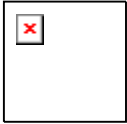


Shire of Coolgardie

**Water Operating Licence Audit  
and Asset Management Review**

Final Report



# Contents

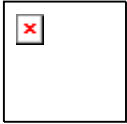
1.	Introduction	1
1.1	Scope	1
1.2	Documents Reviewed	1
1.3	Risk Assessment	2
1.4	Personnel Interviewed	2
1.5	Previous Audit	2
1.6	Assessment And Measurement Of Compliance	2
1.7	Audit Time Input	3
2.	Previous Audit	4
2.1	Mandatory Requirements	4
2.2	Improvement Recommendations	4
3.	Operating Licence Audit	5
4.	Asset Management System Review	14
5.	Conclusions and Recommendations	19
5.1	Operational Audit	19
5.2	Asset Management Review	20
5.3	Conclusion	21
5.4	Compliance Statement	22

## Table Index

Table 1	Operational Audit Checklist	5
Table 2	Asset Management Review Checklist	14

## Appendices

A	Risk Assessment
---	-----------------



# 1. Introduction

This Water Licence Audit and Asset Management System review was carried out on the water services at Coolgardie for the period between 31<sup>st</sup> October 2002 and 30<sup>th</sup> October 2005 in accordance with the requirements of the Economic Regulation Authority. Coolgardie is located approximately 558 Kilometres east of Perth on the Great Eastern Highway. The Shire covers an area of 30,400 km<sup>2</sup> and is responsible for the towns of Coolgardie, Kambalda, Kambalda West, Widgiemooltha and Kurrawang. Approximately 6,100 people live in the shire. Coolgardie saw the biggest movement of people in Australian history when gold was found at Fly Flat back in 1892 and was the first settlement of the Western Australia Eastern Goldfields. The town of Coolgardie's current population is approximately 1063, a significantly reduction since the Goldrush days as mining activities moved east and south.

The Water Services Include:

- ▶ Sewerage Scheme collecting and treating up to 300 cubic meters of wastewater from residences and commercial businesses in the town of Coolgardie.

The scope of services and licence compliance requirements are detailed in the Shire of Coolgardie Operating Licence, Licence Registration Number IL/13, Licence Version 4 dated 4 November 2004. This audit has been prepared in accordance with "The Economic Regulation Authority, Scope and Guidelines for Water Service Licence: Operating Licence and Asset Management Reviews for Shire of Coolgardie (the Licensee) – 1 January 2005.

## 1.1 Scope

The Audit covers the period 31<sup>st</sup> October 2002 and 30<sup>th</sup> October 2005. As it is impractical to review all relevant documents and data over this period, a sample of documents and services/events will be examined in order to establish a thorough appreciation of the operations and assess compliance.

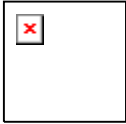
The methodology, order and content of the audit was:

- ▶ Inspection of the facilities, including sewer reticulation, pumping and treatment systems;
- ▶ Review of previous audit documentation and results;
- ▶ Review of Licence Documentation, Asset Management systems, plans etc;
- ▶ Interview with relevant personnel; and
- ▶ Preparation of draft and final report

## 1.2 Documents Reviewed

The following documents, which relate to the water services operations and asset management, were reviewed during the audit.

- ▶ Operational Licence – 4<sup>th</sup> November 2004
- ▶ Customer Services Charter – October 2004



- ▶ Shire of Coolgardie, Water Services Provider Operational Audit Sewerage Scheme, GHD Pty Ltd, 27 May 2003
- ▶ As Constructed Drawings and Plans
- ▶ Shire of Coolgardie 2005/2006 Budget
- ▶ Relevant correspondence between the Shire to ERA and DoE
- ▶ Licences from DoE and other authorities.

### **1.3 Risk Assessment**

A Risk Assessment completed for the Audit Plan identified only one high risk as the water quality for potable water supplies. Most of the assessments were either low or medium risks with no extreme risks. A copy of the Risk Assessment is enclosed at Appendix A.

### **1.4 Personnel Interviewed**

The following personnel were interviewed on the management, maintenance and operation of the water systems including:

- ▶ The Shire
  - Gavin Harris – Manager Technical Services
  - Edward Czaplinski – Coolgardie Town Supervisor

### **1.5 Previous Audit**

The Audit report of 2003 was reviewed and the recommendations and non-compliance issues discussed in the later sections of this report. The Licence has been revised since the previous audit in 2003, with different formats and conditions than the previous Licence. Where possible, the previous audit was compared to the current licence clauses and requirements.

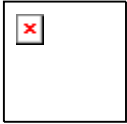
### **1.6 Assessment And Measurement Of Compliance**

The Licensee's compliance with licence requirements was assessed using the following scales:

- A. Exceeds minimum requirement
- B. Meets minimum requirement – no improvement needed
- C. Meets minimum requirement – improvement needed
- D. Does not meet the minimum requirement

In addition, the following rating scale was used in assessing the effectiveness of the key outputs of the Asset Management System.

- A. Excellent                      All key outputs and processes covered and fully demonstrably applied. Systems fully developed and considered appropriate in terms of coverage and application.



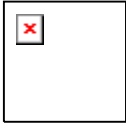
- B. Good All key outputs and processes covered and largely developed. System requires some improvements in terms of coverage, processes and/or application.
- C. Largely adequate Most key outputs covered. System requires some improvements in terms of coverage, processes and/or application.
- D. Inadequate System not fully developed. Lacking in key outputs and coverage. Unable to demonstrate application of system.

In addition to the above compliance assessment or in absence of a specific grading, observations and comments were made by the auditor with recommendations for improvement when deemed appropriate.

### 1.7 Audit Time Input

The professional resource requirements for the operations audit and asset management systems review were as follows:

1.	Preparation of the Audit Plan and Risk Assessment	3 hrs
2.	Conduct the Audit and AM Review	12 hrs
3.	Prepare the Draft Report	16 hrs
4.	Review and Amend Draft Report and Prepare Final Report	4 hrs
<hr/>		
5.	Total	35 hrs



## 2. Previous Audit

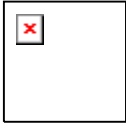
The status of the recommendations from the May 2003 Audit Report by GHD Pty Ltd is shown in the following table. The status of the recommendations demonstrates that no improvement has occurred since the previous audit and review.

### 2.1 Mandatory Requirements

Recommendation	Status
Review and update the Asset Management System and provide a copy to the ERA for approval	No Improvement
Provide completed Schedule 3 of the Licence to the ERA within 30 days of the end of the financial year	No Improvement

### 2.2 Improvement Recommendations

Recommendation	Status
Develop contingency and emergency plans	No Improvement
Complete a risk analysis	No Improvement
Provide a Capital Expenditure Plan and Five Year Plan, consistent with the asset life and condition	No Improvement
Display the Customer Charter on the Display Boards and advertise its availability in the newsletter	No Improvement



### 3. Operating Licence Audit

Mark Bourhill, accompanied by Gavin Harris carried out the inspections on 26<sup>th</sup> October 2005. The inspection provided an overview of systems operations and facilitated access to the facilities.

The wastewater systems were generally in good condition, operated effectively and generally performed within quality requirements. The assets reviewed included:

- ▶ Sewerage Services
  - Pump Station at Lady Loch Rd
  - Gravity reticulation and pressure mains.
  - Wastewater Treatment Plant (WWTP)
  - Effluent re-use lagoons and outfall system.

The systems are generally in good condition, maintained to an acceptable level and operated effectively. System improvements are planned for the WWTP, including reconfiguring the lagoons to facilitate harvesting stormwater for the re-use schemes. Documentation of the “As Constructed” status of the systems has been captured electronically. The WWTP is a simple primary and secondary lagoon system. A third lagoon is used to hold grey water prior to disinfection, and transfer to the irrigation tanks. A fourth lagoon and fifth lagoon are available as a back-up to the primary and secondary lagoons.

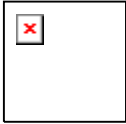
The Shire’s sewage demand profiles have remained steady in recent years. Growth is not predicted during the next five year period. The WWTP, pump station and pipe networks have adequate capacity to meet the current and future demands.

Planned and breakdown operations and maintenance tasks are completed by the Shire’s staff and sub-contracted plumbers as needed.

The following information, evidence and inspections were audited for the period:

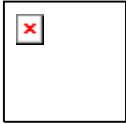
**Table 1 Operational Audit Checklist**

Licence Clause or Schedule	The Licence Obligation	System established by the Licensee to comply with obligations of Licence	Compliance Scale
<b>Operating Area Clause 2 (b) Schedule 1</b>	Is it in the correct operating area	Yes - Drawing OWR-OA-080 (B)	B
<b>General duty to provide services Clause 4.</b>	(a) provide the Water Services; and	Yes	B
	(b) undertake, maintain and operate any Water Services Works, specified in the Licence.	Yes	B

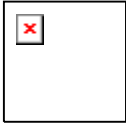


Licence Clause or Schedule	The Licence Obligation	System established by the Licensee to comply with obligations of Licence	Compliance Scale
<b>Regulations prescribing standards of service Clause 5.</b>	The Licensee shall comply with Regulations prescribing standards of service made under section 61 of the Act.	Not Applicable	
<b>Asset management system Clause 6.</b>	<p>(a) The Licensee is to:</p> <p>(i) provide for an asset management system in respect of the Licensee's Water Service Assets;</p> <p>(ii) notify details of the system and any changes to it to the Authority, and</p> <p>(iii) not less than once in every period of 36 months (or such longer period as the Economic Regulation Authority allows), provide the Economic Regulation Authority with a report by an independent expert acceptable to the Economic Regulation Authority as to the effectiveness of the system.</p> <p>(b) The asset management system is to set out the measures to be taken by the Licensee for the proper maintenance of Assets used in the provision of Water Services and for the undertaking, maintenance and operation of Water Services works.</p> <p>(c) The Licensee is to undertake, maintain and operate its Water Services Works in accordance with the processes set out in the asset management system.</p> <p>(d) The scope of the asset management system report under paragraph (a) (iii) will be set by the Economic Regulation Authority.</p>	<p>While drawings are available, most elements of an asset management system have not been developed.</p> <p>No evidence to suggest this has occurred.</p> <p>Water Services Audit and Asset Management Review Report for 2003 provided to Economic Regulation Authority.</p> <p>Nothing in place.</p> <p>Not in place.</p> <p>No evidence of being done.</p>	<p>D</p> <p>D</p> <p>B</p> <p>D</p> <p>D</p> <p>D</p>

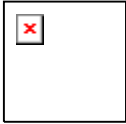




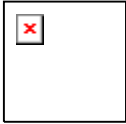
Licence Clause or Schedule	The Licence Obligation	System established by the Licensee to comply with obligations of Licence	Compliance Scale
<b>Operational Audit Clause 7.</b>	The Licensee is to, not less than once in every period of 36 months (or such longer period as the Economic Regulation Authority allows), provide the Economic Regulation Authority with an Operational Audit conducted by an independent expert acceptable to the Economic Regulation Authority.	Water Services audited and Asset Management System reviewed by GHD Pty Ltd for the period to 30 October 2002	B
<b>Technical Standards Clause 8</b>	The Licensee is to comply in line with gazetted technical standards	No standards set.	N/A
<b>Industry codes Clause 9.</b>	The Licensee shall observe the <i>Sewerage Code of Australia WSA 02 1999</i> in the design and construction of sewerage systems.	Design of systems complies. No construction activities during the period.	B
<b>Accounting records Clause 10.</b>	The Licensee shall keep accounting records consistent with the requirements of the <i>Local Government Act 1995</i> , the Licensee shall prepare its accounts in a way which enables it to issue an operating statement which accurately describes its income and expenditure in relation to the Water Services provided under the Licence on an accruals basis:	Annual Reports 2003 and 2004 independently audited.	B
<b>Prices or charges Clause 11.</b>	In setting process or charges for services to Customers the Licensee shall comply with the relevant provisions and regulations of the <i>Health Act 1911</i> and the <i>Local Government Act 1995</i>	Prices and Charges are being set in accordance with the requirements of the <i>Local Government Act</i> .	B



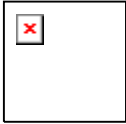
Licence Clause or Schedule	The Licence Obligation	System established by the Licensee to comply with obligations of Licence	Compliance Scale
<b>Methods or principles to be applied in the provision of Water Services Clause 12.</b>	(a) Notwithstanding the engagement of any person or persons to provide Water Services on its behalf, the Licensee remains responsible to ensure those services comply with the terms and conditions of the Licence and with the relevant legislations	The Shire staff complete most of the operational and maintenance tasks. A local plumber is engaged when needed for Licensed Plumbing requirements	B
	(b) The Licensee shall ensure that its Water Services are available for Connection on request to any land situated in the Operating Area, subject to the applicant meeting any reasonable conditions the Licensee may determine to ensure safe, reliable and financially viable supply of services to land in the Operating Area in accordance with this Licence and any relevant legislation. Satisfactory compliance with the conditions of Connection are an essential requirement of gaining approval to connect to the Licensee's schemes.	Application forms are available at Shire Offices. New connections are rare and the application processes is documented in the Customer Services Charter.	B
<b>Amendment, revocation or surrender Clause 13.</b>	The ERA may determine that the Licence is to be amended, etc	A new Licence was issued on 4 <sup>th</sup> November 2004 aligning the Shire with other municipal licensees	
<b>Specified information to be provided Clause 14.</b>	(a) Licensee shall inform the Authority of the occurrence of the following events within five days of their occurrence: <ul style="list-style-type: none"> <li>– Overflows from wastewater / sewerage infrastructure, including wastewater treatment plants, pumping stations etc.</li> </ul>	No incidences were recorded or reported during the audit period	B
	(b) The ERA may require a detailed report on these events to be provided within 14 days of the request.	Has not been required during the period.	B



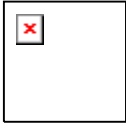
Licence Clause or Schedule	The Licence Obligation	System established by the Licensee to comply with obligations of Licence	Compliance Scale
	(c) The Licensee shall report the information set out in Schedule 3. The reports are due within 30 days of the end of each financial year.	Has not been done during the period.	D
<b>Performance of functions by the Licensee Clause 15.</b>	(a) The Licensee shall comply with the quality and performance standards set out in Schedule 2	Performance not documented. Anecdotal advice was that the performance would meet target KPIs.	C
	(b) The Licensee shall provide annual notification to all Customers provided with non-potable water that the water supplied is not suitable for drinking.	The Shire is the only non-potable water user. Parks and ovals have warning signs.	B
	(c) The Licensee shall implement an emergency telephone system so a Customer can report an emergency and receive advice within one hour of the action to be taken by the Licensee. An emergency is an event, which causes, or threatens to cause, harm to people, the environment or property.	Emergency and after hours phone services established and published in the Customer Charter and Shire website.	B
	(d) The Licensee shall maintain and operate its sewerage scheme so that sewerage does not overflow on Customers' properties.	No incidents recorded during the period.	B
	(e) The Licensee shall maintain and operate its sewerage scheme so that sewerage blockages are minimised.	Not recorded. Incidents advised to be less than targets.	C
<b>Terms and conditions of Customer contracts Clause 16.</b>	(a) The Licensee may enter into agreements with Customers to provide Water Services.	There are no contracts in place.	N/A
	(b) The Licensee may not enter into an agreement with a Customer that excludes, modifies or restricts the terms and conditions of the Licence without the prior written approval of the Economic Regulation Authority.	There are no contracts in place	N/A



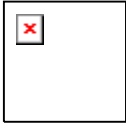
Licence Clause or Schedule	The Licence Obligation	System established by the Licensee to comply with obligations of Licence	Compliance Scale
<b>Obligations to public authorities and other Licensees Clause 17.</b>	Wastewater treatment plants operated by the Licensee shall have relevant Licences from the Department of Environmental Protection and be operated in compliance with those Licences.	DEP Licence (6587/7) renewed on 24 December 2004 till 26 December 2005.	B
<b>Consumer consultation Clause 18.</b>	<p>(a) Prior to making major changes to the operation of a water service, such as the construction of a new wastewater treatment works or significant expansion of the sewerage network, the licensee will;</p> <p>(i) Hold a public meeting to obtain the Customers views on the performance and operation of the scheme; or</p> <p>(ii) Advertise for written submissions on the proposal.</p> <p>(b) The Licensee shall allow customers to raise matters of concern regarding the sewerage system at public question time in accordance with the <i>Local Government Act 1995</i>.</p>	<p>Major changes have not occurred during the period.</p> <p>Not Required</p> <p>Public question time is available at Council Committee Meetings</p>	<p>N/A</p> <p>N/A</p> <p>B</p>
<b>Customer Service Charter Clause 19.</b>	<p>(a) The Licensee must set out in writing the principles, terms and conditions upon which it intends to provide the Water Services to its Customers ('the Customer Service Charter')</p> <p>(b) The Customer Service Charter must be submitted to the Authority for his approval by 1 July 1999.</p> <p>(c) The Customer Service Charter:</p> <p>(i) Should be drafted in 'plain English'; and</p> <p>(ii) Should address all of the service issues that are reasonably likely to be of concern to its Customers.</p>	<p>Revised Customer Services Charter prepared, provided for Customer comment and issued October 2004.</p> <p>No evidence on file that the Charter was submitted for approval.</p> <p>Yes</p> <p>Yes</p>	<p>B</p> <p>N/A</p> <p>B</p> <p>B</p>



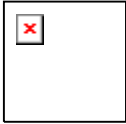
Licence Clause or Schedule	The Licence Obligation	System established by the Licensee to comply with obligations of Licence	Compliance Scale
	<p>(d) Different parts of the Customer Service Charter may be expressed to apply to different classes of Customers</p> <p>(e) The Licensee shall review the Customer Service Charter not less than once in every period of 36 months.</p> <p>(f) Any proposed amendment to the Customer Service Charter or replacement thereof must also be forwarded to the Authority for approval prior to implementation.</p> <p>(g) The Licensee must make the Customer Service Charter available to its Customers in the following ways:            (i). by prominently displaying it in those parts of the Licensee's offices to which Customers regularly have access;            (ii). by providing a copy, upon request, and at no charge, to a Customer; and            (iii). by advising Customers of the availability of the Customer Service Charter on an annual basis.</p> <p>(h) It is a condition of the Licence that the Licensee provides services in a way that is materially consistent with its Customer Service Charter.</p>	<p>Yes. Includes additional detail for industrial and commercial waste customers.</p> <p>Yes – reviewed and reissued in 2004.</p> <p>No evidence on file that the revised Charter was submitted for approval.</p> <p>Copies available on request at the Shire offices.  Customers advised of the availability through Rates Notices, but not displayed prominently.</p> <p>Yes – compliant</p>	<p>B</p> <p>B</p> <p>D</p> <p>C</p> <p>B</p>
<p><b>Dispute resolution Clause 20.</b></p>	<p>(a) By 1 April 1999, the Licensee shall establish a system for recording, managing and resolving Customer Complaints within 21 days regarding a provided or requested Water Service.</p>	<p>Not in place.</p>	<p>D</p>



Licence Clause or Schedule	The Licence Obligation	System established by the Licensee to comply with obligations of Licence	Compliance Scale
	<p>(b) To ensure the effectiveness of such a process the Licensee shall, as a minimum:</p> <p>(i). Record details of each Customer Complaint and its outcome;</p> <p>(ii). Provide an appropriate number of designated officers who are trained to deal with Customer Complaints who are authorised to, or has access to officers who are authorised to make the necessary decisions to settle Customer Complaints or disputes; including where applicable, approving the payment of monetary compensation; and</p> <p>(iii). Make such arrangements as are necessary to ensure that if possible Complaints can be resolved in the timeframes set out in subclause (a).</p> <p>(c) Where a dispute arises between a Customer and the Licensee regarding a provided or requested water service, the Customer may refer the dispute to the Water Services Planning Branch of the Department of Water.</p> <p>(d) Unless the Complaint or dispute is a matter in relation to which Section 3.22W of the <i>Local Government Act 1995</i> applies, where the the dispute has not been resolved within 21 days the Licensee shall inform the Customer of the option of referring their Complaint to the Water Services Planning Branch of the Department of Water</p>	<p>Not in place, but requirements well understood by staff.</p> <p>Staff are available and trained in dispute resolution.</p> <p>Not documented, but practical procedures in place.</p> <p>No complaints during the period.</p> <p>Not required during the period</p>	<p>C</p> <p>B</p> <p>C</p> <p>N/A</p> <p>N/A</p>



Licence Clause or Schedule	The Licence Obligation	System established by the Licensee to comply with obligations of Licence	Compliance Scale
	<p>(e) The Water Services Planning Branch of the Department of Water may:</p> <p>(i). Conciliate the dispute; or</p> <p>(ii). direct the Licensee and Customer to binding arbitration.</p> <p>(f) During the process of investigation and conciliation, the Licensee shall make every endeavour to promptly cooperate with the Water Services Planning Branch of the Department of Water's (or his or her representative's), requests, which shall include the expeditious release of any information or documents requested by the Water Services Planning Branch of the Department of Water and the availability of the relevant staff of the Licensee.</p> <p>(g) the Licensee shall, on request, provide the Water Services Planning Branch of the Department of Water with details of Complaints made, names and addresses of Customers who have made Complaints, and the manner in which the Complaint was managed and resolved.</p>	<p>Not required during the period.</p> <p>Not required during the period.</p> <p>Not required during the period.</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p>
<p><b>Customer Surveys (Clause 21)</b></p>	<p>(a) Where an issue arises that the Authority considers to be of concern to customers, the Authority may require the Licensee to commission an independent customer survey that shall address and conform to the conditions and parameters set out in writing by the Authority.</p> <p>(b) Such a survey will not be required more frequently than once every 12 months</p>	<p>Not required during the audit period</p> <p>Not required during the audit period</p>	<p>N/A</p> <p>N/A</p>



## 4. Asset Management System Review

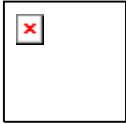
The Shire's Asset Management System comprises asset register, drawings and capital investment plan. The Asset Management systems are very basic, but understood by the Services staff. Electronic information is stored in the Shire's computer systems. The Shire does not have an Asset Management Software System, nor an Asset Management Plan for the Water Services. While the current systems provide a very basic maintenance management system, they do not include the capabilities or requirements of an Asset Management System as detailed in the International Infrastructure Management Manual.

Information, such as, the Levels of Service, asset performance, asset descriptions and condition have not been documented and the level of equipment detail for most assets is limited.

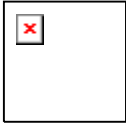
**Table 2 Asset Management Review Checklist**

<b>1. Asset Planning/Creation/Acquisition</b>		
<b>1.1 Output Related</b>	<b>Compliance Scale</b>	<b>Comments</b>
<i>1.1.1 Have the strategic objectives for the asset been identified?</i>	D	Although understood by staff, objectives are not documented.
<i>1.1.2 Have life cycle costs been considered?</i>	D	Not documented
<i>1.1.3 Has the need for new assets been determined and full project evaluation process been followed, including comparative assessment of non-asset solutions?</i>	C	Generally considered for the annual budget cycle but not analysed or documented
<i>1.1.4 Have documents recording relevant details on the asset been collected?</i>	C	Partially completed in the asset registers. Level of detail is limited.
<b>1.2 Performance Related</b>		
<i>1.2.1 Do assets reflect the objectives identified in the asset creation/ acquisition phase?</i>	D	Not documented, nor considered
<i>1.2.1 Are actual costs as predicted?</i>	C	Included in the annual budget based on staff knowledge.

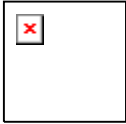




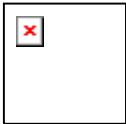
<b>2. Environmental Analysis</b>		
<b>2.1 Output Related</b>	<b>Compliance Scale</b>	<b>Comments</b>
2.1.1 <i>Have the performance requirements – availability of service, capacity, continuity, emergency response been documented?</i>	D	No evidence available
2.1.2 <i>Are the asset system objectives documented?</i>	D	Not documented
2.1.3 <i>Have opportunities and threats in the system environment been assessed?</i>	D	No.
2.1.4 <i>Are regulatory obligations and statutory/regulatory requirements documented?</i>	D	Staff are aware of requirements, but obligations are not documented.
<b>2.2 Performance Related</b>		
2.2.1 <i>Is the asset meeting the level of service required by users of the service?</i>	B	All assets performing adequately.
2.2.2 <i>Do the assets meet regulatory requirements?</i>	A	All compliant
<b>3. Asset System Analysis</b>		
<b>3.1 Output Related</b>	<b>Compliance Scale</b>	<b>Comments</b>
3.1.1 <i>Are the asset system components documented?</i>	B	Level of documentation is adequate.
3.1.2 <i>Has asset performance and condition been assessed?</i>	C	No formal system in place. Anecdotal information is collected by staff. No condition documentation system evident
3.1.3 <i>Does the asset management plan include an asset register and plans of asset system components?</i>	C	AMP document does not exist. Asset register is a spreadsheet. Drawings and plans are available for all assets.
3.1.4 <i>Does the register record asset type, location, material and an assessment of assets' physical/structural condition?</i>	C	Limited detail captured in the Asset Register. No condition information recorded.



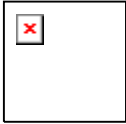
	<b>Compliance Scale</b>	<b>Comments</b>
3.1.5 <i>Are systems in place to assess asset and practice efficiency?</i>	D	Not completed. Reliant of staff experience and observations. Outcomes not recorded.
3.1.6 <i>Assets assessed for capability and deficiencies of current assets to meet performance requirements?</i>	C	Completed informally, but not documented in systems.
3.1.7 <i>Are practices covering operating rules and maintenance documented?</i>	B	Yes in manuals
3.1.8 <i>Do maintenance plans cover preventative and corrective maintenance?</i>	C	Not documented. Practices based on past programs.
<b>3.2 Performance Related</b>		
3.2.1 <i>Are actual assets and human resources appropriate for performance requirements?</i>	B	Assets are adequate and maintenance staff are capable.
3.2.2 <i>Do operation and maintenance practices reflect performance targets?</i>	C	Performance targets not documented.
3.2.3 <i>Are costs measured and recorded?</i>	B	Yes, expenditure recorded through works docket
3.2.4 <i>Is the asset under utilised?</i>	C	Not known. Systems appear to have been designed for greater population and may be under-utilised.
3.2.5 <i>Is the level of maintenance justified against replacement costs?</i>	D	No
3.2.6 <i>Has the asset been inspected?</i>	B	WWTP and PS assets are regularly inspected and reviewed.
3.2.7 <i>Is the asset's theoretical life known?</i>	D	No.
3.2.8 <i>Does the asset management plan enable the prediction of asset deterioration and failure</i>	D	AMP not prepared and predictive analysis not done.
3.2.9 <i>Do the maintenance plans and operational plans relate to what is required to achieve the levels of service required of the system?</i>	C	Basic routines in place using inspections to identify tasks and past activities for planned works.



<b>4. Risk Analysis And Contingency Planning</b>		
<b>4.1 Output Related</b>	<b>Compliance Scale</b>	<b>Comments</b>
4.1.1 <i>Has a risk assessment of the asset been conducted?</i>	D	No
4.1.2 <i>Has the probability and consequences of asset failure been identified?</i>	D	No system in place to assess or record risks.
4.1.3 <i>Are appropriate contingency plans in place?</i>	D	No
<b>4.2 Performance Related</b>		
4.2.1 <i>Is risk management practiced?</i>	D	No
4.2.2 <i>Where unacceptable risks have been identified have risk control measures been implemented?</i>	D	No
4.2.3 <i>Where events that may result in severe consequences have been identified have contingency plans been developed?</i>	D	Not known
<b>5. Financial Planning</b>		
<b>5.1 Output Related</b>	<b>Compliance Scale</b>	<b>Comments</b>
5.1.1 <i>Does the financial plan provide projections of operating statements (profit and loss) and statement of financial position (balance sheets)</i>	B	Annual Report and Budget
5.1.2 <i>Does the financial plan cover the financial objectives and strategies and actions to achieve the objectives?</i>	B	Yes, although not specific to the Water Services.
5.1.3 <i>Does the financial plan identify the source of funds for the capital expenditure plan?</i>	B	Yes
5.1.4 <i>Is the source of funds for operations, maintenance and administration identified in the financial plan?</i>	B	Yes, rates.



<b>5.2 Performance Related</b>	<b>Compliance Scale</b>	<b>Comments</b>
5.2.1 <i>Does the financial plan provide for the operations and maintenance, administration and capital expenditure requirements of the scheme?</i>	C	Strategic Plan includes detailed expenditure projections for five years
<b>6. Capital Expenditure Planning</b>		
<b>6.1 Output Related</b>	<b>Compliance Scale</b>	<b>Comments</b>
6.1.1 <i>Has a capital expenditure plan been prepared?</i>	C	Prepared at summary level only in the Strategic Plan.
6.1.2 <i>Does the plan cover the issues to be addressed, the actions proposed, the centre of responsibilities, and deadline dates?</i>	C	At summary level only.
6.1.3 <i>Does the plan provide reasons for capital expenditure and timing of expenditure?</i>	C	Not in any detail
<b>6.2 Performance Related</b>		
6.2.1 <i>Is the capital expenditure plan consistent with the asset life and condition identified in the asset management plan?</i>	D	Not able to be assessed without additional level of detail. Little consideration on replacement/refurbishment strategies.
<b>7. Review</b>		
<b>7.1 Output Related</b>	<b>Compliance Scale</b>	<b>Comments</b>
7.1.1 <i>Is a review process in place to ensure that asset management plans are kept current?</i>	D	No review process.
<b>7.2 Performance Related</b>		
7.2.1 <i>Are asset management plans being reviewed at appropriate intervals?</i>	D	No.
7.2.2 <i>Are the asset management plans current?</i>	D	No. Plan has not been prepared.



## 5. Conclusions and Recommendations

The outcome of the inspection of the water services assets and interviews with the Shire of Coolgardie staff was that the systems are operated effectively, within the current standards and code requirements and present minimal risks to the customers and residents. However, the level of documentation and management systems is very basic and inadequate in most cases. However, the number of Water Services assets and their complexity is very basic.

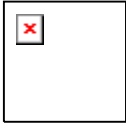
The Shire has static growth and little need to consider planned refurbishment/replacement of the assets. Change over of staff during the reporting period has resulted in the management reporting responsibilities lapsing.

The primary deficiencies with the operation of the Water Services Licence are in the area of reporting, management systems, and asset management planning. The recommended improvements are:

### 5.1 Operational Audit

The following recommendations are provided to improve the compliance of the Shire's Operating Licence:

<b>Licence Clause</b>	<b>Licence Obligation</b>	<b>Recommendation</b>
Asset Management System  Clause 6 (a) (i) and (ii), (b), (c) and (d).	Provide for an Asset Management System.	Purchase and implement an Asset Management software system and migrate the hard and soft copy information to one system.  Prepare an Asset Management Plan for Water Services assets.  Advise the ERA of the scope of the system.
Specified Information to be provided  Clause 14 (c)	The Licencee shall report the information set out in schedule 3 to the ERA within 30 days of the end of each financial year.	Collect the Schedule 3 information and establish a system to ensure that the reports are provided by the due date.
Performance of functions by the Licensee  Clause 15 (a)	The Licensee shall comply with the quality and performance standards set out in Schedule 2	Collect and document the information required for Schedule 2.



<b>Licence Clause</b>	<b>Licence Obligation</b>	<b>Recommendation</b>
Customer Services Charter Clause 19 (f) and (g) (i)	<p>Any proposed amendment to the Customer Services Charter or replacement thereof must also be forwarded to the Authority for approval prior to implementation.</p> <p>The Licensee must make the Customer Services Charter available to its Customers in the following way:</p> <p>by prominently displaying it in those parts of the Licensee's offices to which Customers regularly have access.</p>	<p>Forward the Customer Services Charter to the ERA for Approval.</p> <p>Display the Charter on the Shire web site or Public Noticeboard.</p>
Dispute Resolution Clause 20 (a) and (c)	<p>The Licensee shall establish a system for recording, managing and resolving Customer Complaints within 21 days.</p>	<p>Establish a Customer Complaints System which records the required information.</p>

## **5.2 Asset Management Review**

The following improvements are recommended for the Asset Management System:

### **Asset Planning/Creation/Acquisition**

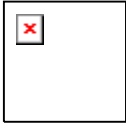
- ▶ Establish the strategic objectives of assets,
- ▶ Document life cycle costs for all assets,
- ▶ Implement a system of full project evaluation for new assets,
- ▶ Fully document asset details,
- ▶ Establish the objectives for asset creation/acquisition, and
- ▶ Establish the actual costs of all assets.

### **Environmental Analysis**

- ▶ Document the performance requirements for all assets (availability of service, capacity, continuity, and emergency response),
- ▶ Document the asset system objectives,
- ▶ Prepare opportunities and threats assessment for each system, and
- ▶ Document the regulatory obligations and requirements.

### **Asset System Analysis**

- ▶ Document the asset system components,
- ▶ Assess the asset performance and condition,
- ▶ Update asset register and plans to system components level,



- ▶ Record the asset type, location, material and an assessment of assets physical/structural condition,
- ▶ Instigate a system to assess asset efficiency, including performance capacity and deficiencies,
- ▶ Assess assets against capability to meet performance requirements,
- ▶ Document operating rules and maintenance,
- ▶ Document the preventative and corrective maintenance plans,
- ▶ Document the outcomes in an Asset Management Plan,
- ▶ Establish the life of each asset, and
- ▶ Update asset life, predictive failure modes and maintenance requirements.

#### **Risk Analysis and Contingency Planning**

- ▶ Establish a risk assessment process for the Water Services,
- ▶ Assess the probability and consequences of asset failures,
- ▶ Prepare appropriate contingency plans for high risk failures, and
- ▶ Identify unacceptable risks and prepare risk control measures.

#### **Financial Planning**

- ▶ Prepare detailed five year capital replacement program for water services assets.

#### **Capital Expenditure Planning**

- ▶ Establish a detailed capital expenditure plan based on asset condition and performance and document within the AMP.
- ▶ Include in the Capital Expenditure Plan the rationale and justifications for projected expenditures, responsibilities, actions and milestone dates.
- ▶ Include detail operations, maintenance and administration cost in the annual budget processes.

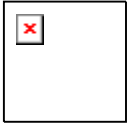
#### **Review**

- ▶ Instigate a process for the periodic review of the asset management systems.

### **5.3 Conclusion**

The Shire's water services systems are generally in reasonable condition and operated effectively by the Shire's staff.

The major areas for improvement are management and reporting obligations of the Licence, the lack of asset management systems, and limited capital and maintenance expenditure planning processes. The absence of an Asset Management software system and an Asset Management Plan exposes the Shire to ad hoc management practices and short term planning.



#### **5.4 Compliance Statement**

Mark Bourhill, GHD's Manager Management Services Group has prepared this report for the Shire.

It is certified that the "Scope and Guidelines for the Water Service Licence: Operational Audit, and Asset Management Review for the Shire of Coolgardie (the Licensee) – 1 January 2005" have been followed in conducting the review, making the review findings and preparing the report.

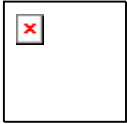
The assessment, findings and recommendations contained in this report reflect the professional opinion of the Reviewer.

Mark Bourhill  
Manager Management Services

GHD Pty Ltd

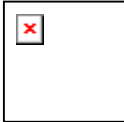
31 January 2005





## Appendix A

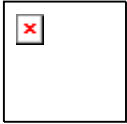
# Risk Assessment



## Operational Audit Risk Calculation: Water Supply Licence

Operating Licence Compliance Element	Operating Licence Reference	Failure during period audited				Likelihood (2)	Inherent Risk (3)	Adequacy of Existing Controls (4)	Priority (5)
		Consequence (1)							
		C 1	C 2	C 3	O				
<b>OPERATING AREAS</b>									
Water Services in designated operating area	<i>Clause 2(b), Sched 1</i>	1	1	2	1	D	Low		
<b>CUSTOMER COMPLAINTS</b>									
Recorded	<i>Clause 20(b)</i>	2	2	1	2	C	Low		
Investigation, conciliation & arbitration	<i>Clause 20(f)</i>	3	2	2	2	D	Low		
Responsiveness (eg solution within 21 days)	<i>Clause 20 (a), Sched 3</i>	3	2	2	2	C	Low		
<b>CUSTOMERS</b>									
Charter in place, reviewed and followed	<i>Clause 19</i>	1	2	2	2	C	Low		
Ongoing consultation and feedback established	<i>Clause 18</i>	1	2	2	2	C	Low		
<b>WATER SERVICES PROVISION</b>									
Conditions for connection followed	<i>Clause 12 (b)</i>	3	3	2	3	D	Medium		
Availability	<i>Clause 12 (b)</i>	2	1	1	2	D	Low		
Discontinuance	<i>n.a.</i>	3	2	2	2	D	Low		
Billing	<i>n.a.</i>	2	2	2	2	C	Low		
<b>INFO PROVIDED TO AUTHORITY</b>									
Annual Benchmarking report	<i>Sched 3</i>	1	1	3	2	C	Low		
Incidents (reported within 5 days)	<i>Clause 14</i>	1	2	3	3	C	Medium		
<b>CONTRACTING OF SERVICES</b>									
Maintenance of Licence Standards	<i>Clause 6 (b)</i>	3	3	3	3	D	Medium		
<b>STANDARDS</b>									
Adherence to Regulation	<i>Clause 5</i>	2	2	3	2	D	Low		
Adherence to technical standards	<i>Clause 8</i>	2	2	3	2	D	Low		
Adherence to industry codes	<i>Clause 9</i>	2	2	2	2	C	Medium		
Accounting records – prepared to standard	<i>Clause 10</i>	1	1	1	1	D	Low		
Pricing and charges – adhere to legislation	<i>Clause 11</i>	1	1	1	1	D	Low		
Services provided by agreement documented	<i>Clause 16</i>	3	3	3	3	D	Medium		
Obligations to other licensees adhered to	<i>Clause 17</i>	2	2	2	2	C	Low		
Customers advised re planned disruptions	<i>As per charter</i>	3	2	2	3	C	Medium		
Customers contacted re emergency shutdowns	<i>As per charter</i>	3	3	3	3	C	Medium		
Emergency telephone service operational	<i>Clause 15 (c)</i>	3	2	2	3	C	Medium		
<b>STANDARDS SPECIFIC TO:</b>									
<b>DRINKING WATER</b>									
Quality	<i>n.a.</i>								
Pressure and flow	<i>n.a.</i>								
Interruptions	<i>n.a.</i>								
Drought response	<i>n.a.</i>								
Leaks and bursts	<i>n.a.</i>								
<b>NON-POTABLE WATER</b>									
Annual notification water not safe for drinking	<i>Clause 15 (b)</i>	3	3	3	3	C	Medium		
<b>SEWERAGE</b>									
Overflows	<i>Clause 15 (d), Sched 3</i>	1	2	3	2	C	Low		
Blockages	<i>Clause 15 (e), Sched 3</i>	2	2	3	3	C	Medium		
<b>DRAINAGE</b>									
Effectiveness of Design	<i>n.a.</i>	1	2	3	2	D	Low		
Effectiveness of Maintenance	<i>n.a.</i>	1	2	3	2	D	Low		
Monitoring of outflows quality	<i>n.a.</i>	3	3	3	3	D	Medium		

See over for definitions and notes



**Definitions and notes:**

The Consequences of an event happening (and as a result the risk) are to be assessed against: Customers, Community and State. These relate to the C1, C2, and C3 columns respectively. An 'Overall' assessment (Column 'O') is based on a subjective assessment of the three consequences.

Consequences are to be assessed as either:

- A. Negligible
- B. Marginal
- C. Critical
- D. Catastrophic

Likelihood is an indication of how often the failure will occur during the period to be audited. The likelihood is to be assessed as either

- A Almost Certain.
- B Likely.
- C Moderate.
- D Unlikely.
- E Rare.

Inherent Risk is to be assessed as either

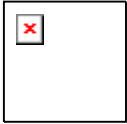
- ▶ High;
- ▶ Medium;
- ▶ Low; or
- ▶ Nil.

The adequacy of existing controls are to be assessed as:

- ▶ Strong
- ▶ Weak; or
- ▶ N.A.

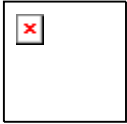
The following criteria the Shire should be used to assess internal controls:

- ▶ Customer focus
- ▶ Regulatory compliance
- ▶ Adequate documents and records
- ▶ Segregation of duties
- ▶ Access controls
- ▶ and possibly (depending on Licensees size)
- ▶ Validity of data



- ▶ Performance reviews
- ▶ Monitoring

Priority to be ranked from 1 to 5, where 1 is the highest.



**GHD Pty Ltd** ABN 39 008 488 373

GHD House, 239 Adelaide Tce. Perth, WA 6004

P.O. Box Y3106, Perth WA 6832

T: 61 8 6222 8222 F: 61 8 6222 8555 E: [permail@ghd.com.au](mailto:permail@ghd.com.au)

© **GHD Pty Ltd 2006**

This document is and shall remain the property of GHD Pty Ltd. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

**Document Status**

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	M Bourhill	J Stewart		M Bourhill		