



Quantum
Assurance

Shire of Kent

Water Services Operating Licence
(Non-Potable Water Supply and
Sewerage Services)

Asset Management System Review

Final Report

January 2014

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Executive Summary

The Shire of Kent has a Water Services Operating Licence, issued by the Economic Regulation Authority (the Authority) under the Water Services Act 2012, for the provision of sewerage and non-potable water supplies in the operating area that are centred on the townsites of Nyabing and Pingrup.

The sewerage scheme was constructed in 1974 and expanded very slightly during the past 10 years. The scheme is operated by the Shire of Kent and includes a gravity reticulation system, two pumping stations and two waste treatment ponds in Nyabing and one waste treatment pond in Pingrup. Each scheme was designed for a town population of about 300 – 400 and can accommodate the current town populations of about 150 and reasonable residential development in future. The scheme collects and treats approximately 112 m³ of residential and commercial liquid wastes and will re-use approximately 70% of this water on spray irrigation of Nyabing's ovals and parks by the end of 2014.

This Asset Management System Review has been conducted in order to assess the effectiveness of its asset management system.

The audit covered the period from 1st December 2008 to 30th November 2011 inclusive.

This Asset Management System Review has been conducted in order to assess the effectiveness of the asset management system. This review covered the period from 1st December 2011 to 31st October 2013.

SUMMARY

The review of the Asset Management System has shown that the assets are being well-managed. The framework of policies, procedures and databases to support the ongoing operation of the sewerage schemes at Nyabing and Pingrup townsites has been significantly improved since the previous review reported in July 2012.

The Asset Management Plan has been revised to include more extensive asset planning, maintenance, risk assessment and contingency planning, supported by detailed asset registers and maintenance schedules.

The review confirmed that the eight recommendations in the previous review report dated July 2012 have been implemented apart from development of a long-term asset replacement strategy which the Shire plans to complete by June 2014.

The development of this strategy is the only improvement noted in this review for further action.

POST REVIEW IMPLEMENTATION PLAN

The Post-Review Implementation Plan in Appendix A provides a summary of the issue and recommendation from this Asset Management System Review with a management response from the Shire of Kent.

The Post Review Implementation Plan has been developed by the review team in consultation with the licensee and has been approved by the licensee. The Shire has agreed to implement the recommended action.

LIMITATIONS

Our review has been conducted in accordance with applicable Standards on Assurance Engagements (ASAE) 3000 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" and 3100 "Compliance Engagements".

Our review procedures have been included in Section 1 of this report and have been undertaken to form a conclusion as to whether the Shire has complied in all material respects, with the requirements of an effective asset management system.

This report was prepared for distribution to the Shire and the Authority for the purpose of fulfilling the Shire's reporting obligations under the Water Services Operating Licence. We disclaim any assumption of responsibility for any reliance on this report to any persons or users other than the Shire and the Authority, or for any purpose other than that for which it was prepared.

Because of the inherent limitations of any internal control environment, it is possible that fraud, error or non-compliance may occur and not be detected. A review is not designed to detect all instances of non-compliance with the procedures and controls over the performance and quality standards and licence obligations of the Water Services Operating Licence, since we do not examine all evidence and every transaction. The review conclusions expressed in this report have been formed on this basis.

We confirm that the Authority's Audit Guidelines: Electricity, Gas and Water Licences (August 2010) have been complied with in the conduct of this review and the preparation of the report, and that the review findings reflect our professional opinion.

QUANTUM MANAGEMENT CONSULTING & ASSURANCE

GEOFF WHITE PERTH, WA
DIRECTOR 6 FEBRUARY 2014

1. Background

The Shire of Kent has a Water Services Operating Licence, issued by the Economic Regulation Authority (the Authority) under the Water Services Act 2012, for the provision of sewerage and non-potable water supplies in the operating area that are centred on the townsites of Nyabing and Pingrup.

The sewerage scheme was constructed in 1974 and expanded very slightly during the past 10 years. The scheme is operated by the Shire of Kent and includes a gravity reticulation system, two pumping stations and two waste treatment ponds in Nyabing and one waste treatment pond in Pingrup. Each scheme was designed for a town population of about 300 to 400 people and can accommodate the current town populations of about 150 and reasonable residential development in future. The scheme collects and treats approximately 112 m³ of residential and commercial liquid wastes and will re-use approximately 70% of this water on spray irrigation of Nyabing's ovals and parks by the end of 2014.

The Shire of Kent is required to comply with the terms and conditions of their licence, including applicable legislative provisions and performance reporting as set out in their licence and the Water Compliance Reporting Manual (July 2012).

The Shire of Kent required an asset management system review to comply with the licensing requirements of the Authority. The previous review period was from 1st December 2008 to 30th November 2011 (report issued July 2012). This review covered the period from 1st December 2011 to 31st October 2013.

Our review approach is based on the obligations set out in the licence (Licence WL20, Version 3, dated 18 November 2013 and the previous version), applicable legislation and the Audit Guidelines issued by the Authority in August 2010.

2. Methodology

2.1 Objectives and Scope

The objective of the review was to assess the adequacy and effectiveness of the asset management system in place for operation, maintenance and monitoring of the non-potable water supply and sewerage services.

The scope of the review included an assessment of the adequacy and effectiveness of the asset management system by evaluating the key processes of:

- Asset planning
- Asset creation/acquisition
- Asset disposal
- Environmental analysis
- Asset operations
- Asset maintenance
- Asset management information system
- Risk management
- Contingency planning
- Financial planning
- Capital expenditure planning
- Review of the asset management system.

The review also assessed the status of the previous review recommendations and identified areas where improvement is required.

The key assets and infrastructure were not physically inspected as the focus of the review was the policies and procedures of the asset management system (the physical assets were observed to be in a good condition in April 2012 when the previous review was performed).

2.2 Review Period and Timing

This review covered the period from 1st December 2011 to 31st October 2013.

The previous review period was from 1st December 2008 to 30th November 2011.

2.3 Licensee's Representatives Participating in the Review

- Peter Bentley – Chief Executive Officer

2.4 Key Documents Examined

- Shire of Kent Water Services Operating Licence WL20, Version 3, dated 18 November 2013 (previously Shire of Kent Water Services Operating Licence 20 Version OL2 dated 15 May 2009).
- Kent Operating Area (Sewerage and Non-potable water supply services) Plan No. OWR-OA-038 (Nyabing) and Plan No. OWR-OA-039 (Pingrup).
- Shire of Kent – 2011 Water Licence Operational Audit and Asset Management Review Report (issued July 2012).
- Shire of Kent - Asset Management Plan for Sewerage and Effluent Reuse Scheme Assets (August 2013)
- Forward Capital Works Plan 2013/14 to 2016/17
- Sewerage Operating Income and Expenses 2012/13 and Budget 2013/14
- Performance Report to the Authority for 2012/13.
- Compliance Report to the Authority for 2012/13.
- Correspondence between the Shire and the Authority

2.5 Adequacy and Performance Ratings

The adequacy of processes and policies, and the performance of the key processes were assessed using the scales described in the tables below.

The overall effectiveness rating for each asset management process is based on a combination of the process and policy adequacy rating and the performance rating.

Asset Management Process and Policy Definition - Adequacy Ratings

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

Asset Management Process - Performance Ratings

RATING	DESCRIPTION	CRITERIA
1	Performing effectively	<ul style="list-style-type: none"> The performance of the process meets or exceeds the required levels of performance. Process effectiveness is regularly assessed, and corrective action taken where necessary.
2	Opportunity for improvement	<ul style="list-style-type: none"> The performance of the process requires some improvement to meet the required level. Process effectiveness reviews are not performed regularly enough. Process improvement opportunities are not actioned.
3	Corrective action required	<ul style="list-style-type: none"> The performance of the process requires significant improvement to meet the required level. Process effectiveness reviews are performed irregularly, or not at all. Process improvement opportunities are not actioned.
4	Serious action required	<ul style="list-style-type: none"> Process is not performed, or the performance is so poor that the process is considered to be ineffective.

2.6 Review Team and Hours

The review was completed by Geoff White – Director, Quantum Assurance with a budget of 15 hours.

3. Observations and Results

The effectiveness of the Shire's asset management system was assessed using the asset management system process and policy definitions ratings and the performance ratings (refer section 2.5) as provided by the Authority in the Audit Guidelines.

The review has assessed and rated the key processes as shown in Section 3.1.

Section 3.2 provides details of the current status of recommendations from the previous review.

Section 3.3 provides further details of the systems and the effectiveness rating for each process in the asset management system.

3.1 Summary of Asset Management System Ratings

The review's assessment of the asset management system process and policy definitions and their effectiveness is shown in the table below.

ASSET MANAGEMENT SYSTEM	Process and policy definition rating			Performance rating					
	Inadequate (D)	Requires significant improvement (C)	Requires some improvement (B)	Adequately defined (A)	Serious action required (4)	Corrective action required (3)	Opportunity for improvement (2)	Performing effectively (1)	Not Rated
Key Processes									
1. Asset planning				√				√	
2. Asset creation/ acquisition				√				√	
3. Asset disposal				√				√	
4. Environmental analysis				√				√	
5. Asset operations				√				√	
6. Asset maintenance				√				√	
7. Asset management information system				√				√	
8. Risk management				√				√	
9. Contingency planning				√				√	
10. Financial planning				√			√		
11. Capital expenditure planning				√			√		
12. Review of asset management system				√				√	

3.2 Previous Review Recommendations

The status of the recommendations in the previous asset management system review report issued in July 2012 is summarised below.

Item	AMS Element & Issue	Recommendation	Action Update by Licensee	Review Observations	Status
	ASSET PLANNING				
1	<p>Lifecycle costs of owning and operating assets should be assessed.</p> <p>The AMP includes the replacement costs and expected life of the main assets of the scheme as at 2009. Annual income for the next 5 years is only shown up to 2007/08 and was not updated.</p> <p>There is no detailed lifecycle costing showing the complete lifecycle costs (capital, operating and maintenance cost) to enable the level of the sewerage reserve to be determined. There is no indication as to whether the current sewerage reserve of \$99,147 at 30 June 2011 is adequate to cover future replacement costs. There are no expense forecasts for the next 5 years. A detailed Annual Capital Investment Budget is being developed as part of the asset management system.</p>	<p>Update the Asset Management Plan to show a detailed lifecycle costing of the scheme, the transfer to reserves required to meet future replacement costs; and the annual income and operating and maintenance costs for the next 5 years. This should be based on the detailed data compiled in the asset management system (Excel spreadsheets).</p>	<p>A total review of the asset management information system is under way including recent full pickup of the system, one complete CCTV inspection with a further inspection which will now be completed in 2012/13.</p> <p>The intent is to get a complete picture of the asset condition and plan for its systematic replacement within its estimated lifespan.</p> <p>The asset is in good condition and is being managed well. The two systems combined total approximately 2.5kms of pipework and it is managed by simple inspection regime and the regular replacement of pumps.</p> <p>Ultimately maintenance costs will be incorporated into the Shire's Asset Management Planning and the capital costs of replacement will form part of the Shire's 10 year Forward Capital Works Plan.</p>	<p>The AMP includes a projection of income each year until 2016/17. The income is close to covering the operating costs of the scheme but does not provide adequate funding for future replacement of the assets based on an annuity of \$102,525 being required. The existing sewerage reserve has a balance of approximately \$100,000.</p> <p>The Shire plans to develop an asset replacement strategy by 30 June 2014. The planned replacement of assets would not commence until 2017 per the lifecycle costing (some sections of piping).</p> <p><i>(Refer recommendation 1 in Post Review)</i></p>	PARTIALLY COMPLETED

Item	AMS Element & Issue	Recommendation	Action Update by Licensee	Review Observations	Status
				<i>Implementation Plan)</i>	
2	<p>Plans should be regularly reviewed and updated.</p> <p>The AMP has not been reviewed since September 2009 and at that date parts of the plan such as the financial projections were not updated.</p>	<p>Review the Asset Management Plan in April of each year as part of the development of the annual Shire budget for the following year. This should include the risk assessment, financial data, contingency plans and any other areas that may have changed. A complete revision of the plan should be done at least every 5 years or if major changes to the scheme occur.</p>	<p>As explained earlier the Shire is undertaking a significant review of the entire system which also includes the future replacement of various parts. The Asset Management Plan for the whole of the Shire's assets will be reviewed annually from the time of its completion in 2012/13.</p>	<p>The Asset Management Plan was revised in August 2013 including the financial projections.</p>	COMPLETED
	ASSET CREATION/ ACQUISITION				
3	<p>Ongoing legal/environmental/safety obligations of the asset owner should be assigned and understood.</p> <p>Section 5 of the AMP outlines the legislative requirements, although this section needs to be updated for the current operating licence issued in 2009.</p> <p>The Health Act, Environmental Protection and Occupational Health, Safety and Welfare are briefly considered. The Nyabing pond is registered with the Department of Environment. The Pingrup pond is smaller and does not need to be registered.</p>	<p>Update the Asset Management Plan for the new operating licence issued in 2009 and to note the registration of the Nyabing pond with the Department of the Environment.</p>	<p>Apart from regularly purchasing pumps, there has been no creation of assets beyond the replacement of the original pond. The Asset Management Plan will be updated accordingly.</p>	<p>The Asset Management Plan has been revised in August 2013 including the operating licence issued by the Authority in 2009 and reference to the Department of Environment licence for the Nyabing pond.</p>	COMPLETED

Item	AMS Element & Issue	Recommendation	Action Update by Licensee	Review Observations	Status
	ASSET OPERATIONS				
4	<p>Assets should be documented in an Asset Register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition and accounting data.</p> <p>Physical parameters for the assets are recorded in the "As constructed" drawings (PDF copies are also kept). The AMP provides a summary description of each installation within the scheme. The current review of the system being carried out by Shire staff will improve the level of documentation. A detailed listing of assets is being created in the asset management information system.</p>	<p>a) Complete the updating of the asset management information system (Excel spreadsheets) for the scheme's assets, including the condition assessment.</p> <p>b) Review the asset condition on an annual basis (not necessarily CCTV) and update any changes in the asset management information system.</p>	<p>a) The overall asset is accounted for in the Shire of Kent's financial asset register. Copies of plans and drawings are kept with a CCTV inspection of the entire system in 2011 being an integral part of the management of the physical assets.</p> <p>The asset management information system has been implemented for Department of Local Government requirements including the sewerage assets per the detailed Asset Register (Excel) for the scheme.</p> <p>b) The condition of assets was reviewed by a full CCTV inspection in 2011. Council has approved for this level of inspection to be completed every 5 years. Asset operation is also monitored by senior staff and others who have the skill and knowledge to do so.</p>	<p>Confirmed that the Asset Register has been set up on an Excel worksheet. This includes the date of the latest inspection and the condition assessment.</p> <p>The Asset Management Plan notes that a full CCTV inspection is to be conducted every 5 years.</p> <p>The condition of assets is also to be reviewed in February each year and recorded in the Asset Register.</p>	COMPLETED
	ASSET MAINTENANCE				
5	<p>Maintenance plans (emergency, corrective and preventative) should be documented and completed on schedule.</p> <p>A comprehensive Routine Maintenance Plan has been included in the AMP. The maintenance schedule specifies maintenance tasks to be carried out and the intervals at which they</p>	<p>Include the maintenance procedures, scheduling and responsibility in the asset management information system including a record of their completion.</p>	<p>As the system is not complicated or large, basic maintenance procedures are currently undertaken.</p> <p>Regular replacement of pumps regular inspections of Pipes and ponds are currently undertaken.</p> <p>In developing an asset management policy and procedures, this item will largely be dealt with.</p>	<p>The detailed Asset Register includes the planned and actual maintenance activities for each asset.</p>	COMPLETED

Item	AMS Element & Issue	Recommendation	Action Update by Licensee	Review Observations	Status
	<p>need to be done. It provides a checklist of maintenance tasks but is reliant on the knowledge and ability of the person performing the maintenance to carry them out satisfactorily.</p> <p>The unforeseen maintenance tasking is instigated by a telephone call-out system to the Shire Work's Manager, who attends the site, assesses the requirements and arrange the immediate and follow-up actions and activities.</p> <p>The procedures for the periodic inspection and maintenance of the assets are to be incorporated in the new asset management system (Excel spreadsheets). Evidence of their completion needs to be retained in the database.</p>				
	RISK MANAGEMENT				
6	<p>Risk management policies and procedures should exist and be applied to minimise internal and external risks associated with the asset management system.</p> <p>There is no Risk Assessment policy and procedures outlined in the Asset Management Plan and no detailed risk register.</p>	Update the Asset Management Plan to include a risk assessment policy and procedure, and implement this by updating the detailed risk register for licence conditions and asset failures, in the asset management system (Excel spreadsheet).	Agreed	The Asset Management Plan revised in August 2013 includes a risk assessment policy and procedure. This has been applied to develop a detailed Risk Assessment for events and assets. Most risks are rated Low with a few rated Moderate.	COMPLETED
	CONTINGENCY PLANNING				
7	Contingency plans should be	a) Based on the	Agreed	The Asset	COMPLETED

Item	AMS Element & Issue	Recommendation	Action Update by Licensee	Review Observations	Status
	<p>documented, understood and tested to confirm their operability and to cover higher risks.</p> <p>Key staff have an understanding of unwritten procedures, such as the calling of a plumber in the case of a pipe blockage, or an electrician in the case of a pump failure.</p> <p>However, a formal Contingency Plan has not been developed.</p>	<p>recommended risk assessment, a set of contingency plans or emergency procedures should be developed by the Shire to cover situations identified in the risk assessment as being a major or significant risk. For example bushfire affecting ponds or reticulation equipment; reticulation pump or electrical failure; extreme rainfall events/water overflows from the ponds; pipeline burst or blockages etc.</p> <p>The contingency plans should include:</p> <ul style="list-style-type: none"> • Detailed procedures • Key local contact details – name, number and location • Communication protocols • Specifications, location and availability of emergency equipment • Authorities that need to be contacted and when. <p>b) Once developed, the contingency plans should be reviewed and tested on at least an annual basis or whenever major changes are required to</p>		<p>Management Plan revised in August 2013 includes mitigation and contingency plans. These include pump failure, pond overflow and system blockages.</p> <p>Staff involved in the operation of the scheme have been advised of the contingency plans, when the AMP was revised in August 2013. No further testing is considered necessary.</p>	

Item	AMS Element & Issue	Recommendation	Action Update by Licensee	Review Observations	Status
		the plans to ensure they are operable and that appropriate persons are aware of their responsibilities in cases of emergency.			
	REVIEW OF ASSET MANAGEMENT SYSTEM				
8	<p>A review process should be in place to ensure that the asset management plan and the asset management system described therein are kept current.</p> <p>The Shire's Asset Management Plan was reviewed in September 2009 but some parts were not updated. The complete system of plans, policies and procedures and the asset management information system have not been reviewed.</p> <p>The Shire is currently revising the asset management system including implementing a database. The Authority was notified of progress in Post Audit Implementation Plan updates.</p> <p>The AMP (September 2009) does not include any procedures for the regular review and update of the plan; or the requirement to notify the Authority of any changes to the asset management system within 10 business days.</p>	<p>a) Include in the Asset Management Plan, a Monitoring and Review Procedures section for the annual review and update of the Plan and revision at least every 5 years;</p> <p>b) Modify the "Document Status" table to include a brief description of changes to the document from the previous version.</p>	<p>A total review of the asset is under way including recent full pickup of the system, one complete CCTV inspection. The intent is to get a complete picture of the asset condition and plan for its systematic replacement within its estimated lifespan.</p> <p>The asset is in good condition and is being managed well. The two systems combined total approximately 2.5kms of pipework and it is managed by simple inspection regime and the regular replacement of pumps.</p> <p>Following the review a full rewrite of the AMP will take place.</p>	<p>The Asset Management Plan has been fully revised in August 2013.</p> <p>The Plan has a section on Monitoring and Review Procedures. This requires a full review of the plan every 5 years and external review of the system every 3 years as per the licence condition.</p> <p>The legislative requirements section includes the requirement to notify the Authority of any significant changes to the asset management system.</p>	COMPLETED

Item	AMS Element & Issue	Recommendation	Action Update by Licensee	Review Observations	Status
	<p>The AMP does not have any Document Control Form that outlines the revision number, the author, the reviewer, and who approved the AMP for issue and when. The users of the AMP could benefit from a brief description of changes to the document from the previous version.</p>			<p>The Plan has document control (version details).</p>	

3.3 Review Results and Recommendations

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
1	ASSET PLANNING	Process Rating ¹	A	Performance Rating ²	1
1.1	Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning.	The Shire of Kent Asset Management Plan (AMP) reviewed in August 2013 was sighted. The goal, objective and level of service are stated in the AMP as: <i>“to provide cost effective wastewater collection, treatment and disposal services for the towns which meet community expectations for health and environmental management”.</i>			
1.2	Service levels are defined.	The Levels of Service requirements for customers are detailed in the Customer Service Charter. Additionally, the levels of service and performance parameters have been defined in the AMP. Performance is measured in performance reports to the Authority.			
1.3	Non-asset options (e.g. demand management) are considered.	The assets are considered appropriate for the current levels of demand.			
1.4	Lifecycle costs of owning and operating assets are assessed.	The Asset Management Plan was revised in August 2013 to include the lifecycle costs of owning the assets. The net present value of the assets is \$1.266 million with annual operating costs of \$41,000 in 2013/14 rising to \$51,900 in 2017/18.			
1.5	Funding options are evaluated.	The Shire maintains a Sewerage Reserve. The funds in the reserve can only be used for the purposes of replacing and upgrading of capital facilities for the Sewerage Schemes in Nyabing and Pingrup. The Shire has a specified area rating which is applied to all properties connected or capable of being connected to the sewerage scheme in the Nyabing and Pingrup town sites. The purpose of this rate is to offset the cost of the sewerage treatment, including operation, maintenance, administration, depreciation and loan repayments. A detailed Annual Capital Investment Budget has been developed as part of the asset management system.			
1.6	Costs are justified and cost drivers identified.	The estimated replacement costs of assets are included in the AMP. Demand is stable. Operating and maintenance cost are detailed in the AMP for the next 5 years.			
1.7	Likelihood and consequences of asset failure are predicted.	The analysis assumes that assets will be replaced at the end of their standard economic life. Assets are given a condition rating and an importance rating in the AMP as a form of risk assessment.			
1.8	Plans are regularly reviewed and updated.	The AMP was fully revised in August 2013. A full review is required every five years. The Plan will also be reviewed annually and updated as necessary.			

¹ Process ratings: A=adequately defined, B=requires some improvement, C=requires significant improvement, D=inadequate.

² Performance ratings: 1=performing effectively, 2=opportunity for improvement, 3=corrective action required, 4=serious action required

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
		Process Rating	A	Performance Rating	1
2	ASSET CREATION/ ACQUISITION	Process Rating	A	Performance Rating	1
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions.	No new assets are shown on the Asset Management Plan since the Nyabing pond expansion in 2009. A project evaluation was undertaken prior to contracting the project engineers. Apart from this, the AMP only includes replacement of existing assets as they reach the end of their life.			
2.2	Evaluations include all life-cycle costs.	No new assets are shown on the AMP.			
2.3	Projects reflect sound engineering and business decisions.	No new assets are shown on the AMP.			
2.4	Commissioning tests are documented and completed.	Commissioning tests for the Nyabing ponds expansion were documented and completed. The completed ponds were registered with the Department of Environment.			
2.5	Ongoing legal/environmental/safety obligations of the asset owner are assigned and understood.	Section 5 of the AMP outlines the legislative requirements, including the operating licence issued in 2009. The Health Act, Environmental Protection and Occupational Health, Safety and Welfare are briefly considered. The Nyabing pond is registered with the Department of Environment. The Pingrup pond is smaller and does not need to be registered.			
3	ASSET DISPOSAL	Process Rating	A	Performance Rating	1
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process.	This is a small system and all assets are performing as intended. No disposals are planned other than pump station pumps being replaced as required. There was a full CCTV inspection in 2011. The AMP notes that Council has approved a full CCTV inspection being done every five years. Any under-performing assets would be identified in the planned maintenance checks each year.			
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken.	Asset condition is reviewed in the planned maintenance checks and reasons for any under-performance are investigated.			
3.3	Disposal alternatives are evaluated.	According to the AMP, assets at the end of their life will be replaced with a similar capacity and the old asset dumped or recycled for scrap as appropriate.			
3.4	There is a replacement strategy for assets.	The Asset Management Plan records details of the main assets and their replacement costs and expected lives.			
4	ENVIRONMENTAL ANALYSIS	Process Rating	A	Performance Rating	1
4.1	Opportunities and threats in the system environment are assessed.	Opportunities and threats for the system are considered in the AMP and in the risk assessment spreadsheet.			
4.2	Performance standards (availability of	The Annual Performance Report for 2012/13 was sighted. Performance standards have been met with no blockages			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
	service, capacity, continuity, emergency response, etc) are measured and achieved.	reported.			
4.3	Compliance with statutory and regulatory requirements.	<p>The Asset Management Plan identifies the following regulatory requirements:</p> <ul style="list-style-type: none"> ▪ Water Services Licensing Act 1995; ▪ Local Government Act 1995; ▪ Environmental Protection Act 1986; ▪ Occupational Safety and Health Act 1984; and ▪ Water Agencies (Powers) Act 1984. <p>The AMP also requires compliance with the Shire's Operating Licence for Sewerage Services under the Water Services Licencing Act 1995. The CEO and Works Supervisor monitor compliance.</p>			
4.4	Achievement of customer service levels.	Compliance report for 2012/13 shows that customer service levels have been achieved. The CEO advised that there have been no customer complaints.			
5	ASSET OPERATIONS	Process Rating	A	Performance Rating	1
5.1	Operational policies and procedures are documented and linked to service levels required.	The Asset Management Plan includes an overview of the operations of the system. The manufacturers' operating instructions/manuals are kept and used by Works staff.			
5.2	Risk management is applied to prioritise operations tasks.	The Asset Management Plan includes a risk assessment policy and this has been applied in developing a risk assessment register and the Annual Planned Maintenance program.			
5.3	Assets are documented in an Asset Register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition and accounting data.	<p>Physical parameters for the assets are recorded in the "As constructed" drawings (PDF copies are also kept). The AMP provides a summary description of each installation within the scheme. A detailed listing of assets is documented in the Asset Register for the scheme (Excel worksheet).</p> <p>The condition of assets is also to be reviewed in February each year and recorded in the Asset Register.</p>			
5.4	Operational costs are measured and monitored.	All asset expenditure is captured in the Shire's Financial Management Information System (FMIS). The historical cost information for the assets has not been transferred to the Asset Register but is in the FMIS.			
5.5	Staff receive training commensurate with their responsibilities.	<p>The AMP outlines the current human resources required to support the plan as follows:</p> <ul style="list-style-type: none"> ▪ CEO or Deputy CEO; ▪ Works Supervisor; ▪ Building Maintenance Officer; 			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
		<ul style="list-style-type: none"> ▪ Town Gardener; ▪ Contract Personnel. External licensed plumbers and electricians are also utilised as necessary. The Kent wastewater scheme is a simple system which requires a basic level of asset management to maintain it in an effective condition. The assets are in good condition.			
6	ASSET MAINTENANCE	Process Rating	A	Performance Rating	1
6.1	Maintenance policies and procedures are documented and linked to service levels required.	The Nyabing and Pingrup wastewater schemes are simple systems, which require a very basic level of asset management to maintain them in effective condition. The systems are in good condition. The assets seem appropriate for the current levels of demand. The Asset Management Plan includes a section on Maintenance Planning that provides an overview of the maintenance activities. There is a detailed Annual Maintenance Schedule in the AMP. Long term staff of the Shire have an excellent knowledge of the requirements and carry out maintenance in a very effective manner.			
6.2	Regular inspections are undertaken of asset performance and condition.	The condition of assets was reviewed by a full CCTV inspection in 2011. Council has approved for this level of inspection to be completed every 5 years. The condition of assets is also to be reviewed in February each year and recorded in the Asset Register. Asset operation is also monitored via the planned maintenance checks by senior staff and others, who have the skill and knowledge to do so.			
6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule.	A comprehensive Routine Maintenance Plan has been included in the AMP. The maintenance schedule specifies maintenance tasks to be carried out and the intervals at which they need to be done. It provides a checklist of maintenance tasks but is reliant on the knowledge and ability of the person performing the maintenance to carry them out satisfactorily. The unforeseen maintenance tasking is instigated by a telephone call-out system to the Shire Work's Manager, who attends the site, assesses the requirements and arrange the immediate and follow-up actions and activities. The detailed Asset Register includes the planned and actual maintenance activities for each asset. Confirmed planned maintenance activities completed for year to date.			
6.4	Failures are analysed and operational/maintenance plans adjusted where necessary.	Any failures are rare but would be analysed and considered as part of the Shire's annual budget preparation.			
6.5	Risk management is applied to prioritise maintenance tasks.	The Asset Management Plan includes a risk assessment policy and this has been applied in developing a risk assessment register and the Annual Planned Maintenance program.			
6.6	Maintenance costs are measured and	Maintenance costs are tracked through the FMIS and actual/budget reporting each month.			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
	monitored.				
7	ASSET MANAGEMENT INFORMATION SYSTEM	Process Rating	A	Performance Rating	1
7.1	Adequate system documentation for users and IT operators.	The asset management information system is a simple system based on the Excel spreadsheets available from the Authority. The system is documented in the Asset Management Plan (revised August 2013) which refers to each spreadsheet included in the Appendices.			
7.2	Input controls include appropriate verification and validation of data entered into the system.	Excel spreadsheets are populated and data is checked when input.			
7.3	Logical security access controls appear adequate, such as passwords.	The AMP and the accompanying Excel spreadsheets have been saved on the Shire's server. There is a password access to the Shire's system and PCs which restricts access to authorised Shire officers.			
7.4	Physical security access controls appear adequate.	The Shire offices are locked and alarmed outside of hours.			
7.5	Data backup procedures appear adequate.	The system is regularly backed up as part of the standard IT maintenance procedures on a nightly basis and disks are taken offsite for safekeeping.			
7.6	Key computations related to licensee performance reporting are materially accurate.	<p>Some Excel spreadsheets contains formulas such as, for example:</p> <ul style="list-style-type: none"> - In the Risk Assessment spreadsheet, inherent risk is automatically assigned from the likelihood and overall consequence scores; - In the Annual Capital Investment Budget spreadsheet and in the Annual Operations & Maintenance Budget spreadsheet, the light blue cells are automatically calculated. <p>The review confirmed that the key computations in the Excel spreadsheets are accurate.</p>			
7.7	Management reports appear adequate for the licensee to monitor licence obligations.	<p>Apart from printing the Excel spreadsheets out, there is no ability to create management reports.</p> <p>However, the functionality of the suite of Excel spreadsheets provided as a guide by the Authority to Shires for asset management planning purposes appears to be adequate for the Shire's needs.</p>			
8	RISK MANAGEMENT	Process Rating	A	Performance Rating	1
8.1	Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system.	The Asset Management Plan revised in August 2013 includes a risk assessment policy and procedure. This has been applied to develop a detailed Risk Assessment for events and assets. Most risks are rated Low with a few rated Moderate.			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
8.2	Risks are documented in a risk register and treatment plans are actioned and monitored.	The risks have been documented in a Risk Assessment worksheet. Treatment plans (mitigation and contingency) have been documented in the Asset Management Plan.			
8.3	The probability and consequences of asset failure are regularly assessed.	The Asset Management Plan revised in August 2013 includes a risk assessment policy and procedure. This has been applied to develop a detailed Risk Assessment for events and assets, including the probability and consequences of asset failure.			
9	CONTINGENCY PLANNING	Process Rating	A	Performance Rating	1
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.	<p>The Asset Management Plan revision in August 2013 includes mitigation and contingency plans. These include pump failure, pond overflow and system blockages.</p> <p>Staff involved in the operation of the scheme have been advised of the contingency plans, when the AMP was revised in August 2013. Confirmed with the CEO that key staff have an understanding of the procedures, such as the calling of a plumber in the case of a pipe blockage, or an electrician in the case of a pump failure.</p>			
10	FINANCIAL PLANNING	Process Rating	A	Performance Rating	2
10.1	The financial plan states the financial objectives and strategies and actions to achieve the objectives.	The AMP has a broad financial plan that sets out the strategy and objectives.			
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs.	<p>The Shire maintains a Sewerage Reserve. The funds in the reserve can only be used for the purposes of replacing and upgrading of capital facilities for the Kent Sewerage Scheme.</p> <p>The Shire has a specified area rating which is applied to all properties connected or capable of being connected to the sewerage scheme in the Kent town site. The purpose of this rate is to offset the cost of the sewerage treatment, including operation, maintenance, administration, depreciation and loan repayments. The AMP also notes that additional loans for replacements may need to be funded by customers in future.</p> <p>The AMP has been updated for capital expenditure and operating/maintenance costs to 2016/17. There is no significant capital expenditure planned.</p>			
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets).	The Asset Management Plan was revised in August 2013 to include the lifecycle costs of owning the assets. The net present value of the assets is \$1.266 million with annual operating costs of \$41,000 in 2013/14 rising to \$51,900 in 2017/18. The replacement of assets at the end of their economic life would require an annuity provision of \$102,525.			
10.4	The financial plan provides firm predictions on income for the next five	The AMP includes a projection of income each year until 2016/17. The income is close to covering the operating			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
	years and reasonable indicative predictions beyond this period.	costs of the scheme. The balance is provided by general rates income.			
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services.	<p>The AMP includes a projection of income each year until 2016/17. The income is close to covering the operating costs of the scheme but does not provide adequate funding for future replacement of the assets based on an annuity of \$102,525 being required. The existing sewerage reserve has a balance of approximately \$100,000.</p> <p>The Shire plans to develop an asset replacement strategy by 30 June 2014. The planned replacement of assets would not commence until 2017 per the lifecycle costing (staged replacement of clay piping over 40 years old with PVC).</p> <p>Recommendation:</p> <ul style="list-style-type: none"> As noted in the Asset Management Plan, an asset replacement strategy should be developed for the replacement of the sewerage scheme assets at the end of their economic life. (Post Review Implementation Plan item 1.1) 			
10.6	Significant variances in actual/budget income and expenses are identified and corrective action taken where necessary.	Variations in actual and budget income and expenses are identified in monthly reports.			
11	CAPITAL EXPENDITURE PLANNING	Process Rating	A	Performance Rating	2
11.1	There is a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates.	<p>There are no forecast capital expenditures to 2016/17. The Asset Management Plan notes that planning is underway for the possible staged replacement of the clay pipe system from 2017.</p> <p><i>(Refer Post Review Implementation Plan item 1.1).</i></p>			
11.2	The plan provides reasons for capital expenditure and timing of expenditure.	The analysis assumes that assets will be replaced at the end of their standard economic life.			
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan.	The capital expenditure plan is consistent with the asset life and condition recorded in the detailed Asset Register.			
11.4	There is an adequate process to	The Asset Management Plan will be revised at least every five years and when any significant changes occur. As			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
	ensure that the capital expenditure plan is regularly updated and actioned.	noted in 11.1 a separate Asset Replacement Strategy is planned to be developed by 30 June 2014.			
12	REVIEW OF ASSET MANAGEMENT SYSTEM	Process Rating	A	Performance Rating	1
12.1	A review process is in place to ensure that the asset management plan and the asset management system described therein are kept current.	<p>The Asset Management Plan has been fully revised in August 2013.</p> <p>The Plan has a section on Monitoring and Review Procedures. This requires a full review of the plan every 5 years and external review of the system every 3 years as per the licence condition.</p> <p>The legislative requirements section includes the requirement to notify the Authority of any significant changes to the asset management system.</p> <p>The Plan has document control (version details).</p>			
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system.	An independent review is performed every 3 years as required by the licence.			

3.4 Conclusion

The review of the Asset Management System has shown that the assets are being well-managed. The framework of policies, procedures and databases to support the ongoing operation of the sewerage schemes at Nyabing and Pingrup townsites has been significantly improved since the previous review reported in July 2012.

The Asset Management Plan has been revised to include more extensive asset planning, maintenance, risk assessment and contingency planning, supported by detailed asset registers and maintenance schedules.

The review confirmed that the eight recommendations in the previous review report dated July 2012 have been implemented apart from development of a long-term asset replacement strategy which the Shire plans to complete by June 2014.

The development of this strategy is the only improvement noted in this review for further action.

The Post Review Implementation Plan in Appendix A provides a summary of the issue and recommendation from the asset management system review with a response from the Shire of Kent.

Appendix A: Post Review Implementation Plan

No.	Issue	Priority (High Medium Low)	Recommendation	Licensee's Response	Responsibility & Completion Date
	Asset Planning				
1	<p>Asset Replacement Strategy</p> <p>The AMP includes a projection of income each year until 2016/17. The income is close to covering the operating costs of the scheme but does not provide adequate funding for future replacement of the assets based on an annuity of \$102,525 being required. The existing sewerage reserve has a balance of approximately \$100,000.</p> <p>The Shire plans to develop an asset replacement strategy by 30 June 2014. The planned replacement of assets would not commence until 2017 per the lifecycle costing (staged replacement of clay piping over 40 years old with PVC).</p>	Low	As noted in the Asset Management Plan, an asset replacement strategy should be developed for the replacement of the sewerage scheme assets at the end of their economic life.	Development of the asset replacement strategy is planned.	CEO 30 June 2014

END OF REPORT