri Barmera Council's strategic asset management framework

The Council's strategic asset management framework includes key elements of a good framework. Appendix 4 provides further information on it.

4.3 Asset management planning findings

4.3.1 Berri Barmera Council's CWMS asset management plan does not contain adequate information

Recommendation

In updating its CWMS asset management plan, the Berri Barmera Council should:

- consider the guidance provided by IPWEA and the LGA to ensure the key requirements are addressed, at least at IPWEA's core asset management maturity level
- confirm the assets to be included in the plan, with provision for expansion as additional assets are acquired
- agree on an approach to developing the plan with the consultant engaged
- work closely with the consultant to ensure the plan is well understood by the council staff responsible for implementing it and keeping it up to date
- use information that is already captured to inform the plan, such as the annual pump station condition assessment reports prepared by its service provider
- include key information about the arrangements with service providers and their impact on delivering the service to the community.

The Council should ask the service provider for wastewater treatment plants to update its asset management plan for information on the current demand on its CWMS assets compared to its contractual future demand, scheduled to occur when the contract term ends.

Finding

We found that the Berri Barmera Council's CWMS asset management plan does not contain adequate information on its CWMS assets, how they are managed, their condition and the

CWMS network's capability to meet the required levels of service. This is because, for example:

- it did not cover all CWMS network assets (eg information on the pipe network was not included)
- it does not clearly align with the Council's asset management objectives and strategy
- the Council had not defined the levels of service required from its CWMS network
- the Council had not established performance measures and targets.

On this basis, we concluded that the Council's CWMS asset management plan did not contain information that met the core level of asset management maturity.⁸

Why it is important for CWMS asset management plans to contain key asset information

A CWMS asset management plan that meets a core level of asset maturity would help the Council meet its objectives of delivering the required levels of service to the community and being financially sustainable over the life of the CWMS network. The plan provides information to the elected body and the community on the specific arrangements the Council has with external service providers, funding requirements for maintenance and renewal activities and the impact on service levels and risk. The Council could then use this information to review its performance and make decisions on levels of service and risk, future asset management practices and funding strategies.

Council staff advised us that the Council intends to engage a consultant to prepare a CWMS asset management plan that meets the core level of asset management maturity. It is important that staff work closely with the consultant to ensure:

- the approach to developing the plan is well understood
- key stakeholders are engaged in the process
- the plan is consistent with the Council's strategic direction, policy and objectives.

Berri Barmera Council's response

Council accepts the recommendation and has commenced the process of update of the CWMS Asset Management Plan.

Due to the scale and complexities of the CWMS the project will be multi-year.

Council engaged an independent contractor for the inspection, reporting and condition rating of Councils CWMS system. This information will be used for the development of an updated CWMS AMP.

Revaluations will also be undertaken as part of the current review.

⁸ See Appendix 1 for details of asset management maturity levels.

4.3.2 Berri Barmera Council could not demonstrate that CWMS asset cost requirements will be fully funded and a funding shortfall is likely

Recommendation

The Berri Barmera Council should review its financial strategy and determine how and by when it will address the projected funding shortfall and achieve full CWMS cost recovery.

The Council should consider using the LGA's budget model to develop a 20-year CWMS financial plan to support its funding strategy and long-term financial plan.

The Council should clearly identify its asset requirements and funding needs to support the financial forecasts in its long-term financial plan. It should develop a 20-year renewal program for all asset components of the CWMS network, which should explain any renewal backlogs and how they will be addressed.

The Council should analyse annual CWMS expenditure against forecast to understand the reason for any variances and inform the next planning process.

The Council should obtain from its contractor for wastewater treatment:

- a five-year replacement and refurbishment plan that is updated annually and outlines the proposed asset renewal activities over the next five years
- a 10-year asset management and financial plan closer to the end of the contract term to determine its future asset and funding requirements.

Finding

The Berri Barmera Council's long-term financial plan 2020–2030 states that its CWMS funding strategy is to achieve full cost recovery from customer charges.

Our analysis of the information supporting the long-term financial plan found that there is a shortfall in CWMS revenue each year, reaching a cumulative total of \$4.6 million by 2029-30 as shown in figure 4.5. This suggests that projected CWMS revenue will not cover the costs to operate and maintain the CWMS. This is not consistent with the Council's funding strategy.

Pump stations, pipe network and other assets

The contractor provided the Council with a capital (upgrade and renewal) program for pump stations for the period 2016-17 to 2025-26. It identifies the individual asset work schedule from 2016-17 to 2021-22, and for the four years after it allocates a fixed annual amount for preventative maintenance that is not allocated to individual assets. The total capital forecast is \$2 million over the 10 years.

We found that these pump station capital program forecasts did not agree to the amounts in the long-term financial plan, and that the two could not be easily compared. The long-term financial plan falls short by \$150,000 over the period of the capital program.

Council staff advised us that the long-term financial plan budget also includes the renewal costs for the pipe network. However they could not provide operational and capital programs identifying the asset requirements of the pipe network and other CWMS network assets, including any renewal backlogs. This means there is potentially a larger shortfall in funding that cannot be reliably quantified without sufficient detail about these other programs.

Wastewater treatment plants

Payments to the contractor to manage and operate wastewater treatment plants are included in operating expense forecasts and indexed annually. The contractor provides information on planned asset replacement and refurbishment needs but does not provide cost estimates. The contractor does not provide the Council with a formal replacement and refurbishment plan each year to inform its asset planning process.

CWMS revenue

We found that the information supporting the long-term financial plan did not clearly demonstrate whether CWMS revenue was calculated to fully offset CWMS expenditure. The projected increase in CWMS service charges provided in the long-term financial plan will not generate enough revenue to cover CWMS costs.

CWMS reserve

Figure 4.5 shows that the CWMS reserve has been used to meet the funding shortfall. Based on its financial projections, the Council will need to increase its service fee charge more than projected and/or significantly reduce CWMS costs to achieve full cost recovery over a period it determines.

Why it is important to identify asset requirements and have a funding strategy and plan in place

The Council could not clearly demonstrate that the asset expenditure requirements for its CWMS network were fully funded in its annual budget and long-term financial plan. This is evidenced by a reducing CWMS reserve balance. There is therefore a significant risk of a funding shortfall and CWMS assets not being renewed on time. This increases the risk of the Council failing to provide a safe and reliable level of service to its community.

Berri Barmera Council's response

Council accepts the recommendation.

A comprehensive review of the Long Term Financial Plan is scheduled for the 2023/24 financial year.

It should be noted that the shortfall recorded in the audit period was due to the cancellation of a contract with a local industrial contributor to the CWMS network, which affected the quantum contributed to the reserve at that time.

This has been addressed in the 2022/2023 financial year in accordance with Council's annual business plan.

This matter along with a 20-year CWMS financial plan developed with the LGA's budget model will also be considered in the comprehensive review of Council's Long Term Financial Plan, scheduled for 2023/2024.

4.3.3 Berri Barmera Council had not defined core requirements of effective asset management

Recommendation

In developing its CWMS asset management plan, the Berri Barmera Council should:

- clearly define its CWMS asset management objectives, which should be linked to its organisational objectives and consistent with its asset management policy
- set out its required levels of service, written in terms the community can understand and relate to. It could consider consulting with the community on the levels of service before adopting them
- establish clear performance measures and targets.

Finding

We found the Berri Barmera Council had not defined core requirements to support the effective management of its CWMS network and implementation of its asset management policy. For example, it had not defined:

- its CWMS asset management objectives
- appropriate levels of service and how they would be measured.

Why it is important to have CWMS asset management objectives

Without CWMS asset management objectives, the Council cannot clearly demonstrate that its CWMS network would be managed in a way to achieve organisational objectives and support its asset management policy requirements.

Why it is important to define and measure levels of service

Without defining and measuring levels of service, the Council cannot clearly demonstrate to its community and other stakeholders how its CWMS network is measured and monitored to understand whether:

- it is achieving the asset management objectives
- it is delivering the required levels of service
- corrective action is required.

Berri Barmera Council's response

In addition to the response provided in section 4.3.1, the Council responded that:

Council conducts public consultation pursuant to the Local Government Act 1999 and Council's Public Consultation and Community Engagement Policy.

4.3.4 Berri Barmera Council had not assessed the condition of all components of its CWMS network

Recommendation

The Berri Barmera Council should develop and implement an approach to assessing the asset condition of its CWMS network. This should include a methodology on how assets will be selected for inspection, how often condition data should be updated, the application of condition ratings and how its asset management information system (AMIS) should be updated with condition data.

The methodology should be documented in the Council's CWMS asset management plan and it should monitor and report on actions and outcomes over the life of the plan.

The Council should update its AMIS with condition assessment ratings, priority risk rankings and critical assets and, where relevant, revised remaining useful life forecasts following physical inspections.

Finding

We found that the Berri Barmera Council did not have a formal approach to assessing the condition of its CWMS network.

Pump stations

A contractor provides information on the condition of pump stations based on its inspection and maintenance activities. This information informs the maintenance and renewal works for the following year.

The Council did not assess this information to determine a specific condition rating to identify the category of works required to maintain or renew the asset. Further, the AMIS is not updated for the results of these activities.

Pipe network

While the AMIS provides for the documentation of asset condition data for pipe assets, we found that a condition assessment had not been performed. There was limited information documented about high risk and critical assets (eg gravity drains in poor condition).

There was not enough pipe asset condition data to effectively plan and prioritise maintenance and renewal activities.

Why asset condition assessments help a council manage its CWMS network effectively

Performing asset condition assessments and capturing this information is fundamental to managing a CWMS network effectively. Asset condition information is needed to effectively:

- plan and prioritise maintenance and renewal work and funding
- manage the risk of assets failing to provide safe and reliable levels of service
- report on the CWMS network's performance against asset objectives and levels of service.

The Council advised us that in December 2022 it sought to procure a contractor to inspect the condition of its pipe network over several years. It intends to use this information to complete a condition assessment and update the AMIS to inform the maintenance and renewal activity programs and CWMS asset management plan.

Berri Barmera Council's response

Council accepts the recommendation.

As advised earlier herein, Council has commenced the process of update of the CWMS Asset Management Plan in a multi-year project.

Inspection and asset condition assessments will update the baseline of condition rating data of Councils CWMS system. This information will be used for the development of an updated CWMS AMP and the AMIS which follows.

4.4 Governance arrangements findings

4.4.1 Roles and responsibilities for managing the CWMS network were not clear

Recommendation

The Berri Barmera Council should review and clearly document the roles and responsibilities for its CWMS network asset management.

Finding

The Manager for Environment and Regulatory Services and the Manager Infrastructure and Operations are jointly responsible for managing the Berri Barmera Council's CWMS network and services.

It was unclear how this joint responsibility worked in practice to ensure the effective management of the CWMS network. For example, we found that:

- in practice there is an overlap in responsibilities. The Manager Environment and Regulatory Services meets with contractors to discuss CWMS network operations and asset requirements to inform the annual asset planning process. However, this responsibility aligns with the Manager Infrastructure and Operations' role description, which covers planning and managing infrastructure assets
- there was no reporting on the CWMS network's performance by either manager.

Why it is important that roles and responsibilities are clear

There are many areas that contribute to the effective management of a CWMS network and delivering a CWMS service to the community. It is important that staff in these areas, such as finance, environmental and infrastructure services, work together for an integrated approach to managing the CWMS network effectively. Roles and responsibilities between these areas should be clear to avoid duplication and gaps in asset management practices, and to ensure accountability is properly assigned.

Berri Barmera Council's response

Council notes the recommendation and advises the matter has been addressed. Council notes, that at the time of audit several vacancies existed within the organisation at senior level. Such vacancies also resulted in minor restructure and changes to departmental responsibility.

It should be noted, that senior management staffing has since returned to full capacity and the management of the CWMS is the joint responsibility of the Manager Infrastructure and Operations and the Manager Environment and Regulatory Services.

Responsibilities in relation to the CWMS network asset management are clearly documented in position descriptions and annual work plans.

4.4.2 Berri Barmera Council did not have processes to evaluate and monitor its main CWMS contractor's performance

Recommendation

The Berri Barmera Council should implement a contract management process to ensure its CWMS contractors are meeting agreed service and contract requirements.

The Council should develop a contract management plan to help manage the long-term wastewater treatment plant contract with its service provider. This plan should allow enough time for the Council to review the ongoing effectiveness and viability of the current service model before the contract expires.

The Council should ensure that the service provider defines performance measures and assessment metrics to demonstrate the achievement of the service levels defined in its asset management plan for the assets owned by the service provider.

Finding

The Berri Barmera Council's main contractor provides monthly performance reports on the KPIs identified in the contract. We found that the Council did not review these reports and had no process to assess the service provider's performance in providing CWMS services.

Why it is important for councils to monitor a contractor's performance

Processes to manage contracts and contractor performance ensure that contract terms are met, services are delivered at the expected performance level and any issues are promptly identified and resolved.

Berri Barmera Council's response

Council accepts the recommendation. Council will investigate implementation of an appropriate contract management plan to assist in management of the independent contractor via the fee for service contract.

Current performance measurements in accordance with the contract include:

- *Invoice calculation and substantiation*
- *KPI report*
- *Plant flow summary, inlet and treated wastewater quality report/s*
- *AWE [Average Weekly Earnings] escalation for the current quarter*
- *Utility and input purchases account/s.*

4.4.3 Payments made to Berri Barmera Council's main contractor were not approved by an authorised delegate

Recommendation

The Berri Barmera Council should ensure all payments are approved in line with delegations of authority. Invoices should record evidence of the approval before they are paid.

Finding

We found that payments made to the Berri Barmera Council's contractor for wastewater treatment services were not approved by an authorised delegate.

Under the LG Act, the elected body delegated the power to spend funds up to the approved budget to the chief executive officer (CEO). As permitted in the LG Act, the CEO sub-delegated this power to managers to spend funds within their department budgets up to \$50,000. The Manager Infrastructure and Operations was also delegated the authority to approve payments up to \$200,000 where there is a contract in place.

Council staff advised us that the Corporate Services Manager checks that invoice amounts are within the budget for the month before they are paid.

Only the CEO or the Manager Infrastructure and Operations (up to \$200,000) were authorised delegates to approve these invoices for payment.

Berri Barmera Council's response

Council notes the recommendation and advises the matter has been addressed. Since the period of audit, delegation limits have been reviewed. All payments are approved in accordance with delegations of authority. Approval is recorded on or attached to invoices paid.

4.4.4 Berri Barmera Council did not verify the accuracy of fees charged by its main contractor

Recommendation

The Berri Barmera Council should request documents to support the fees being charged by its main contractor and review them to ensure that monthly reporting and amounts invoiced are accurate and in line with the contract.

Finding

We found that invoices from the Berri Barmera Council's main contractor accurately reflected the contract requirements and provided a breakdown of the calculation, but the Council was not able to provide supporting documents for some components of the calculation.

Under the contract, the Council can ask for additional data at any time to verify the calculation of invoice values. We found that it had not requested these documents and therefore had not undertaken a detailed assessment of invoice calculations to ensure amounts charged were correct before they were paid.

Berri Barmera Council's response

Council notes the recommendation and advises the matter has been addressed. Council accepts that during the period of audit relevant documents to support the fee charged were not provided by the independent contractor.

Currently, Council's independent contractor is managed in accordance with the fee for service contract

Payment of invoices is subject to review of the above information and ongoing compliance with the remainder of the executed contract. As advised earlier herein, Council will investigate implementation of an appropriate contract management plan to assist in management of the independent contractor via the fee for service contract.

4.5 Asset maintenance findings

4.5.1 Preventative maintenance reports not maintained for all assets

Recommendation

The Berri Barmera Council should prepare preventative maintenance reports for all CWMS asset classes within its CWMS network.

The Council should consider obtaining monthly service reports from its wastewater treatment contractor detailing the results of maintenance activities performed. This report could be attached to monthly invoice.

Finding

A contractor provides an annual preventative maintenance report for pump station assets. The Berri Barmera Council uses this report to inform the budget for the next financial year.

Similar reports are not maintained for other asset classes within the CWMS network such as gravity drains and nodes, or wastewater treatment plants that are under the control of a contractor.

Why maintenance reports are important for future planning

Without this information, there is an increased risk that the Council will not identify all the maintenance and renewal activities and associated funding needs for future years. This information also enables the Council to ensure that its service providers are performing maintenance activities as planned.

Berri Barmera Council's response

Council notes the recommendation and advises the matter has been addressed. Council's independent contractor is required to provide monthly service reports in accompaniment of monthly invoices in accordance with the fee for service contract.

4.6 Risk management findings

4.6.1 Berri Barmera Council had not assessed the risks specific to its CWMS network

Recommendation

In developing its CWMS asset management plan the Berri Barmera Council should rigorously analyse its asset information and asset management practices to identify and assess CWMS network risks that impact service delivery and achieving its objectives.

The CWMS asset management plan should provide information on these risks and explain how they will be managed, monitored and reviewed. Risk registers should record all identified risks, assessment ratings and mitigation strategies.

Finding

The Berri Barmera Council's risk management policy and framework outlines the key elements of a sound risk management process. It defines roles and responsibilities, processes and reporting requirements.

The Council's strategic risk register identifies the following infrastructure risks (which covers the CWMS network):

- failure to appropriately manage and/or maintain its assets and infrastructure
- ineffective project management systems.

A control identified to mitigate both risks is having an asset management plan. The plan should identify CWMS network risks and critical assets and explain how the Council will manage them. We found that it did not provide this key information. Risks that are fundamental to the operation of the CWMS network and should be assessed include:

- asset failure of the CWMS network. This should include the components managed by external service providers. We note that the wastewater treatment contractor's asset management plan provides information on risk and critical assets for the components they manage on the Council's behalf
- business failure – the Council's inability to recover sufficient revenue to fund maintenance and renewal costs when needed, charging users incorrect service fees
- natural events – the resilience of the CWMS network to climate change and extreme weather events, such as flooding
- service delivery/performance failure, including ransomware/cyber security risk and risks related to relying on third parties to help deliver the service
- infrastructure resilience, such as assessing how robust the Council is to respond to, and its readiness for, change; how robust the CWMS network is to withstand a level of stress or demand without a loss of function or drop in levels of service.

Why it is important for councils to identify and assess all risks

Failing to identify and manage risks affecting a CWMS network increases the risk that:

- these assets are not managed properly
- the council's objectives are not achieved
- effective services are not delivered to the community.

Berri Barmera Council's response

Council accepts the recommendation. Council has engaged an independent contractor for the inspection, reporting and condition rating of Councils CWMS system. This information will be used for the development of an updated CWMS AMP which will include the identification and assessment of CWMS network risks which may impact service delivery.

4.6.2 Lack of risk reporting to the audit committee in 2022

Recommendation

Berri Barmera Council management should provide risk management information to the audit committee for it to carry out its function.

Finding

The Berri Barmera Council's senior management team undertook a risk identification process to develop its strategic risk register. Strategic, operational and project risks were identified, assessed and treated in the context of their impact on achieving the Council's objectives.

The audit committee received reports on the development of the strategic risk register and were provided with a copy of it for monitoring in November 2021. We found that the audit committee did not receive any other risk reports in 2022.

Why it is important for the audit committee to receive risk reports

Risk reports enable the audit committee to monitor and provide advice to the Council on its risk management practices.

Berri Barmera Council's response

Council notes that this observation occurs outside of the advised audit period. Council notes the recommendation and advises the matter has been addressed. In November 2022 Council endorsed the establishment of an Audit and Risk Management Committee which serves a critical role in reviewing (among other matters) Council's Risk Management Framework, Strategic Plan and receiving reports from Council's External and Internal Auditors. The establishment of this committee ensures alignment with the broadened scope of risk management and independent membership requirements of the Local Government Act 1999.

Relevant vacancies in Council's workforce which contributed to the infrequency of risk reporting to the former audit committee have now been addressed.

4.7 Asset management information system findings

4.7.1 Gaps in asset information

Recommendation

The Council should update its asset register for:

- the information gaps we identified, to ensure it provides quality and complete information
- information about assets that have been renewed (eg where asset lives are extended)
- physical asset condition assessments when completed.

Finding

The Council's asset register recorded key information, but we identified some gaps:

- information about pump station assets was recorded at the facility level but not at the asset component level (eg pump, pump well, switchboard, vent pipe)
- the standard life or asset expiry date and asset condition rating of pipe assets was not recorded
- pump station asset condition assessment data provided by the contractor was not recorded
- connection type (eg residential or non-residential, occupied or vacant) was not recorded.

An asset movement spreadsheet provides financial information about the CWMS network for financial reporting purposes. It had information on nodes and pump stations at the asset component level (but in total and not for each individual pump station). The asset register was not updated for the capital movements recorded in this spreadsheet.

Why it is important to maintain asset information

Good asset management is enabled by effective information systems that provide current, accurate and complete asset information to inform operational and financial planning decisions.

Berri Barmera Council's response

Council accepts the recommendation. Council has engaged an independent contractor for the inspection, reporting and condition rating of Councils CWMS system. This information will be used for the development of an updated CWMS AMP and update of the asset register which follows.

4.8 Performance monitoring and reporting findings

4.8.1 No reporting on the CWMS network's performance

Recommendation

Berri Barmera Council's management should regularly report on the operations, finances and service performance of its CWMS network to the appropriate Council governance level. These reports should include information on:

- the financing of the CWMS network, including the impact on the CWMS reserve
- the comparison between planned and actual CWMS activity (ie operations, maintenance, renewal and upgrades)
- the variances between the annual capital budget and expenditure, which is done for its operating budget
- the performance of the CWMS network against the set levels of service and asset management objectives, once they are established.

The Council should apply the legislated formula to calculate the asset renewal funding ratio (ARFR). It should consider setting a CWMS ARFR target and report the actual ARFR against this target each year.

The Council's finance, environment and infrastructure services staff should work together to ensure an integrated approach to reporting on CWMS network performance.

Finding

We found that the Berri Barmera Council received quarterly reports on variances in its overall operating budget. They did not cover the operational and financial performance of its CWMS network, or information on any renewal gap.

We concluded that the Council was unable to demonstrate that it was monitoring and evaluating the performance of its CWMS network to ensure the required levels of service were being delivered effectively and efficiently.

Why reports on CWMS services should be prepared

A CWMS is a prescribed and full cost recovery service provided to the community. Given this and the regulatory framework a CWMS operates under, it is categorised as a business undertaking in the local government sector. It therefore warrants separate management reports on:

- the operational and financial performance of the CWMS network
- the CWMS network's performance against the CWMS objectives and required levels of service.

This reporting would help the Council to manage and monitor its CWMS network, analyse performance trends and inform future operational and financial planning decisions more effectively.

Why councils would benefit from measuring the CWMS ARFR to monitor its performance

The ARFR⁹ is a key financial measure of a council's infrastructure performance. It replaced the previous asset sustainability ratio in May 2018.¹⁰ The Council was applying the outdated metric and inconsistently stating the metrics in its long-term financial plan, such that it was not clear which one had been reported.

There is no legislative requirement to calculate the ARFR for individual asset classes such as a CWMS. However, calculating this ratio provides better information to assess how asset renewals are tracking and take corrective action when needed. It also helps make informed decisions on the timing of renewal activities and funding allocation.

We could not calculate the ARFR for the Council's CWMS assets because it does not report renewal expenditure commitments at the asset level. This is information that would be included in an asset management plan. As such, the Council could not demonstrate that its planned CWMS renewals meet its asset requirements and/or address any renewal backlog.

Berri Barmera Council's response

Council accepts the recommendation ... and [sic] will be considered in [sic] review of existing reporting practices.

4.8.2 Reporting on performance to the community is limited

Recommendation

The Berri Barmera Council's annual report should provide performance information on its CWMS network activity against measures and targets, once they have been developed.

Finding

The LG Act requires a council to report on its performance in implementing its strategic management plans and against its annual business plan. A council must provide this information in its annual report.

Our review of the Berri Barmera Council's annual reports from 2018-19 to 2020-21 found that its reporting was limited to a statement on whether its planned CWMS capital projects have been completed. There is no more detail about the nature and scope of these projects in its annual reports or its annual business plans.

⁹ The asset renewal funding ratio compares the amount spent on renewals with the optimal amount required to be spent on renewals for the year from the asset management plan.

¹⁰ An asset sustainability ratio measures renewal spending as a proportion of depreciation in value.

Why a council benefits from performance reporting

Performance reporting by a council on the delivery of a CWMS network against measures and targets:

- enables it to demonstrate, and be accountable for, its achievements in meeting its objectives and providing the required levels of service
- provides useful information about the effectiveness of services provided that strengthens community trust
- keeps the community and key stakeholders better informed, which may strengthen future community engagement in managing the CWMS network and setting user charges.

Berri Barmera Council's response

Council notes the recommendation. Council's Annual report is developed pursuant to the requirements of the Local Government Act 1999.

4.9 What the Berri Barmera Council did well

The Berri Barmera Council had an adequate asset management policy that is regularly reviewed. The policy demonstrates its commitment to managing assets in a structured, coordinated, cost-effective and financially sustainable manner to provide the appropriate levels of service. It provides the key principles in the Council's approach to asset management. For example, it states that asset renewal plans will be reviewed annually taking into account required service levels and the effectiveness of the assets in providing that level of service.

The Council had practices to ensure planned maintenance activities were completed to support a safe and reliable CWMS service. They included:

- regular maintenance activities being planned and scheduled with all activities and measurements completed during these activities being recorded for pump stations and wastewater treatment plant assets
- maintenance records for pump stations providing information to inform each financial year's budgeting process
- the maintenance schedule for pump stations being periodically reviewed and refined to consider higher periods of use when reliability may be more critical (eg summer holiday periods)
- assets requiring less frequent maintenance (eg gravity drains) being monitored by responding to community observations, CCTV inspections where necessary to support asset condition assessments and periodic inspections where operational issues are experienced
- future renewal and replacement activities for pump stations being captured in the annual budget planning process.

5 Yorke Peninsula Council

5.1 Executive summary

5.1.1 What we did

We assessed the effectiveness of Yorke Peninsula Council's management of its CWMS network over the four-year period we reviewed against our review objective in section 3.2.

5.1.2 Audit conclusion

We concluded that the Yorke Peninsula Council had successfully removed and treated wastewater collected from properties connected to its CWMS network over the period we reviewed.

We also concluded that some key areas of its management of the CWMS network were not operating effectively. These were:

- assessing the physical condition of its CWMS pipe network
- forecasting CWMS service costs
- setting CWMS performance measures and targets
- identifying, assessing and documenting CWMS-related risks
- evaluating and reporting on CWMS performance and renewal activity.

We identified some areas that were operating effectively, where the Council had:

- adopted an up-to-date asset management plan for its CWMS network that contained key elements that met IPWEA's core level of asset management maturity
- clear roles and responsibilities for managing its CWMS network
- an adequate asset management policy and strategy
- established an AMIS that captured key information
- sound practices to ensure planned maintenance activities were completed as scheduled to support a safe and reliable CWMS service.

We noted that, during the period we reviewed, improvements were progressively made to the Council's asset management framework and practices after its Director of Assets and Infrastructure Services commenced in January 2021.

The Council's approach to CWMS asset maintenance and renewal demonstrates a mature, competent and technical understanding of CWMS asset management needs. Its CWMS asset management plan clearly identifies the asset renewal needs and funding shortfall and the risk this poses to the safe and reliable operation of its CWMS network. It also conveys an intent to address the shortfall by increasing the funding for renewals and focuses available resources on priority risk areas.

5.1.3 What we found

The key findings from our review of the Yorke Peninsula Council's management of its CWMS network were that it:

- had not assessed the physical condition of all components of its CWMS network (section 5.3.1)
- had gaps in the way it calculated the forecast service costs, which were likely to have a material impact on these cost forecasts and service charges (section 5.3.2)
- did not prepare reports on its CWMS renewal activity, which reduced the effectiveness of monitoring the renewal works backlog (section 5.4.2)
- had not fully identified, assessed and documented its CWMS network management risks (sections 5.5.1 and 5.5.2)
- did not have well-defined performance measures and targets for its CWMS network, reducing the effectiveness of its performance monitoring and evaluation (section 5.6.1)
- did not prepare reports on the operational and financial performance of the whole CWMS network and its performance against the CWMS objectives and required levels of service (section 5.6.2).

5.1.4 What we recommended

We recommended the Yorke Peninsula Council:

- develop and implement an approach to assessing the asset condition of its CWMS network and monitor the actions and outcomes. The asset register should be updated for the results of asset condition assessments
- review its costing principles and assumptions for CWMS services to ensure the calculation of forecast services costs are based on complete and comprehensive information
- report on actual renewal activity against the planned renewal program and budget, and consider documenting its approach to managing renewal backlogs
- rigorously analyse its asset information and asset management practices to identify and assess all risks specific to its CWMS network. Its CWMS asset management plan should include a detailed and complete assessment of these risks
- set clear performance measures and targets for its CWMS network that are monitored, evaluated and reported against
- prepare separate management reports on the operations, finances and service performance of its CWMS network.

5.1.5 Yorke Peninsula Council's response

The Yorke Peninsula Council accepted our recommendations and advised us how it would action them. Its response to each recommendation is included in sections 5.3 to 5.6.

Appendix 7 contains the Council's response to this report.

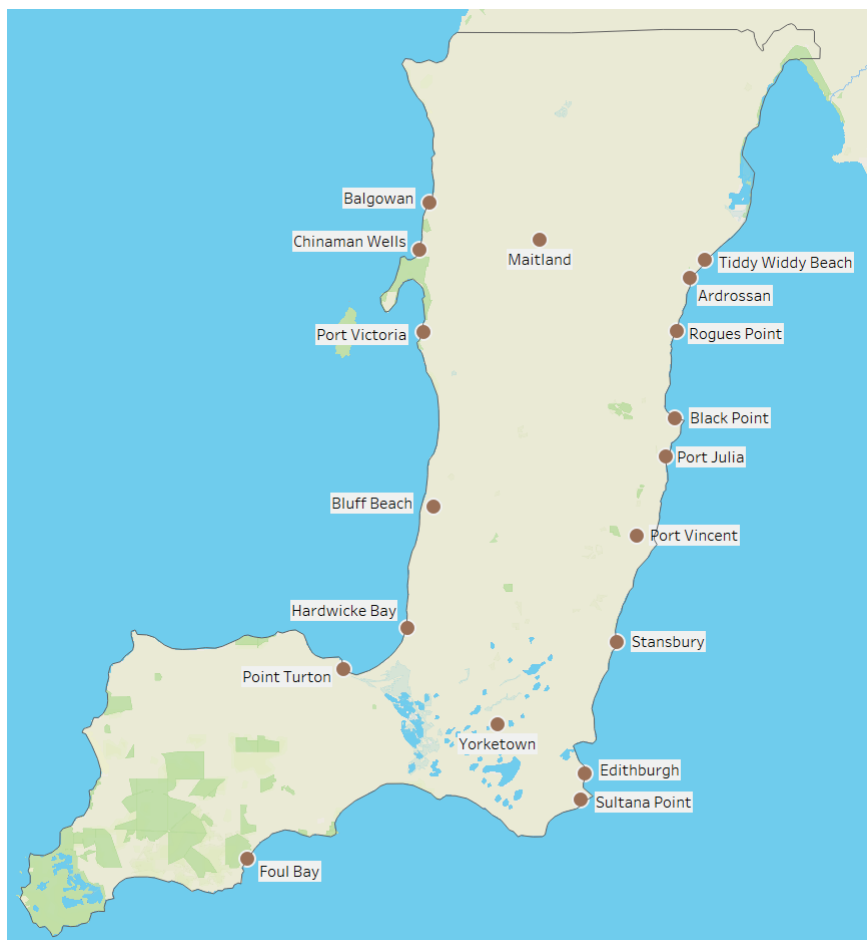
5.2 Overview of the Yorke Peninsula Council

5.2.1 Yorke Peninsula Council's CWMS network

The Yorke Peninsula Council is approximately 194 km north of Adelaide. Its resident population is around 11,900 and it provides CWMS services to 2,698 residential properties and 203 non-residential properties.

The Council's CWMS network comprises 18 schemes across the council area of 5,834 km² as shown in figure 5.1, with 41 pump stations, 17 wastewater treatment plants and 109 km of pipes. Treated wastewater is provided free to community organisations for irrigation.

Figure 5.1: Location of the Yorke Peninsula Council's CWMS schemes



Source: Based on information provided by the Yorke Peninsula Council.

5.2.2 Asset management roles and responsibilities

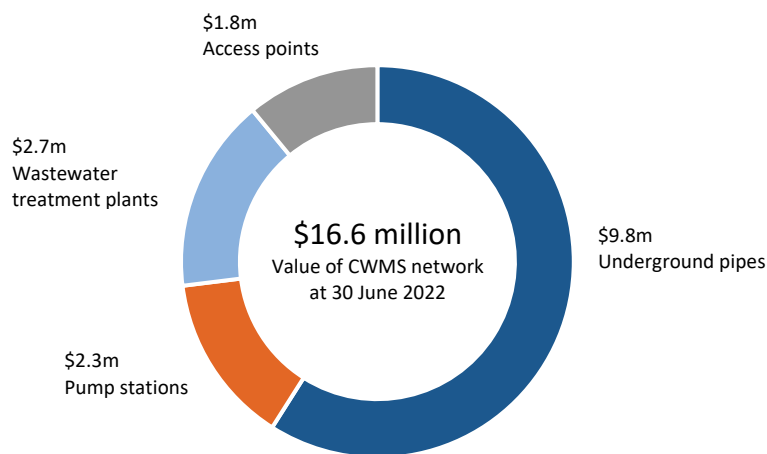
The Yorke Peninsula Council has a small internal team led by the Infrastructure Manager that regularly monitors wastewater treatment plants and pump stations, engaging contractors as required for specialist services such as plumbing and electrical work.

Appendix 5 details the Council’s governance structure for asset management.

5.2.3 Financial overview of the CWMS network

The Council’s CWMS network is valued at \$16.6 million, which is 6% of its physical assets, and comprises the asset components shown in figure 5.2.¹¹

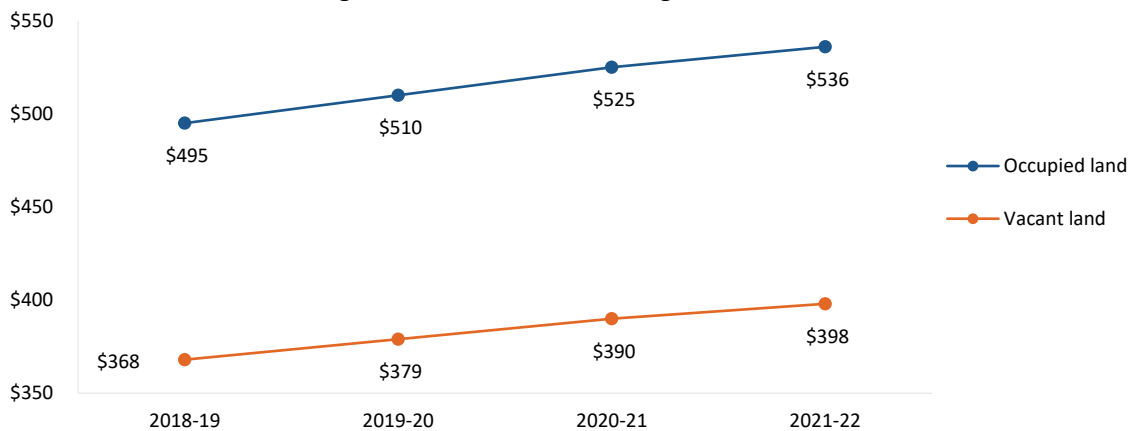
Figure 5.2: Value of the CWMS network asset components



Source: Yorke Peninsula Council’s detailed asset movement report for 2021-22 (unaudited).

The Council levies an annual service charge on connected properties to recover the cost of providing the CWMS service. A lower amount is charged for vacant land where a connection to the CWMS is available. The service charge is applied consistently across the 18 CWMS schemes. Figure 5.3 shows the amounts charged since 2018-19.

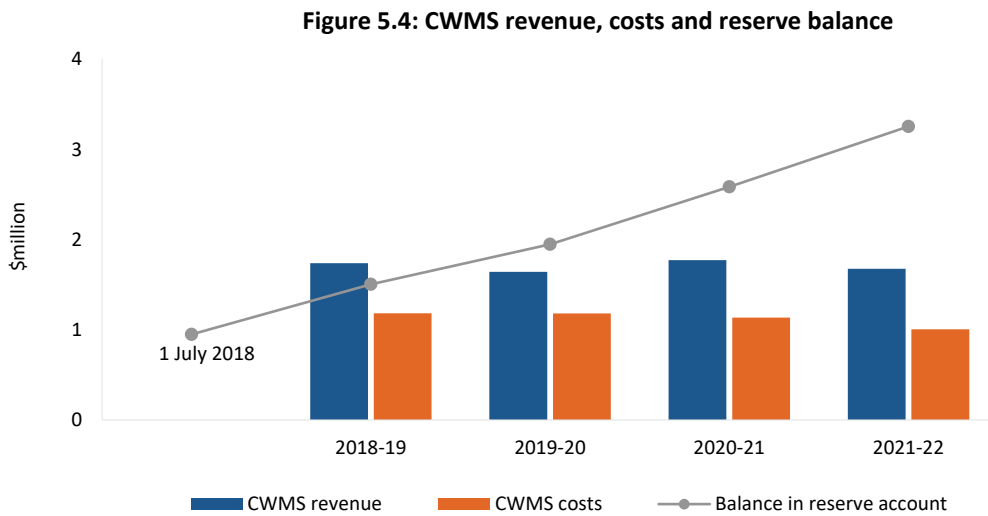
Figure 5.3: CWMS service charges since 2018-19



Source: Yorke Peninsula Council’s annual business plans.

¹¹ Yorke Peninsula Council’s general purpose financial statements for the year ended 30 June 2022, Note 7a – Infrastructure, Property, Plant & Equipment.

The revenue raised from CWMS service charges and grants, cost (both operating and capital) of providing the CWMS service and funds held in reserves over the past four years are shown in figure 5.4.



Source: Based on unaudited data provided by the Yorke Peninsula Council.

Figure 5.4 shows that CWMS network costs have fluctuated over the four years. The operating expenses in 2021-22 were \$838,000 compared to \$863,000 in 2018-19. Capital expenditure on infrastructure varies from year to year, averaging around \$237,000 per year.

While overall CWMS network revenue fluctuated over the last four years, revenue from the service charge steadily increased by 9.9% from \$1.518 million in 2018-19 to \$1.669 million in 2021-22. Grant income for the CWMS network will vary each year and has dropped from \$220,000 in 2018-19 to \$7,200 in 2021-22, causing fluctuations in overall revenue. This is because of the staged approach to funding new CWMS schemes.

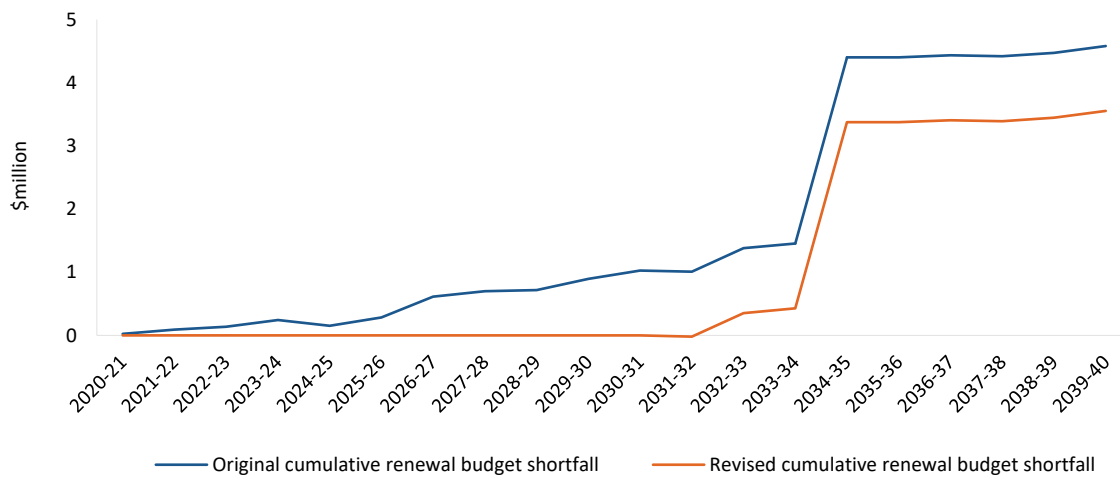
As a result, \$2.4 million has been accumulated over the past four years to fund future CWMS network capital (renewal and upgrade) works. These funds are in a reserve account that had a balance of \$3.3 million on 30 June 2022.¹²

In 2020-21, the forecast backlog of renewal works was \$62,000 and would accumulate to an estimated \$4.6 million by 2040 if no further action was taken to address the shortfall in renewal funding, as shown in figure 5.5. These forecast amounts are capital works for assets that have exceeded their useful lives based on the information in the asset register.¹³

¹² Yorke Peninsula Council’s general purpose financial statements for the year ended 30 June 2022, Note 9 – Other Reserves: Combined Effluent Reserve, which reflects ‘the balance of historic cash flows associated with operation of Council’s combined CWMS schemes. This balance does not represent the under or over-recovery of costs for the combined schemes. This reserve is not cash backed.’

¹³ The forecast renewal year for each asset is based on the year the asset was installed and its expected useful life. The Yorke Peninsula Council expects to operate assets to the end of their design useful lives, at which point they are identified for renewal.

Figure 5.5: Cumulative CWMS renewal budget shortfall¹⁴



Source: Prepared by us based on information in the Yorke Peninsula Council’s 2020 CWMS asset management plan and 2022–2031 long-term financial plan.

In April 2021, the Council adopted its 2022–2031 long-term financial plan, which shows that from 2021-22 the funding available for its CWMS renewal activity matched the renewal forecasts in its 2020 CWMS asset management plan. The renewal funding shortfall would be addressed for the period of the long-term financial plan, the 10 years ending 2031. Soon after this in 2035 there is a significant increase in renewals expected of \$3 million. This mainly represents the renewal of the Maitland CWMS network’s pipeline. The Council has classified these assets as critical to its CWMS network. It forecasts that full cost recovery of CWMS services will be achieved by 2039-40.

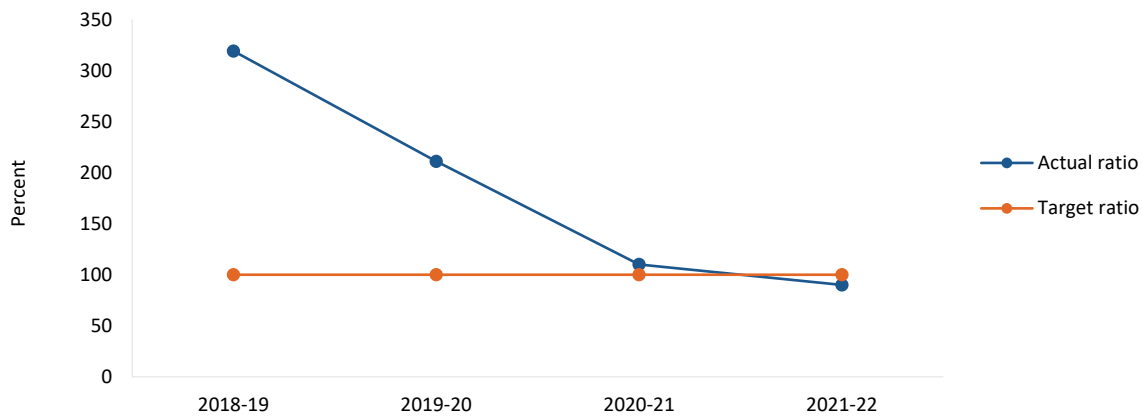
5.2.4 CWMS asset renewal funding

A key financial measure of a council’s infrastructure performance is the asset renewal funding ratio (ARFR). This ratio shows whether a council is renewing and replacing its assets in a satisfactory or optimal way and taking corrective action when needed. A ratio of less than 100% over a period could indicate an accumulating backlog of renewal work.

Figure 5.6 shows the Council’s actual CWMS ARFR since 2018-19.

¹⁴ The Yorke Peninsula Council used the average of the first 10 years to budget for the years 2031 to 2040.

Figure 5.6: CWMS asset renewal funding ratio



Source: Based on data provided by the Yorke Peninsula Council (unaudited).

Figure 5.6 shows that the actual ARFR significantly exceeded the target of 100% in 2018-19 and 2019-20. This was because the Council spent more on renewals than planned in those financial years to reduce the renewal backlog at the time. It was closer to the target for 2020-21 and 2021-22.

5.2.5 The Yorke Peninsula Council’s strategic asset management framework

The Yorke Peninsula Council’s strategic asset management framework includes key elements of a good framework. Appendix 5 provides further information on it.

5.3 Asset management planning findings

5.3.1 Not all components of the Yorke Peninsula Council’s CWMS network have been assessed for their condition

Recommendation

The Yorke Peninsula Council should develop and implement an approach to assessing the asset condition of its CWMS network, including the frequency of inspections and a risk-based approach to prioritising inspection works over a specific period. This should be documented in its CWMS asset management plan and actions and outcomes monitored over the life of the plan.

The asset register should be updated for the condition assessment rating, priority risk ranking and critical assets and, where relevant, for revised remaining useful life forecasts following physical inspections.

Finding

The Yorke Peninsula Council prioritises maintenance and renewal activity based on limited condition assessment data, their asset knowledge, inspection results, age and criticality of assets.

The Council advised us that it inspects the condition of its CWMS assets annually, targeting around 2% of its CWMS network. Most of the inspection activities are directed to sections of the pipe network that have a higher failure rate due to age and pipe material. We consider this to be a reasonable approach, as inspecting underground infrastructure is an expensive activity needing cameras and specialist expertise to do the condition assessment.

The Council did not have an inspection program nor a risk assessment that identified these high priority sections of the pipe network and the timing of when the inspections would happen.

Council staff advised us that an inspection of the entire CWMS pipe network has not been completed.

The Council's CWMS asset management plan identified the continual collection and review of condition data as an area of improvement with an ongoing timeline. We found that it had not developed an approach to ensure the condition assessment of its entire CWMS pipe network is completed within a time frame determined by the Council.

Why asset condition assessments help the Council manage its CWMS network effectively

The Council is managing its CWMS assets in the short term but lacks long-term renewal planning because it has not performed physical condition assessments of the entire pipe network.

Asset condition information is needed to effectively:

- plan and prioritise maintenance and renewal work and funding
- manage the risk of it failing to provide safe and reliable levels of service
- report on its CWMS network's performance against asset objectives and levels of service.

Yorke Peninsula Council's response

Council agrees that long term renewal planning is an area for improvement. Council accepts that an overarching, risk prioritised inspection program for assessing asset condition has not been implemented. Council will include a plan to assess CWMS asset condition (including the frequency of inspections and a risk-based approach in prioritising the inspection works) as part of the CWMS AMP review in 2024.

Although there are areas for improvement, Council has established short term measures and other condition assessment practices to ensure ongoing CWMS performance, including partial condition assessments and the ongoing installation of flow meters during site upgrades.

5.3.2 There were gaps in the way the Yorke Peninsula Council calculated forecast service costs and charges

Recommendation

The Yorke Peninsula Council should review its costing principles and assumptions to ensure the calculation of service costs is based on complete and comprehensive information.

The Council should record more detail to support acquisition forecasts, disposal costs and current asset replacement costs.

Finding

Consistent with the Yorke Peninsula Council's previous long-term financial plan, its 2022–2031 plan states that a service charge is calculated each year to cover the cost of operating, maintaining and replacing equipment for its CWMS. The annual CWMS charges are based on a 20-year budget model.¹⁵ This means that the CWMS funding strategy is for CWMS revenue to cover all CWMS costs.

Costing principles and assumptions are used by the Council to develop the 20-year budget model.¹⁶ We found many gaps in the way the Council calculated the services, which were likely to have a material impact on the cost forecasts and service charges.

Why long-term financial forecasts are important

Councils face financial challenges in managing infrastructure like CWMS networks, which have a long lifecycle. It becomes difficult to predict the costs to manage these assets over their lives. If these forecasts are not done thoroughly, this may increase the risk of incurring higher costs in managing these assets and insufficient and/or inequitable charging. This may lead to an increase in the risk of the CWMS network not being financially sustainable over its useful life.

Yorke Peninsula Council's response

Council agrees that more comprehensive information should be included to support the calculation of forecasted CWMS service costs. The gaps identified within the above findings, will be considered as part of future CWMS budgeting activities, including as part of the LTFP review and CWMS AMP update.

¹⁵ The LGA provided councils with a costing model that is consistent with the LG Act and the Essential Services Commission of South Australia's full cost recovery requirements.

¹⁶ The LGA's *CWMS Accounting Principles – The Costing and Pricing of CWMS Template*, December 2016.

5.3.3 The Yorke Peninsula Council identified improvements needed in asset planning, but time frames were not set

Recommendation

The Yorke Peninsula Council should determine a timeline for the identified improvement initiatives in its CWMS asset management plan and set specific milestone dates for their effective delivery.

The Council should develop metrics to assess the effectiveness of its asset management plan and guide any further improvements to asset management.

Finding

We found that the Yorke Peninsula's CWMS asset management plan provided key information, including:

- alignment with strategic and corporate goals
- some performance measures
- generic descriptions of levels of service, but limited information on levels of service targets
- the risk assessment process and identified critical assets
- maintenance and renewal needs
- a 10-year financial forecast.

It also provides an asset improvement plan, which identified six initiatives to build on current asset condition knowledge and community engagement to inform service levels.

While the initiatives were supported, the Council's asset management plan does not provide a defined timeline of expected completion for each initiative. We noted that many of these initiatives also appeared in the Council's 2017 CWMS asset management plan.

The Council's asset management plan also includes measures to assess its effectiveness. Some of them do not provide enough information to properly assess effectiveness.

Yorke Peninsula Council's response

Council agrees that implementing timeframes and milestone dates for CWMS improvement initiatives and programs, including systems for monitoring performance, will improve the effectiveness of the AMP and ensure accountability. The Council intends to document timeframes, milestones and monitoring as part of the CWMS AMP update and review planned for 2024.

5.4 Asset maintenance findings

5.4.1 Yorke Peninsula Council did not perform a renewal priority ranking assessment

Recommendation

In line with its CWMS asset management plan, the Yorke Peninsula Council should apply the renewal priority ranking criteria in developing its CWMS renewal program. The results of applying these criteria should be documented in its asset management information system (AMIS) and should support its approved renewal program and any subsequent changes. The Council should consider using these results to prioritise asset condition assessments.

Finding

The Yorke Peninsula Council's planned renewal program is based on the asset's design useful life to ensure it is renewed on time. The Council may decide to bring forward or defer renewals if it inspects the asset and determines that the actual remaining useful life differs from the design expectancy. The Council has more work to do to properly assess the condition of its CWMS assets and use this data to support an assessment of remaining useful lives to inform its renewal program.

Further, the Council's 2020 CWMS asset management plan states that it uses a renewal priority ranking criteria to determine the priority of identified asset renewals and replacements. The criteria considers, for example, the CWMS network components with a high consequence of failure and higher than expected operational or maintenance costs.

The Council had not performed this assessment to determine the planned renewal program or to plan the condition assessment.

Why the Yorke Peninsula Council should perform and maintain a record of its renewal priority ranking assessment

Recording its renewal priority ranking assessment will enable the Council to clearly demonstrate how the priority renewals and replacement needs were determined and inform decisions on works and funding. Doing so can also be useful for long-term planning and monitoring of renewal activity.

Yorke Peninsula Council's response

Council agrees that documenting criteria to rank and prioritise renewal activities, will improve Council's ability to plan for and fund its CWMS program. Council intends to incorporate this as part of the CWMS AMP update and review planned in 2024.

Generally, Council staff perform a ranking assessment in the order of priority (i.e. first pumps, second pipe network and third WWTP treatment) however having this documented will ensure clarity and consistency.

5.4.2 Yorke Peninsula Council should improve how it manages and reports on renewal backlogs

Recommendation

The Yorke Peninsula Council should report on actual renewal activity against its planned renewal program and budget. This reporting should clearly identify and quantify the renewal backlog. This information should be in the reports we recommend the Council prepares in section 5.6.2.

The Council should consider documenting its approach to managing renewal backlog, including why renewals were deferred or brought forward, and the backlog trend over time to demonstrate that it is being adequately managed.

Finding

In 2020-21 the Yorke Peninsula Council's forecast backlog of renewal works was \$62,000 and this would accumulate to an estimated \$4.6 million by 2040 if no further action was taken to address the shortfall in renewal funding.

Our analysis of actual renewal expenditure in 2020-21 and information in the asset register indicated that some renewal backlog works were not performed as planned.

We found that the Council did not prepare reports on its CWMS renewal activity that detail the actual activities (at the asset level) and expenditure against its renewal plan and adopted budget. This means there is no clear indication of the extent of the renewal backlog and the information to support asset management decisions made on renewals.

Why it is important for councils to report on renewal activity

An increase in the backlog of renewal activity increases the potential risk of the CWMS scheme failing to maintain the required levels of service, which may impact the operation of interdependent assets in the network and increase maintenance costs. It is important the renewal backlog is monitored to enable timely action.

Yorke Peninsula Council's response

Council agrees that reporting on actual CWMS renewal activities against planned renewal program and budget should be implemented. This information and reporting will provide greater transparency to Elected Members and the community on the maintenance and renewal achievements and setbacks of CWMS schemes.

Council intends to develop and improve the general reporting and information that is provided to the Elected Members and the community in regard to our CWMS network and infrastructure.

5.4.3 Yorke Peninsula Council would benefit from analysing maintenance results to inform future planning decisions

Recommendation

The Yorke Peninsula Council should update its AMIS for any condition assessment observations made during planned maintenance activities.

The Council should analyse the results of its maintenance activities to inform future planning decisions. Information on the analysis should be retained to support any decisions made.

Finding

We found that the Yorke Peninsula Council had undertaken planned maintenance activities as scheduled to support a safe and reliable CWMS service. The schedule is regularly reviewed and refined to undertake necessary inspection and maintenance activities. The results of these activities are manually recorded on monitoring sheets and retained on file at the Council offices. Information on the condition of CWMS assets is also included on these sheets but we found that the AMIS is not updated for this information.

Why the Council may benefit from analysing maintenance results over time

The Council takes immediate action to maintain the inspected asset but would benefit from analysing the information captured on the monitoring sheets over time to inform decisions on medium to long-term asset needs. For example, this would help it to make timely decisions on when an asset should be renewed or upgraded instead of continuing to maintain it.

Yorke Peninsula Council's response

Council agrees that any condition assessment observations should be included within the asset management information system and that these observations and maintenance activities should inform future planning decisions.

Council's current IT systems, however, do not allow for staff to directly input observations against an asset during onsite maintenance activities. As a result, Council will need to consider the potential administrative cost to facilitate the required information input and analysis as part of future budgeting activities.

5.5 Risk management findings

5.5.1 Yorke Peninsula Council had not identified all relevant risks

Recommendation

The Yorke Peninsula Council should rigorously analyse its asset information and asset management practices to identify and assess all risks that impact service delivery and achieving its objectives.

The risk register should record all identified CWMS risks, assessment ratings, mitigation strategies and residual risks. Treatment costs should be included in the Council's budget to ensure the mitigation strategy can be implemented within a time frame determined by the Council.

Finding

We found that the Yorke Peninsula Council's risk registers include some risks relevant to its CWMS network but not the risks that are fundamental to the network's operation, such as the risks of:

- asset failure of all key components of the CWMS network, including the wastewater treatment plant. The plant's equipment assets are identified as critical in the Council's asset management plan. Critical assets have a high consequence of failure, causing significant loss or reduction of service
- business failure – the Council's inability to recover sufficient revenue to fund operations, maintenance and renewal costs when needed, charging users incorrect service fees
- natural events – the resilience of the CWMS network to climate change and extreme weather events, such as flooding
- service delivery/performance failure, including ransomware/cyber security risk and risks related to relying on third parties to help deliver services
- infrastructure resilience, such as assessing how robust the Council is to respond to, and its readiness for, change; how robust the CWMS network is to withstand a level of stress or demand without a loss of function or drop in levels of service.

Why it is important to identify and assess all risks

Failing to identify and assess all risks affecting a CWMS network increases the risk that:

- these assets are not managed properly
- the level of service delivered to the community reduces.

Yorke Peninsula Council's response

Council has a Risk Management Policy which is currently under review. This Policy is supported by Strategic and Organisational Risk Registers, which at a high-level, addresses risks associated with the CWMS network.

It is agreed that as part of ongoing risk management activities, operational risk registers are required to be developed further to include specific risks fundamental to the operation of the CWMS network and ensure alignment with the risks identified within the CWMS AMP. This will, however, take some time as Council are soon to have entirely new IT systems rolled out throughout the organisation. Timeframes will be set with this in mind.

5.5.2 Yorke Peninsula Council needs to assess the risks specific to its CWMS network and record the results

Recommendation

The Yorke Peninsula Council should assess the consequence and likelihood of all identified CWMS organisational and operational risks to support its initial and post-control risk ratings, and document this assessment in its risk registers. The Council should review any revised risk ratings to ensure they are monitored and reported to the appropriate levels of management and committees.

The Council's CWMS asset management plan should document a detailed and complete assessment of the CWMS risks and, where relevant, this should be referenced to the CWMS business continuity plan.

The Council's audit and risk committee should seek regular status reports on the implementation of the risk management framework to fulfil its role in monitoring it.

Finding

The Yorke Peninsula Council's risk management policy outlines the key elements of a sound risk management framework. It defines roles and responsibilities, processes and risk reporting requirements.

The Council's organisational risk register identifies one risk for the CWMS network – the failure of or inadequate CWMS network – with a low risk rating. However, the Council's assessment of the risk's consequence and likelihood was not documented.

The Council's CWMS asset management plan identifies four operational risks that align with the risk in the organisational risk register. It stated that the risks and treatments had not been assessed and would be done as part of the Council's risk management program.

We noted that the Council's CWMS business continuity plan outlines its response to a business disruption event such as no service delivery and effluent spillage. These events are identified as operational risks, but they have not been assessed in line with the Council's risk management policy and framework.

Why risk assessments are important to manage risks effectively

Without information to support a risk assessment, it is not easy for management to determine, and clearly demonstrate, whether:

- the risk was adequately assessed and the risk level was acceptable
- current controls and other risk treatments are effective in reducing the risk to an acceptable level.

This assessment is also important as the risk level determines the risk monitoring and reporting requirements to the levels of management, council committees and elected body, as outlined in the Council's risk management policy. This information is essential for management to regularly monitor and review risks levels and mitigation strategies to ensure they remain appropriate and relevant.

Yorke Peninsula Council's response

Council will ensure that risks fundamental to the operation of the CWMS network are appropriately captured, assessed, risk rated and controlled as recommended.

CWMS risk management activities will be incorporated into the regular risk management reporting provided to Council's Audit and Risk Committee as soon as reasonably practical.

5.6 Performance monitoring and reporting findings

5.6.1 Yorke Peninsula Council's performance measures and targets were not well defined

Recommendation

The Yorke Peninsula Council's CWMS asset management plan should clearly set out strategic and operational objectives, performance measures and targets to help the Council assess the effectiveness of its CWMS management activities.

The performance measures should be relevant to the Council's CWMS asset management objectives and required levels of service, and be set to allow measurement and achievement within the time frame determined by the Council.

Over time, the Council should review information on the performance of its CWMS network to identify ways to address any low-performing service level areas.

Finding

The Yorke Peninsula Council's CWMS asset management plan lists six strategic objectives relevant to its CWMS network and describes how they will be addressed. We found that not all objectives had a well-defined measure or target to assess performance and to determine whether the objective has been achieved.

Operationally, the Council had identified technical and customer levels of service and performance measures. However, performance targets were not defined for these levels of service to measure performance against.

Why performance measures and targets are important for effective asset management

Not having well-defined measures and targets reduces a council's ability to:

- make an objective assessment of the effectiveness of its asset management activities
- determine whether the required levels of service were delivered
- identify areas where capital or renewal funding should be invested, or maintenance improved
- effectively monitor, report on and be held accountable by the community on its performance.

Yorke Peninsula Council's response

Council agrees that improvements should be made to the CWMS AMP to clearly define targets and measures to assess the effectiveness of CWMS management activities. The recommendations will be incorporated as part of the CWMS AMP update and review planned for 2024.

5.6.2 Reporting to the elected body on the performance of the CWMS network was minimal

Recommendation

The Yorke Peninsula Council should prepare separate management reports on the operations, finances and service performance of its CWMS network. Finance, assets and infrastructure staff should work together to ensure an integrated approach to preparing these reports.

The Council should consider setting a CWMS ARFR target and report the actual ratio against this target each year.

Finding

We found that the elected body received monthly reports on the progress of capital projects against budget and timelines, which included CWMS capital projects. It also received a separate report listing the CWMS maintenance work undertaken. However, these reports did not provide an understanding of the operational and financial performance of the whole CWMS network, including information on the renewal gap.

Why separate reports on the CWMS services should be prepared

A CWMS is a prescribed and full cost recovery service provided to the community. Given this and the regulatory framework a CWMS operates under, it essentially operates like a business and is categorised as a business undertaking in the local government sector. It therefore warrants separate management reports on:

- the operational and financial performance of the CWMS network. These reports should include information comparing planned and actual activity consistent with the CWMS asset management plan and annual budget (ie operations, maintenance, renewal and acquisitions)
- the CWMS network's performance against the CWMS objectives and required levels of service.

This reporting would provide information to enable a council to manage and monitor its CWMS network, analyse performance trends and inform future operational and financial planning decisions more effectively.

It is important that the finance, asset and infrastructure staff work together to ensure an integrated approach to preparing these reports.

Why a council would benefit from measuring the CWMS ARFR to monitor its performance

The ARFR¹⁷ is a key financial measure of a council's infrastructure performance.

The Council's ARFR target is 100% for its total assets. There is no legislative requirement to calculate this ratio for individual asset classes such as CWMS. As such, the Council has not set a specific target for its CWMS network.

Calculating an ARFR for CWMS assets provides better information to assess how renewals are tracking and take corrective action when needed. Figure 5.6 shows the Council's actual CWMS ARFR since 2018-19.

¹⁷ The asset renewal funding ratio compares the amount spent on renewals with the amount required in an infrastructure and asset management plan.

Yorke Peninsula Council's response

Although this type of information hasn't been sought after or requested to date, Council supports any activity to improve transparency and accountability in the management of community assets to the Elected Members and the community. This could assist to facilitate a greater understanding and awareness of the CWMS network operations, objectives and future planning needs.

To alleviate additional administrative resources and costs of producing separate reports, Council will consider increasing the CWMS network information within Council's Annual Report.

5.6.3 Yorke Peninsula Council's reporting on CWMS performance to the community is limited

Recommendation

The Yorke Peninsula Council's annual report should provide performance information on its CWMS network activity against set measures and targets.

Finding

The LG Act requires a council to report each year on its performance in implementing its strategic management plans and against its annual business plan. A council must provide this information in its annual report.

Our review of the Yorke Peninsula Council's annual reports from 2018-19 to 2021-22 found that there was limited reporting on CWMS performance. CWMS capital expenditure is reported against the approved budget but there is no statement on whether objectives and levels of service have been met.

Why the Yorke Peninsula Council should report on CWMS performance to its community

Performance reporting on the delivery of CWMS services against set measures and targets:

- enables the Council to demonstrate, and be held to account for, its achievements in meeting its objectives and providing the required levels of service
- provides useful information about the effectiveness of services provided, which strengthens community trust
- keeps the community and key stakeholders better informed, which may strengthen future community engagement in managing the CWMS network and setting user charges.

Yorke Peninsula Council's response

Council will include CWMS performance reporting within its Annual Report.

5.7 What the Yorke Peninsula Council did well

We found some areas that were operating effectively, where the Yorke Peninsula Council had:

- an adequate asset management policy and asset management strategy
- key elements that met the core level of asset management maturity in its CWMP asset management plan and the plan was reviewed and updated regularly
- adequate governance arrangements where clear roles and responsibilities for managing the CWMS network were established
- good practices to ensure planned maintenance activities were completed to support a safe and reliable CWMS service, including monitoring assets requiring less frequent maintenance by responding to community observations, CCTV inspections (when undertaking asset condition assessments) and periodic inspections where operational issues are experienced
- captured all future renewal and replacement activities in its annual budget planning process.

Appendix 1 – Abbreviations and terms used in this report

The terms and descriptions used in this Report were sourced from legislation, the Councils, the International Infrastructure Management Manual (IIMM) and the Local Government Association of South Australia (LGA).

Abbreviation/Term	Description
AMIS	asset management information system
AMP/IAMP	asset management plan. Referred to as infrastructure asset management plan in the LG Act
Asset management	a systematic, structured process covering the whole life of an asset by which councils manage infrastructure assets to meet current and future levels of service
Asset renewal	planned maintenance to restore existing assets to original service capability. This excludes improvements to the asset through upgrades to extend the life or improve functionality, such as replacing a section of pipe network with a larger sized pipe or increasing the capacity of a pump station to discharge greater flow
Asset renewal funding ratio (ARFR)	quantifies the extent of any annual shortfalls against the optimal level of capital expenditure on renewal and replacement of all existing assets specified in asset management plans to provide desired and affordable service levels
CEO	chief executive officer
Core level of asset management maturity	for each asset management component, the IIMM provides a range of levels of asset management: aware, basic, core, intermediate and advanced. The LGA reports that typically councils will start at a core level and develop to a more advanced level by identifying strategies to reduce life cycle costs through improved practices and recent technology. We reviewed the asset management maturity levels in the IIMM, and it is our view that councils should be operating at the core level for many of the asset management components to meet LG Act requirements
CWMS	community wastewater management systems
CWMS network	the CWMS infrastructure under the care and control of a council including the connection point provided to each property. This infrastructure includes rising and gravity mains (pipeline), pump stations and wastewater treatment plants
Design useful life	the period an asset is expected to be available for use
Effluent	liquid discharged from a wastewater treatment system

Abbreviation/Term	Description
IIMM	<i>International Infrastructure Management Manual</i> , International Edition 2015, issued by the Institute of Public Works Engineering Australasia
Infrastructure	the physical assets that enable a council to deliver core services to its community, support improvements in economic activity and community members' health and wellbeing. This includes parks, community hubs, road infrastructure and CWMS
IPWEA	Institute of Public Works Engineering Australasia
Levels of service	identify the quality and cost effectiveness of the service that an asset delivers. This will differ according to the choices that a council makes, including when and how an asset is maintained
LG Act	<i>Local Government Act 1999</i>
Maintenance	all actions necessary for retaining an asset as near as practicable to its original condition, but excluding rehabilitation or renewal. Maintenance does not increase the service potential of the asset or keep it in its original condition, but slows down deterioration and delays when renewal is necessary
Performance measures	specific indicators used to demonstrate how a council is delivering levels of service. Customer performance measures assess the service the customer receives. Technical performance measures show how effectively the council provides the service
Planned maintenance	repair work that is identified and managed through a maintenance management system. Activities include inspection, assessing the condition against failure/breakdown criteria/experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance
Preventative maintenance	maintenance that is recommended by the manufacturer or service provider to prevent unexpected downtime and costly repairs
Renewal gap	a shortfall in required annual funding to renew assets. If this is not carried forward and funded, there is a backlog

Appendix 2 – Relevant law and industry guidance

A2.1 *Local Government Act 1999*

The LG Act provides the functions of a council, which include providing infrastructure for its community and for development within its area. In carrying out its functions, a council must uphold many principles, including to:

- seek to ensure council resources are used fairly, effectively and efficiently
- seek to provide services that are adequate and appropriate, and ensure equitable access to them
- achieve and maintain standards of good public administration
- ensure the sustainability of its long-term financial performance and position.

A council's CEO is required to ensure its assets and resources are properly managed and maintained.

The LG Act requires a council to develop and adopt strategic management plans. In developing them, a council is required to set its long-term strategic objectives, assess its capacity to deliver the extent or levels of service to its community and determine performance measures and targets.

A council's capacity to meet its long-term strategic objectives is demonstrated through its long-term financial plan and infrastructure asset management plan (IAMP). These plans identify the financial and infrastructure resources needed to meet a council's strategic objectives and protect its long-term financial sustainability.

A council is required to develop, in consultation with its community, and adopt a business plan and budget each year that identifies the principal activities to meet its objectives and state the measures that will be used to monitor and assess the council's performance.

A council discharges its operational and financial accountability by reporting on its performance through its annual report, which includes its audited financial statements. A council's audit committee has a role in ensuring the integrity of financial records and regularly reviews the adequacy of internal controls, reporting and other financial management systems and practices.

The LG Act provides an integrated process of consulting, planning, monitoring, reviewing and reporting, where each stage depends on the other.

A2.2 Industry guidance – Institute of Public Works Engineering Australasia

The LG Act requires councils to develop IAMPs that cover at least 10 years. The form and content of an IAMP is not prescribed. The LGA recommends that councils follow the

guidance provided in the Institute of Public Works Engineering Australasia's IIMM and templates when preparing their IAMPs.¹⁸

This manual outlines how infrastructure assets should be managed across their lifecycles to support service delivery objectives and is in line with the asset management best practices issued by the International Organisation for Standardisation.

A2.3 Local Government Association support

The LGA provides support and guidance to councils by publishing various information papers and model templates on asset management and financial sustainability. These include the following information on the financial and asset management of CWMS networks:

- CWMS property units code
- CWMS accounting principles – the costing and pricing of CWMS
- 20-year budget model template.

¹⁸ Local Government Association of South Australia, *Financial sustainability information paper 6: infrastructure and asset management*, revised December 2019.

Appendix 3 – Asset management principles and framework

A3.1 Asset management defined

Asset management is a systematic, structured process covering the whole life of an asset by which councils manage infrastructure assets, like a CWMS network, to meet current and future levels of service.

A3.2 Key elements of a strategic asset management framework

The aim of asset management is to meet a required level of service in a cost-effective way. Levels of service are the fundamental building blocks of asset management and it is important a council understands what levels of service its community requires and its willingness to pay. Councils also need to clearly understand the capability of the asset to deliver those requirements. This knowledge informs asset management operational and financial planning and decision making.

Levels of service identify the quality and cost effectiveness of the service that an asset delivers. This will differ according to the choices that a council makes, including when and how an asset is maintained.

A council is required to manage its CWMS network over its expected useful life for current and future community members, manage associated risks and achieve long-term financial sustainability. It must also manage its CWMS network effectively to deliver a safe and reliable service to its community.

The key elements of a good strategic asset management framework include:

- **governance arrangements** that provide an accountability structure with clearly defined roles, responsibilities and reporting requirements
- **community consultation** before setting the required levels of services and adopting asset management plans
- well defined **levels of service**, which are needed to develop asset management strategies
- well defined and relevant **performance measures**
- an agreed **asset management policy** that provides the principles and requirements for asset management
- an asset management **strategy and objectives** that outline the actions to take to implement the policy, achieve the levels of service and manage the impact of changes in demand
- an **infrastructure asset management plan(s)** that is in line with the policy, strategy and objectives. The IAMP provides a clear and accurate understanding of the CWMS network assets owned and managed by the council and their physical condition

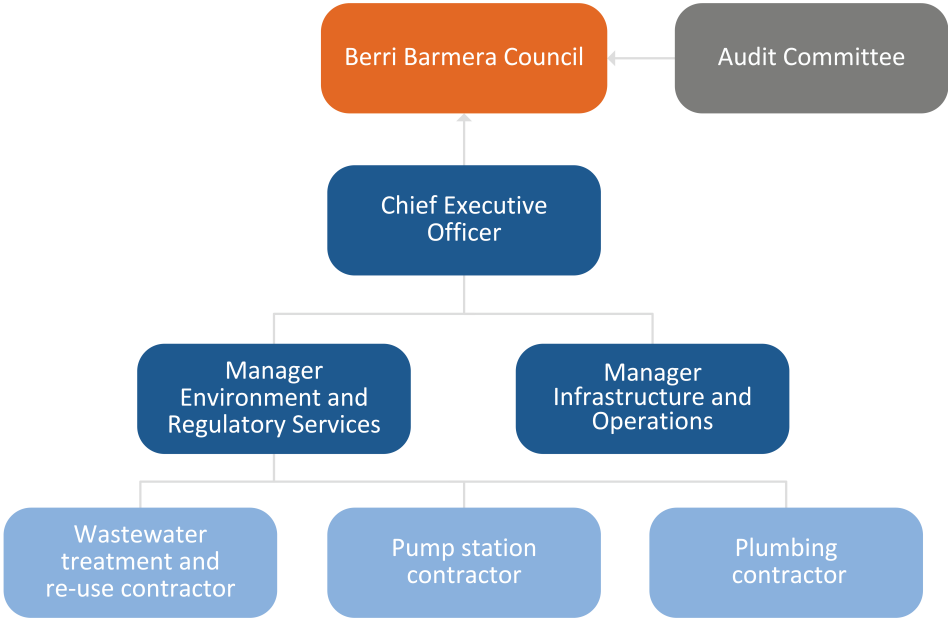
- a ***long-term financial plan*** that identifies the expenditure needed and source of funds to support the IAMP
- sound ***risk management*** practices to identify, assess and manage CWMS network risks
- ***monitoring, evaluation and reporting*** on CWMS network maintenance and renewal activities and performance to senior management, elected body and the community.

Appendix 4 – Background information on the Berri Barmera Council

A4.1 Asset management roles and responsibilities

Figure A4.1 shows the Berri Barmera Council’s governance structure for asset management.

Figure A4.1: Berri Barmera Council’s CWMS governance arrangements



Source: Based on information provided by the Berri Barmera Council.

The Council’s elected body is responsible for making informed decisions on providing infrastructure for its community and ensuring that resources are used effectively and efficiently in providing services.

The CEO is required to ensure that the Council’s assets and resources are properly managed, providing relevant advice and reports on performance against the Council’s strategic management plans for informed decision making.

The Manager Environment and Regulatory Services is responsible for managing the contractors and contract arrangements shown in figure A4.1 and other contractors that provide plumbing services for blockages, overflows and after-hours callouts.

The Manager Infrastructure and Operations is responsible for providing efficient and cost-effective planning and management of all infrastructure assets, including the CWMS network.

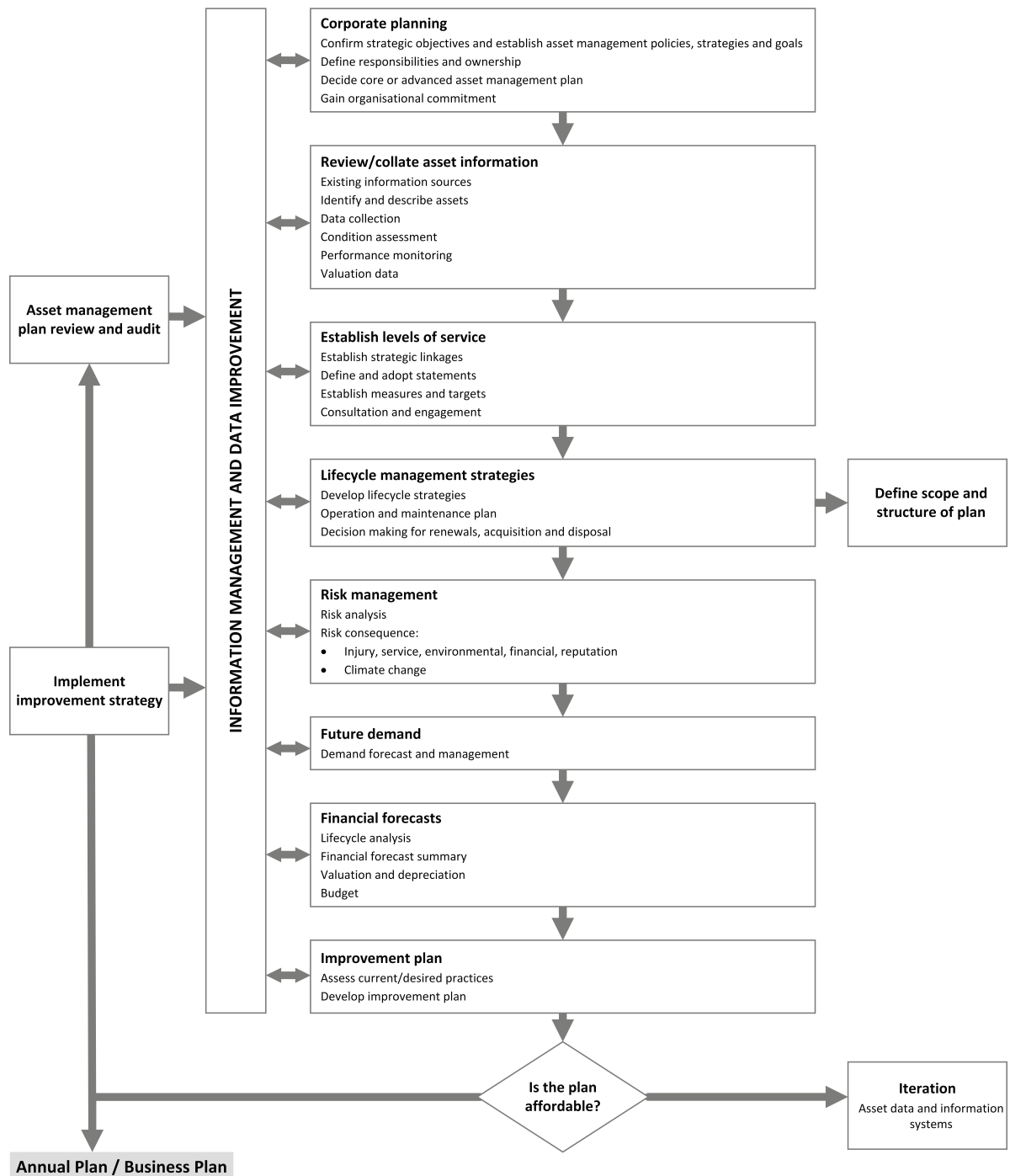
The audit committee’s role is to oversee and provide independent advice to the elected body on financial accountability and internal control matters, including asset management.

Consultation and ongoing review of the overall long-term asset management strategies and related policies in line with legislation and good management practices is referred to the Infrastructure, Assets and Works Committee.

A4.2 Strategic asset management framework

The Council's strategic asset management framework, shown in figure A4.2, includes key elements of a good framework.

Figure A4.2: Berri Barmera Council's strategic asset management framework



Source: Berri Barmera Council.

A4.3 Examples of CWMS network components

The following photos show some of the components of the Berri Barmera CWMS network.



Wastewater treatment lagoon



Wastewater treatment plant equipment (treated wastewater pump)



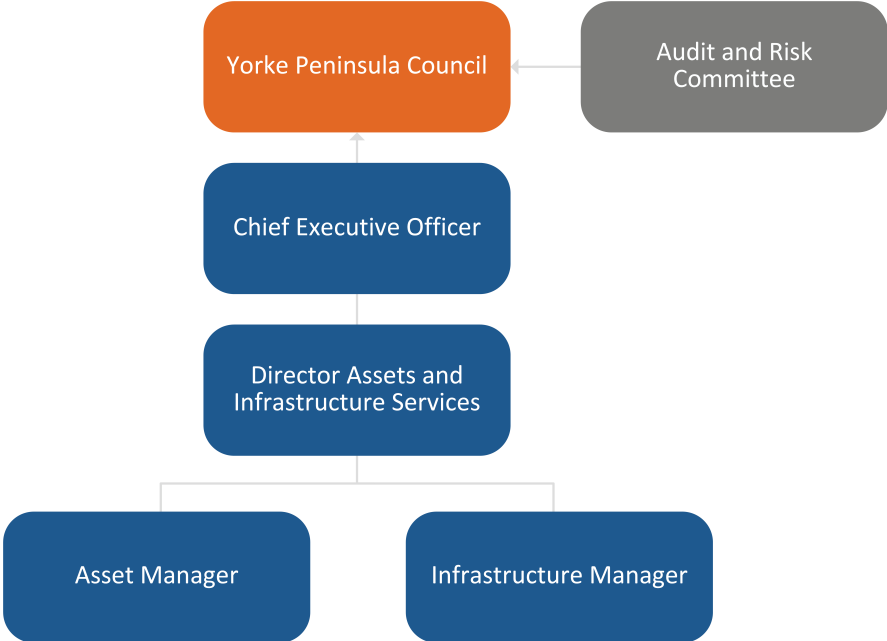
Wastewater network pumps

Appendix 5 – Background information on the Yorke Peninsula Council

A5.1 Asset management roles and responsibilities

Yorke Peninsula Council’s governance structure for asset management is shown in figure A5.1.

Figure A5.1: Yorke Peninsula Council’s CWMS governance arrangements



Source: Based on information provided by the Yorke Peninsula Council.

The Council’s elected body is responsible for making informed decisions on providing infrastructure for its community and ensuring that resources are used effectively and efficiently in providing services.

The CEO is required to ensure that the Council’s assets and resources are properly managed, providing relevant advice and reports on performance against the Council’s strategic management plans for informed decision making.

The Infrastructure Manager reports to the Director for Assets and Infrastructure Services and is responsible for overseeing a small team that regularly monitors wastewater treatment plants and pump stations, engaging contractors as required for specialist services such as plumbing and electrical work.

Contractors are also engaged to pump out septic tanks located on private land to prevent blockages and other issues with the Council’s CWMS pipe network.

The Asset Manager is responsible for maintaining the asset management information system.

The audit and risk committee’s role is to oversee and provide independent advice to the Council on financial accountability and internal control matters, including asset management.

A5.2 Yorke Peninsula Council's strategic asset management framework

The Council's strategic asset management framework, shown in figure A5.2, includes key elements of a good framework.

Figure A5.2: Yorke Peninsula Council's strategic asset management framework



Source: Yorke Peninsula Council.

A5.3 Examples of CWMS network components

The following photos show some of the components of the Yorke Peninsula CWMS network.

Large wastewater treatment plant



Image of inside a broken earthenware pipe



Appendix 6 – Response from the Berri Barmera Council



Building a better community

Ref: I21/807

16 May 2023

Auditor Generals Department
Level 9
State Administration Centre
200 Victoria Square
ADELAIDE SA 5000

Dear Mr Richardson,

RE: Report to Parliament - Community wastewater management system

Please receive this letter acknowledging receipt of your letter and proposed report to Parliament on the review of the Berri Barmera Council's management of its community wastewater management systems.

Council notes the report will be finalised with some minor formatting changes for printing purposes and to be delivered to the President of the Legislative Council and the Speaker of the House of Assembly for tabling in Parliament.

Council awaits a copy of the final report, noting that the draft report contains fifteen (15) recommendations in total. "Council confirms that, the Report contains fifteen (15) recommendations in total. Of these, twelve (12) have been accepted, six (6) of which have already been actioned and an additional three (3) have been noted for consideration."

Berri Barmera Council acknowledge the process to date and thank the Auditor General's staff for their time and professionalism.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Dylan Strong".

Dylan Strong
Chief Executive Officer

A handwritten signature in blue ink, appearing to read "Ella Winnall".

Ella Winnall
Mayor



Address 5 Riverview Drive, Berri SA 5343 **Post** PO Box 229, Berri SA 5343
Phone (08) 8582 1922 **Fax** (08) 8582 3029 **Email** bbc@bbc.sa.gov.au

berribarmera.sa.gov.au

Appendix 7 – Response from the Mayor of the Yorke Peninsula Council

YORKE PENINSULA COUNCIL

PRINCIPAL OFFICE:
8 Elizabeth Street, Maitland
ALL CORRESPONDENCE TO:
PO Box 57, MAITLAND, SA 5573
Telephone (08) 8832 0000
Email: admin@yorke.sa.gov.au
Website: www.yorke.sa.gov.au



16 May 2023

Record No: 23/49253

Mr Andrew Richardson
Auditor-General
Auditor-General's Department
Level 9
State Administration Centre
200 Victoria Square
ADELAIDE SA 5000

By Email: records@audit.sa.gov.au

Dear Andrew

Review of the community wastewater management systems network

Thank you for providing a final copy of the report, *Review of the community wastewater management systems (CWMS) network* ('Review') and for the opportunity to respond to the findings and recommendations.

I confirm that Yorke Peninsula Council ('Council') has no further updates or additional comments to the final report.

The Review represents a fair assessment of Council's CWMS network operations and provides Council with a number of valuable recommendations to improve our condition assessment, financial forecasting and reporting processes within the CWMS area.

We thank the audit team from the Auditor-General's Department and the industry consultants from Kellogg Brown & Root Pty Ltd, for their expertise and approach to this Review and the audit process.

Yours sincerely



Darren Braund
Mayor

BRANCH OFFICES
MINLATON
YORKETOWN

