Safety, Reliability, Maintenance

and

Technical Management Plan
# Safety, Reliability, Maintenance & Technical Management Plan

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This document has been prepared according to guidelines issued by the Office of the Technical Regulator in the administration of the Water Industry Act 2012.

Yorke Peninsula Council
PO Box 57
Maitland SA 5573

Date
September 2016
1 Introduction

1.1 Purpose of the Plan
This document constitutes the Safety, Reliability, Maintenance and Technical Management Plan (SRMTMP) associated with the collection, treatment and disposal of wastewater, and the supply of potable water undertaken by the Yorke Peninsula Council, its employees and contractors.

This SRMTMP has been developed to meet the requirements of the Water Industry Act 2012 and associated Water Industry Regulations 2012 as required by the Technical Regulator.

1.2 Scope and Objectives
This SRMTMP has been prepared to describe how the Yorke Peninsula Council’s employees and contractors ensure the safe and reliable operation of Council’s collection networks, wastewater and desalinated water treatment facilities and desalinated water use.

The Yorke Peninsula Council is committed to the safe and efficient operation of all systems through compliance with all statutory legislation, which is demonstrated by adherence to the elements described in this Plan.

1.3 Organisational Background
The Yorke Peninsula Council is the owner and organisation responsible for Community Wastewater Management Schemes (CWMS) comprising Septic Tank Effluent Drainage (STEDS) and full sewer systems at eighteen (18) towns and locations across the Council area. The Council’s responsibility involves effluent collection, transportation and disposal.

Three locations (Balgowan, Black Point and Hardwick Bay) have potable water supplies drawn from the SA Water mains, but the storage, distribution and rating are managed by the Council.

In addition, the Council owns and operates a sea water desalination plant at Marion Bay, which provides potable water to the local community and several commercial premises.

1.4 Relationships with Stakeholders
The collection and transfer by Yorke Peninsula Council of effluent for treatment and disposal, and operation of a sea water desalination plant producing a potable water supply requires a clear focus on safety towards the community.

Key stakeholders in the operation and maintenance of the Yorke Peninsula Council’s systems include:

- Customers of the services provided.
- Property owners in locations where desalination infrastructure or effluent collection and treatment are located in public places or private landholdings.
- Employees of Yorke Peninsula Council.
- Specialised contractors and their employees.
- Relevant regulatory authorities including the Essential Services Commission of South Australia (ESCOSA), the Technical Regulator (TR), Department for Health and Ageing (DHA), Development Assessment Commission (DAC), Local Government Association (LGA) and the Environment Protection Authority (EPA).

The Yorke Peninsula Council strives to maintain an effective line of communication with all stakeholders in relation to its operation and any events which may in any way affect one, some or all stakeholders. An outline of specific stakeholder communication is provided in Section 7.
1.5 Organisational Chart
As per the Organisational Chart provided in Appendix A the following Yorke Peninsula Council employees are responsible for the day-to-day operations of Council’s collection networks, wastewater and desalinated water treatment facilities and desalinated water use:

1.6 SRMTMP and its Responsibilities

1.6.1 Responsible Person
The Council Officer responsible for this Plan and any future revisions is Grant Smith, Infrastructure Manager. He can be contacted at the Council’s Maitland Office:

Address: 8 Elizabeth Street, Maitland
Phone: 08 8832 0000
E-mail: admin@yorke.sa.gov.au
Post: PO Box 57, Maitland SA 5573

1.6.2 Communicating the Plan
Following initial preparation of the Plan it will be reviewed by the Technical Regulator and any comments or feedback discussed with Council Staff and incorporated into the document as appropriate. Copies of the final document as endorsed by the Technical Regulator will be provided to relevant Council personnel and the Technical Regulator.

Communication of the Plan will be through existing Department line communication responsibilities. An initial presentation will be held for key personnel so that the overall Plan can be understood and discussed. Department Managers are responsible for ensuring appropriate Departmental or Toolbox meetings are held for presentation and discussion of the Plan.

The Plan will be published on the Council’s website, and a copy will also be available at the Council Office for public inspection.
1.7 Legislation, Codes and Standards
Yorke Peninsula Council complies with the requirements of all applicable legislation, including:

- *Return to Work Act 2014*.
- *South Australian Public Health Act 2011* and Regulations (Wastewater) 2013.
- *Natural Resources Management Act 2004* and associated Regulations.
- *Environment Protection Act 1993*.

Yorke Peninsula Council operations and associated installations also comply with the following codes, standards, criteria and guidelines:

- Guidelines, Design Criteria and Standards for Community Wastewater Management Schemes (Local Government Association of South Australia).
- Sewerage Code of Australia (WSA 02) and any SA Water supplementary documentation.
- Sewage Pumping Station Code of Australia (WSA 04).
- AS/NZS 3500: Plumbing and drainage.
- The National Construction Code (NCC) Volume 3 Plumbing Code of Australia (PCA) including South Australian Variations and/or Additional Provisions as listed in Appendix A.
- Septic Tank Effluent Drainage Scheme Design Criteria (DH, LGA).
- South Australian Bio-solids Guidelines for the Safe Handling, Reuse or Disposal of Bio-solids (EPA).
1.8 Approvals and Licences

Yorke Peninsula Council has valid approvals and licences from the relevant regulatory authority as shown by examples in Table 1.1 below.

Copies of all approvals and licences are held on Council’s central filing system located under the township or location.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Licence Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA</td>
<td>EPA 13972 (example)</td>
<td>Ardrossan - Sewage Treatment Works or Septic Tank Effluent Disposal Schemes</td>
</tr>
<tr>
<td></td>
<td>Various</td>
<td>Relevant WWTP approvals</td>
</tr>
<tr>
<td></td>
<td>EPA 05/17597</td>
<td>Desalination Plant licence threshold</td>
</tr>
<tr>
<td>DHA</td>
<td>WCS00942 (example)</td>
<td>Yorketown STEDS, including wastewater reuse</td>
</tr>
<tr>
<td></td>
<td>WCS1989 (example)</td>
<td>Stansbury WWTP</td>
</tr>
<tr>
<td></td>
<td>Various</td>
<td>Relevant STEDS or ‘waste control’ approvals</td>
</tr>
<tr>
<td>ESCOSA</td>
<td>Issued 7/2/13</td>
<td>Water Industry Retail Licence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Class - Water + Sewerage Services, Intermediate (1) Retailer</td>
</tr>
</tbody>
</table>

Table 1.1: Existing regulatory approvals - examples
2 Description of the Operation

2.1 Introduction
The assets covered by this SRMTMP include:

2.1.1 Community Wastewater Management Schemes
The Yorke Peninsula Council owns and operates CWMS at eighteen (18) towns and locations across the Council area, providing wastewater drainage connections to 2,627 properties.

All effluent undergoes treatment at one of the seventeen (17) local wastewater treatment plants before the treated wastewater is then disposed of either by sporting ground reuse (golf courses and oval), agriculture (lucerne), viticulture (grapevines) reuse or irrigation of numerous Council owned woodlots. See Table 2.1 for disposal details.

2.1.2 Potable Water Supply
At each of the three locations (Balgowan, Black Point and Hardwicke Bay) potable water is supplied from the SA Water mains into a Council operated distribution scheme. All supplies to consumers are metered and charged at the current SA Water usage rate. An annual service charge is also applied to each assessment of rateable or non-rateable land to which the Council provides or makes available a water supply service.

For the 2016-17 Financial Year this service charge is $180.

2.1.3 Desalinated Water Supply - Marion Bay
The Council owns and operates a sea water desalination plant at Marion Bay, which provides potable water to the local community and several commercial premises, with the Council owned Caravan Park being the major user.

Sea water is drawn via submersible pumps in the Beach Well Bore and transferred to a Reverse Osmosis Plant for desalination. The treated water is then stored in four lined 133kL storage tanks.

A reticulated non-guaranteed supply is provided to commercial property owners at $12.00 per kilolitre, and water is also available for general use from a standpipe at $10.00 per kilolitre.

All of the assets covered by this SRMTMP are operated and maintained by Council’s highly trained employees, with specialised contractors engaged on an as needs basis.

2.2 Asset Description
The below details have been compiled and validated as part of the development of Council’s CWMS Asset Register.

2.2.1 Community Wastewater Management Schemes

<table>
<thead>
<tr>
<th>Location</th>
<th>Connections</th>
<th>Gravity Drains (m)</th>
<th>Rising Mains (m)</th>
<th>Pump Stations</th>
<th>Disposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardrossan</td>
<td>565</td>
<td>17,685</td>
<td>4,360</td>
<td>Jetty Car Park</td>
<td>WWTP - Golf Course Reuse</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hogarth St Bridge Rd</td>
<td></td>
</tr>
<tr>
<td>Balgowan</td>
<td>18</td>
<td>249</td>
<td>786</td>
<td>Esplanade</td>
<td>WWTP - Council Woodlot</td>
</tr>
<tr>
<td>Location</td>
<td>Houses</td>
<td>Population</td>
<td>Houses to Common Main</td>
<td>WWTP</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------</td>
<td>------------</td>
<td>-----------------------</td>
<td>-------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Black Point</td>
<td>211</td>
<td>3,650</td>
<td>1,053</td>
<td>Black Point Dve (x2) Outlook Rd</td>
<td>WWTP - Council Woodlot</td>
</tr>
<tr>
<td>Bluff Beach</td>
<td>34</td>
<td>283</td>
<td>623</td>
<td>Edwards St</td>
<td>WWTP - Council Woodlot</td>
</tr>
<tr>
<td>Chinamans Well</td>
<td>38</td>
<td>716</td>
<td>536</td>
<td>Chinaman Wells Rd (x2)</td>
<td>WWTP - Council Woodlot</td>
</tr>
<tr>
<td>Edithburgh</td>
<td>73</td>
<td>903</td>
<td>1,739</td>
<td>Sultana Point Rd</td>
<td>Sultana Point WWTP</td>
</tr>
<tr>
<td>Foul Bay</td>
<td>23</td>
<td></td>
<td>551</td>
<td>N/A</td>
<td>WWTP - Council Woodlot</td>
</tr>
<tr>
<td>Hardwicke Bay</td>
<td>71</td>
<td>1,264</td>
<td>1,387</td>
<td>South Terrace Rd Southshore Rd Foreshore Rd Northshore Rd (x2)</td>
<td>WWTP - Council Woodlot</td>
</tr>
<tr>
<td>Maitland</td>
<td>423</td>
<td>12,817</td>
<td>125</td>
<td>WWTP - Golf Course Reuse</td>
<td></td>
</tr>
<tr>
<td>Point Turton</td>
<td>137</td>
<td>2,459</td>
<td>2,470</td>
<td>WWTP - Council Woodlot</td>
<td></td>
</tr>
<tr>
<td>Port Julia</td>
<td>11</td>
<td>134</td>
<td>1,050</td>
<td>Jetty Rd</td>
<td>WWTP - Council Woodlot</td>
</tr>
<tr>
<td>Port Victoria</td>
<td>95</td>
<td>2,202</td>
<td>2,655</td>
<td>WWTP - Town Oval Reuse</td>
<td></td>
</tr>
<tr>
<td>Port Vincent</td>
<td>167</td>
<td>3,217</td>
<td>3,374</td>
<td>WWTP - Lucerne crop reuse</td>
<td></td>
</tr>
<tr>
<td>Rogues Point</td>
<td>27</td>
<td></td>
<td>1,249</td>
<td>N/A</td>
<td>WWTP - Council Woodlot</td>
</tr>
<tr>
<td>Stansbury</td>
<td>94</td>
<td>3,372</td>
<td>4,205</td>
<td>Pitt St Oyster Court Oyster Point Dve (x2)</td>
<td>WWTP - Lucerne crop reuse</td>
</tr>
<tr>
<td>Sultana Point</td>
<td>37</td>
<td></td>
<td>1,320</td>
<td>N/A</td>
<td>WWTP - Grapevine reuse</td>
</tr>
<tr>
<td>Tiddy Widdy Beach</td>
<td>180</td>
<td>3,714</td>
<td>1,753</td>
<td>Hoskin Rd</td>
<td>Ardrossan WWTP</td>
</tr>
<tr>
<td>Yorketown</td>
<td>422</td>
<td>10,200</td>
<td>2,614</td>
<td>Warooka Rd Minlaton Rd David St Waterloo Bay Rd Jacobs St Memorial Dve</td>
<td>WWTP - Golf Course Reuse</td>
</tr>
</tbody>
</table>

Table 2.1: Details of Community Wastewater Management Schemes

See Asset Management System for the following additional information:
- Gravity Mains - specific drain sizes, lengths and locations
• Rising Mains - specific pipe sizes, lengths and locations
• Pumps - details of pumps at each Pump Station

2.2.2 Potable Water Supply

<table>
<thead>
<tr>
<th>Location</th>
<th>Metered Connections</th>
<th>Distribution Mains (m)</th>
<th>Pumps</th>
<th>Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balgowan</td>
<td>261</td>
<td>6,055</td>
<td>N/A</td>
<td>Breaker Tanks 4 x 150kL concrete</td>
</tr>
<tr>
<td>Black Point</td>
<td>219</td>
<td>10,243</td>
<td>N/A</td>
<td>Balance Tanks 2 x 159kL concrete</td>
</tr>
<tr>
<td>Hardwicke Bay</td>
<td>329</td>
<td>10,029</td>
<td>Transfer Pumps 3 x Grundfos 3kw</td>
<td>Storage Tanks 2 x 200kL concrete</td>
</tr>
</tbody>
</table>

Table 2.2: Details of Potable Water Supply Schemes

See Asset Management System for the following additional information:
• Metered Connections - location, meter size and total available services
• Mains - specific pipe sizes, lengths and locations
• Pumps - details of pumps at each Pump Station

2.2.3 Desalinated Water Supply - Marion Bay

<table>
<thead>
<tr>
<th>System Components</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Seawater via a 15 metre beach well in sand dunes. Grundfos SP17-9R submersible bore pump</td>
</tr>
<tr>
<td>Treatment</td>
<td>Dow SW 30HRLE-400 Reverse Osmosis desalination plant. Currently set to deliver 48,000 litres per day if required</td>
</tr>
<tr>
<td>Pumps</td>
<td>Transfer pump - main: Lowara dual pump system 2x15 SVN</td>
</tr>
<tr>
<td>Storage</td>
<td>Surface tanks: 4 x 133kl lined steel storage tanks</td>
</tr>
<tr>
<td>Distribution Network</td>
<td>Potable water main of 1,345 metres / standpipe / 5 metered services</td>
</tr>
</tbody>
</table>

Table 2.3: Details of Marion Bay Desalination Scheme

See Asset Management System for the following additional information:
• Treatment - more detailed specification of treatment and pipework layout
3 Organisational Safety and Reliability

3.1 Leadership and Commitment

3.1.1 Policy, Procedures and Guidelines
REF: PO001 - Work Health Safety (WHS) & Injury Management Policy
(Reviewed every six (6) months)

Yorke Peninsula Council demonstrates its commitment to the health and safety of its workers, contractors, other stakeholders and the public through a Work Health and Safety Policy (WHS Policy). The WHS Policy is complemented by a range of supporting policies, procedures and systems.

The WHS Policy and its supporting policies, procedures and systems observe the requirements of the relevant legislation and other obligations of Yorke Peninsula Council's operating licences, and extend the WHS to include safety of physical plant, assets and the environment.

The Risk Management Officer has functional responsibility for safety and risk related matters. This responsibility includes ensuring that the WHS Policy is implemented, supported, reviewed and revised as necessary, and for reporting relevant safety matters as required by the Chief Executive Officer and relevant legislation.

Responsibility for the day-to-day observation of all aspects of the WHS policies, procedures and systems rests with the relevant line managers, supervisors and leading workers.

Water infrastructure safety responsibility rests with Council’s Infrastructure Manager, the Director Assets and Infrastructure Services, the Risk Management Officer and Infrastructure Workers.

WHS policies and procedures are reviewed by the officer responsible for the document, in line with the expiry / review date stated on the document. When policies / procedures are amended they are first submitted to the WHS Committee for consideration and then made available to all staff for consideration and comment. The WHS Committee will make any necessary amendments following consideration of staff comments, after which the Policy / Procedure is forwarded to the Corporate Management Team for adoption.

All policies / procedures show the date it was adopted and also include an expiry / review date.

Section 3 describes the Yorke Peninsula Council systems and procedures, which ensure that risks to the safety of plant, workers and contractors are identified and mitigated to a level that is in accordance with the relevant legislation, codes and standards.

3.1.2 Organisational Procedures and Competence
REF: PR078 - Recruitment & Selection of Employees Procedure
(Reviewed every twelve (12) months)
REF: PO133 - Training Needs Analysis Policy
(Reviewed every twenty-four (24) months)

Employee Selection and Competency

Human Resources within Yorke Peninsula Council are managed according to policies and practices, which serve to ensure that workers, contractors and other persons satisfy personal, practical and professional requirements of the corresponding operations being undertaken.

Regular reviews of competency and skill levels are undertaken to identify where deficiencies may exist, including those introduced by new technologies. Where a deficiency or a supplementary training need is identified, the appropriate training is provided and the HR Training System is updated for both the worker’s and position files.
**Operator and Contractor Training**

**Operators**

**REF: PO011 - Training and Professional Development Policy**
(Reviewed every twenty-four (24) months)

- Relevant Yorke Peninsula Council employees are trained in procedures for the operation and maintenance of the CWMS systems and Reverse Osmosis Desalination Plant.
- Operator training covers relevant aspects of the operations manuals for the systems.
- Yorke Peninsula Council has standard training available and incorporates other training requirements as needs demand.
- All training completed is recorded in a Training Records Register, incorporated in the Staff Development file.
- Yorke Peninsula Council is committed to providing every opportunity for employee involvement in continuous improvement as part of the safety culture. Employees are actively encouraged to identify opportunities for improvements in work methodologies to increase the safety of operations, and to improve practices with respect to implementing an improved hierarchy of hazard controls.

**Contractors**

**REF: PO006 - Contractor Management Policy**
(Reviewed every thirty-six (36) months)

Contractors employed by Yorke Peninsula Council undergo a site-specific induction and are required to demonstrate compliance with all Council WHS policies and procedures. Records of any such training are maintained in a Contractor Induction File.

Wherever possible, established and experienced contractors are engaged on the CWMS and potable water systems to ensure that they have appropriate knowledge of risks associated with those systems.

Contractors are required to provide copies of all relevant WHS documentation prior to commencing on site.

### 3.2 Effective Planning

#### 3.2.1 Design

The engineering and technical design (including operating specifications) of any wastewater system or water supply system is outsourced to qualified, competent and reputable professional consultants. As such, plant and facilities are designed, constructed and commissioned, operated and maintained to meet the requirements of the schedules of legislation, standards and codes in Section 1.7.

Yorke Peninsula Council does not have the resources available, nor systems and processes established, to ensure that any design commissioned by others will be validated as conforming to current legislative requirements and appropriate standards. Independent external advice and assistance is sought as required for this activity.

The design of all infrastructure (new or upgrades) involving wastewater and potable water is submitted to the DHA and EPA for approval as required in accordance with the current Public Health and Environment legislation.
Yorke Peninsula Council employees will facilitate the progress of designs as required, and assist in the identification of potential hazards, risks and other safety and operational concerns in relation to any design activities.

The establishment of scopes of work and the procurement of such services is managed by the Director Assets and Infrastructure Services.

As a minimum, the person responsible for administration of the Yorke Peninsula Council Licence under the Water Industry Act will undertake a review of any proposed works to ensure that they comply with the terms of the Licence.

In the case of any developments that would increase demand significantly on one of Council’s existing systems, it is more than likely that a developer would be required to provide or fund an appropriate system upgrade.

3.2.2 Design Life of Plant
The service life of new infrastructure is approved with consideration for the deterioration of equipment during operation and any mitigating effects of maintenance, replacement and redundancy.

Operating conditions such as pressure, fluid velocity, temperature, and service factor are considered in design and any excursions from the design envelope are addressed to review the remaining life of equipment.

Deterioration caused by corrosion or other mechanisms is monitored according to the selected design codes, to confirm the effectiveness of mitigating measures or to detail specific service conditions for the remaining life.

3.2.3 Safety in Design Requirements
REF: PR015 - Safe Plant and Systems of Work Procedure
(Reviewed every thirty-six (36) months)

Yorke Peninsula Council is committed to compliance with all relevant legislation affecting its business operations. This includes compliance with the safe design requirements as specified in the Work Health and Safety Act 2012. The Council adheres to safety standards and codes of practice and has implemented processes and procedures for the design of new assets, or modification of existing assets that include safety in design principles and practices.

The core components in Yorke Peninsula Council’s Plant Procedure aim to:

- Outline Council’s systems for identifying hazards relating to plant in the workplace and eliminate, or, where elimination is not reasonably practicable, minimise risks to health or safety so far as is reasonably practicable.
- Assist Council to comply with the legislative requirements relating to testing, maintenance, installation, commissioning, use, repair, alteration, dismantling, storage and disposal of plant.
- Outline Council’s systems for providing information and training relating to plant, necessary to protect all persons from risks to their health and safety arising from work.
- Ensure that reasonably foreseeable hazards associated with plant are identified prior to the introduction of plant / equipment into the workplace.
- Ensure that there is a system for assessing and recording risks (on a prioritised basis).
- Ensure that appropriate controls are identified and implemented.
- Ensure that core competencies are identified for persons working with plant, and appropriate training is undertaken prior to activities associated with plant occurring.
• Ensure that items of plant are registered as required.
• Ensure that appropriate inspection and certification requirements are identified and carried out and that appropriate records are maintained, including pre-operational checks, periodic maintenance checks, safety inspections, regulatory inspections etc.
• Ensure that appropriate auditing processes are identified and carried out for plant management.

3.2.4 Procurement
REF: PQ058 - Purchasing and Procurement Policy
(Reviewed every forty-eight (48) months)

Procurement Systems and Processes
Yorke Peninsula Council has in place procurement processes, which address the need to ensure correct specification and purchasing of materials and components. Any procurement of goods with significant business risk is undertaken with clear evaluation criteria and understanding of the implications associated with the supply contracts. However, commonly used items will be catalogued as approved stock items, supplied by recognised vendors.

Apart from the commercial and contracting aspects of the overall procurement processes, it is important to ensure that all the relevant technical requirements are transmitted from the design stage into the procurement process. Procurement documentation is generated by technical or specific end user employees to ensure correct and relevant requirements are included.

Responsibility for the procurement systems and processes within Yorke Peninsula Council rests with the Governance Officer.

Materials and Components Selection
Design processes used by Yorke Peninsula Council address the specification of appropriate materials and components to ensure that they are selected to comply with particular design and other requirements such as:

• Compliance with specified codes and standards.
• Appropriate to the design life of the asset.
• Ability to withstand high or low pressure and high or low temperature.
• Where applicable, ability to resist corrosive environments.
• Ability to resist bacterial or microbiologic attack or degradation.

Once specified, these requirements become part of the tendering and purchasing process.

Inspection and Testing of Procured Materials and Components
The overall procurement system includes systems and processes for inspection and testing of procured materials and components to ensure they comply with specifications and to assess their condition on arrival into Yorke Peninsula Council control. This inspection and testing is also supported by procedures outlined in the Safe Plant and Systems of Work Procedure.

These inspections are carried out by competent and experienced professionals and/or employees using documentation developed for the process, such as Inspection and Test Plans and appropriate checklists. As a general example they would be expected to consider matters like the following, prior to the acceptance and commissioning of a piece of plant or equipment:

• Have all legislative requirements, AS/NZS Standards, Codes of Practice and industry guidance material that apply to this item been identified?
• Has the supplier been requested in writing to provide instruction / operator / user manuals?
• Are there licensing / registration requirements for the item and are permits to operate and / or operator certification required?
• Are chemicals required as part of the operational requirements of the item?
• What training or competency standard is required for employees or others to safely use this item?
• Will the item require regular inspection, maintenance, calibration or testing?
• Are spare parts readily available?
• If the item breaks down, will the supplier provide an emergency breakdown service?
• How long is the warranty period for this item?
• Is the item used or second hand?
• Does this item require specialised emergency procedures?
• Has consultation occurred with employees and others required to use the item?

**Inspection, Testing, Maintenance, Alteration and Repair**
A maintenance schedule should be developed that details the inspection, testing and/or maintenance requirements for each item of plant (including any registration or certification requirements).

• The maintenance schedule should include the testing and maintenance requirements for all safety features and/or warning devices.
• Inspections, maintenance and cleaning should be conducted in accordance with procedures recommended by the designer or manufacturer, or those developed by a competent person.
• If access is required to plant with moving parts for the purpose of maintenance, cleaning or repair, the plant is to be stopped, and one or more of the following should be used to minimise any risk to health or safety:
  a. Lockout or isolation devices.
  b. Danger tags.
  c. Permit to work systems.
  d. Other control measures: or
  e. If it is not reasonably practicable to carry out cleaning, maintenance or repair while the plant is stopped, the operator’s controls must allow the safe operation of the plant while the person is undertaking the maintenance or cleaning.
  f. If plant is altered, it should be altered, inspected and tested by a competent person, having regard to any relevant design specification (taking into account any alteration to the design), and prior to the plant being returned to service.
• Only competent persons should undertake inspection, testing, maintenance and repair activities.
• Repairs should be carried out so as to retain the plant within its design limits.
• Records of repair, inspection, testing and maintenance activities should be retained.

### 3.3 Controlled Implementation

#### 3.3.1 Construction and Commissioning

**Construction Safety**
Construction and installation activities are performed in accordance with processes and practices defined within the various Yorke Peninsula Council WHS policies and procedures. These measures are aimed at providing a safe environment for construction activities, and the procedures include the use of various tools, such as:
Daily pre-start tool box meetings
Safe Work Method Statements
WHS Management Plan
Risk Assessments and Safe Work Instructions

The efficiency and effectiveness of safety management during construction activities is monitored, evaluated, reviewed and, where appropriate, updated to promote continuous improvement. Contractors undertaking work are inducted to the worksite and monitored throughout the construction phase.

Construction Project Management
The Yorke Peninsula Council does not maintain any permanent specialised construction project management resources and, if required, would engage them on a consulting or contract basis.

Any such resources would be required to provide processes and procedures during the construction phase to monitor construction contractors and work against the time, quality and cost parameters nominated in execution plans and construction contracts.

Regular project progress updating is required, as part of these procedures particularly for construction, and the project control elements included in this updating would include:

- Project deliverability – issues that arise or are foreseeable that may affect the project or may add pressure to the performance or outcome.
- Project safety and incident reports – a summary of indicators such as Lost and Medical Time Incidents (LTI / MTI), along with number of hours worked and a summary of site incidents for each reporting period.
- Project schedule – a detailed schedule of all construction activities is maintained and updated on a regular basis for each project, and reviewed against the baseline schedule established at construction commencement. Schedule reports are issued to various levels of project and senior management, including summary level for management and two (2) week construction look ahead for onsite construction management.
- Project cost reports – reports are issued following the update process, which include progress to date, updated cost forecasts of work in the future, and summarised into a forecast cost at completion.

Execution plans developed in feasibility stage (contracting strategy, procurement etc.) are monitored during construction to ensure that delays are not introduced into the construction schedule by poor implementation, or scope creep, thus resulting in additional costs or unacceptable delays.

The interface between Yorke Peninsula Council's project management resource and a construction contractor is recognised and managed to ensure the Council is discharging its project responsibilities in an effective manner.

Commissioning
In all Yorke Peninsula Council commissioning activities, the emphasis is firstly on providing a safe commissioning process, then on the effective plant commissioning to ensure outputs from the plant comply with legislation and license requirements.

Commissioning plans take full account of the required health and safety standards for the new or modified plant such as pathogen and E.coli levels, disinfection levels, pH and various biochemical parameters etc.
Inspection and test plans form an integral part of the commissioning process and include the use of pre commissioning and commissioning checklists, review of construction data and supplier manuals and other data relevant to development of a safe commissioning process.

Commissioning is not commenced until documentation has been fully reviewed by all designated employees involved in the commissioning process. Resources for commissioning are selected as having appropriate experience with the particular plant and processes involved.

### 3.3.2 Operations and Maintenance

**Operations - Safe Operational Procedures (SOP)**

The CWMS, potable water system and associated assets operated by Yorke Peninsula Council use a range of procedures, site-specific operational procedures, generic operational procedures and administrative procedures.

The Safe Operational Procedures (SOPs) are developed by risk analysis of each task in the procedure and prescribe the safe methods for routine work. Other procedures in place to ensure work safety during non-standard or non-routine activities, and when multiple activities occur, include the following:

**Permit to Work**

The Yorke Peninsula Council has in place a Permit to Work process in conjunction with relevant WHS procedures, e.g. Confined Space Management Procedure, Electrical Safety Procedure and Hot Work Procedure. The Permit to Work System is used by all operators, maintenance employees and contractors who work on Yorke Peninsula Council infrastructure. It is administered by the Works and Operations Managers.

**Safe Work Method Statement**

Safe Work Method Statement (SWMS) processes are used to identify, assess and mitigate risks and hazards at a workgroup level, on a daily operational task basis. It is a simple, effective tool for planning and communicating job hazards and risks to individual work groups, and involves all workers in applying their skills and knowledge to plan how the job should be undertaken safely and effectively. It is completed jointly by all of the people involved in the task, documented and then approved and signed off by all participants before the task is undertaken. The objective is to enable all tasks to be completed with minimal risk.

Worker training in the SWMS process covers when it is required, and the steps for carrying out a Safe Work Method Statement. This training is provided to all new workers who work at the operational or maintenance level as a part of their normal duties. Regular refresher training is also provided for existing workers.

**Confined Space Procedures**

*REF: PR099 - Confined Space Management Procedure*  
(Reviewed every thirty-six (36) months)

No Council employee or contractor is permitted to enter a designated confined space unless possessing the required training, qualifications, skills, and equipment. A written risk assessment must also be conducted by a competent person prior to the first entry into the confined space.

**Hazardous Chemicals**

*REF: PR102 - Hazardous Chemical Procedure*  
(Reviewed every thirty-six (36) months)

The Yorke Peninsula Council as part of its commitment under its Hazardous Work Policy (PO004) recognises its obligation to manage risks to health and safety associated with using, handling, generating or storing hazardous chemical(s) at the workplace.
Specific procedures exist for the handling and use of hazardous chemicals in operations, and the core components of this procedure are:

- A current SDS is provided for all hazardous chemicals.
- Risk assessments are conducted for hazardous chemicals.
- Appropriate risk controls are identified, implemented, and regularly reviewed.
- Records are maintained and are readily available to relevant stakeholders.
- Persons undertaking work on behalf of Yorke Peninsula Council are appropriately trained.
- Health monitoring requirements are identified and a monitoring program implemented.
- Airborne contaminant levels are identified and monitored.
- Emergency response provisions, including site emergency plans are in place.
- Where relevant, a manifest of chemicals is maintained.

Employees are given specific training in the use of each hazardous chemical, and training records are kept to aid in ensuring regular refresher training is provided.

### 3.3.3 Decommissioning, Demolition, Disposal

**REF: PO072 - Sale and Disposal of Land & Other Assets**  
(Reviewed every thirty-six (36) months)

Decommissioning of assets being replaced or renewed is included in Yorke Peninsula Council’s annual capital and maintenance programs, and processes are in place to ensure that the assets are decommissioned in a safe and appropriate manner.

Disposal procedures for demolished equipment and materials include checks to ensure that they are free of toxic or corrosive chemicals that may be a hazard for future operators, third parties, the environment or the public. Relevant authorities are notified if required by Licence.

### 3.3.4 Emergency Response Management

**REF: PO005 - Emergency Management Policy**  
(Reviewed every thirty-six (36) months)

The responsibility for emergency preparedness and response within Yorke Peninsula Council rests with the Director Assets and Infrastructure Services, and the Emergency Management Procedure (PR080) provides details of organisational responsibilities adopted during emergency situations.

The plan is communicated to all relevant workers within the organisation, from executive management through to operators and maintenance. It undergoes regular review to maintain relevance.

Emergency Management Procedures have been developed to provide specific response actions for a range of emergency scenarios across Yorke Peninsula assets and the surrounding area. These procedures are tested on a regular basis.
3.4 Monitoring and Evaluation

3.4.1 Incident Management, Reporting and Investigation
REF: PR013 - Incident Reporting and Investigation Procedure
(Reviewed every thirty-six (36) months)
REF: PR048 - Corrective and Preventative Action Procedure
(Reviewed every thirty-six (36) months)

The Yorke Peninsula Council has a comprehensive Incident Management process, which requires staff to report all incidents and/or hazards on appropriate forms. As part of the reporting process, an investigation is undertaken by the relevant manager/supervisor to ascertain the root cause of the incident and the Work Health and Safety representative for the specific work area is advised of the incident. The Incident Reporting and Investigation Procedure provides staff with guidelines in relation to their responsibilities regarding incidents and near misses.

The Incident/Near Miss Report is then forwarded to the Risk Management Officer for inclusion in the next WHS Committee Meeting agenda. Where necessary, a risk assessment is completed and controls put in place to ensure the risk of the incident re-occurring is reduced.

The Correction and Preventative Action Procedure outlines staff responsibilities in relation to capturing, monitoring and evaluating any control measures implemented to reduce risk within the organisation.

The Corporate Management Team monitor all activities relating to WHS issues and receives copies of the Safety Committee minutes as well as other WHS monitoring documents such as Types of Incidents Reports, Corrective and Prevention Action Reports, WHS Activity Calendar.

Staff are trained in all WHS policies and procedures to ensure they are fully aware of their responsibilities in relation to maintaining a safe work environment for all.

3.4.2 Documentation and Reporting
REF: PO019 - Document Management Policy
(Reviewed every thirty-six (36) months)
REF: PR076 - WHS Consultation and Communication Procedure
(Reviewed every thirty-six (36) months)

WHS policies and procedures are generally reviewed every three (3) years or as required if legislative changes are made that would affect the accuracy of the document. When policies / procedures are amended they are first submitted to the WHS Committee for consideration and then made available to all staff for consideration and comment. The WHS Committee will make any necessary amendments following consideration of staff comments, after which the Policy / Procedure is forwarded to the Corporate Management Team for adoption.

All policies / procedures show the date it was adopted and also include an expiry / review date.

Legislative changes are monitored through LGA Circulars, which are released weekly by the Local Government Association, and outline any legislative changes which may affect Council processes.

Council’s WHS Document Management Policy outlines the process that is undertaken internally in relation to Document Control. The latest versions of all Council policies are available on the Council Website www.yorke.sa.gov.au so staff have access at all times to the latest version of the relevant documents.
The WHS Consultation and Communication Procedure outlines the process to ensure appropriate communication and consultation with staff in relation to WHS and other Council activities.

3.5 Audit and Review

Regular external Key Performance Indicator Audits are undertaken in relation to WHS issues and an Audit Committee that includes external independent members has been established to monitor Council financial and other areas of risk throughout the organisation.

An external Auditor is engaged to monitor and audit Council’s financial activities annually, and at interim periods throughout the financial year.
4 Formal Safety and Reliability Assessment

4.1 General
Safety and reliability assessments are adopted for avoiding and minimising risks, which may occur from the design, manufacture, procurement, importation, construction, operation and management of assets.

The assessment involves understanding and identifying hazards that are presented by the assets, and the risk or potential that these hazards have to cause damage or harm to property or people. Understanding the risk will assist, part way, to the selection of appropriate controls to mitigate the risk or the severity of consequence of the hazardous event. The application of these controls will reduce the risk to a residual level, which should be considered “as low as reasonably practicable” (ALARP).

The assessment is undertaken to respond to the legal duty or obligation of Yorke Peninsula Council and in turn satisfy the requirements of due diligence.

4.2 Due Diligence

Hazard Identification and Rating
REF: PO002 - Hazard Management Policy
(Reviewed every thirty-six (36) months)
REF: PR016 - Hazard Management Procedure
(Reviewed every thirty-six (36) months)

The hazard identification processes, both for new infrastructure and ongoing operations, are aimed at identifying all reasonably foreseeable hazards. The identification process utilises persons with appropriate knowledge and experience, and the processes include:

- Consideration for off-design operating conditions and deterioration of existing equipment.
- Consultation with the employees/operators “at the coal face” or those with experience in similar operations. This is a requirement of legislation.

Identified hazards are assessed and rated according to the likelihood of occurrence and the consequence of the event, which may be affected by circumstances at the time. While not only addressing safety, the rating system also considers implications such as environmental, societal/reputational or financial, and methodologies and mitigations for addressing the hazards taking into account these environmental, societal/reputational or financial considerations.

A Hazard and Risk Register is maintained and regularly reviewed and updated for incorporation of new assets as existing operating assets are modified.

Levels of Responsibility
The level of responsibility for controlling and reporting of hazards, and monitoring the effectiveness of hazard controls, are aligned with the organisational structure, where each member of the workforce carries a responsibility commensurate with their level of influence, as described below:

- Level 1 – Yorke Peninsula Council
  It is the duty of Yorke Peninsula Council under legislation to eliminate or minimise risks so far as is reasonably practicable (ALARP).

- Level 2 – Departmental
  CEO and managers ensure the health and safety of employees, contractors and the public by exercising due diligence to be aware of the risks that the business undertake.
• Level 3 – Supervisor
Supervisors ensure that they do not present undue risks to the health and safety of any person whilst maintaining safe and reliable operations.

• Level 4a – Installation, construction, commissioning employees
Systems and processes are implemented for the selection and control of contracting and procurement functions, which ensure that during the installation and commissioning of equipment, appropriate maintenance services, are in place to keep all equipment fit for safe use. The systems ensure that employees have sufficient understanding and skill to implement the works with reasonable care.

• Level 4b – Designers, manufacturers, importers and suppliers
Design development for all new plant/equipment and modification to existing assets is undertaken with reasonable care, and includes the appropriate level of hazard identification and assessment.

4.3 Risk Response, Mitigation and Control
In responding to and mitigating identified risks, Yorke Peninsula Council applies a rigorous set of controls which take account of, for each risk or hazard, how well the hazard or risk is known, what can be done, and is reasonable to do, the degree of harm associated with failure of the controls, and the availability and sustainability of controls.

The methods employed to reduce risk are selected recognising the hierarchy of controls as follows:

• Elimination – removes the cause of danger completely e.g. using non-hazardous acids and alkalis for controlling pH instead of Class 8 chemicals.
• Substitution – controls the hazard by replacing it with a less risky way to achieve the same outcome.
• Isolation – separates the hazard from the people at risk by isolating it e.g. moving the chlorine dosing away from the plant and encasing it in an enclosure with increased security measures such as locks and alarm systems.
• Engineering – using engineering controls, i.e. making physical changes, to lessen any remaining risk, e.g. redesign a machine by adding safeguards.
• Administration – using administrative controls to lessen the risk, e.g. install signs, job rotation.
• Personal Protective Equipment (PPE) - requiring employees to wear PPE, e.g. provide gloves, earplugs, goggles.

Within this hierarchy, both physical and procedural controls are applied. However, where applicable, the implementation of physical controls such as traffic barriers or fencing will be preferred over procedural controls.

Risk Control
REF: PR016 - Hazard Management Procedure
(Reviewed every thirty-six (36) months)

The identification of hazards is conducted in accordance with Council’s Hazard Management Procedure and includes the specific aspects associated with the legal roles and duties as per legislative requirements, e.g. designers, owners, employers, importers, suppliers, manufacturers, installers and those undertaking commissioning activities.
**Risk Assessment Process**

- Specific controls are required under the WHS Regulations for certain types of plant. In some situations, specialised expertise may be required to assist in completing the risk assessment process. These situations include those where:
  - There is uncertainty about the degree of risk.
  - There is a significant risk, for example, exposure to sustained noise, plant that requires complex guarding, etc.
  - Plant that has not been manufactured in Australia.
  - The plant is of such a nature that specialist knowledge is required to complete the risk assessment competently.
  - Other factors such as locality, timing and/or expense are a consideration as to the completion of the task.

- The findings are to be documented on the plant risk assessment form, which should include the agreed estimations for likelihood, consequence and risk rating.

- The plant risk assessment should be:
  - Signed by all parties who participated in the risk assessment process.
  - Revised whenever there is evidence to indicate that the assessment is no longer current, risk controls are no longer effective, or when there has been a change in the work to which the assessment relates.

- The purchaser should complete the purchase documentation in accordance with any procurement guidelines and specifically:
  - Any specific requirements identified during the risk assessment process should be documented in the purchase documentation.
  - All purchases of plant should have manufacturers’ instructions supplied.

- The department manager should check that all hazards identified during the risk assessment process are added to the hazard register.

- An action plan is also developed and, where it is not reasonably practicable to eliminate all risks, controls from the highest level of Hierarchy of Control that are as low as reasonably practicable (ALARP) must be selected, documented and implemented, in accordance with the requirements of the Hazard Management Procedure.

**Training**

The department manager/supervisor shall make sure, so far as is reasonably practicable, that any item of plant is not operated at the workplace unless the operator has been provided with information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety.

- The instruction and training should be commensurate with any risk to health or safety that has been identified by the risk assessment process.
- When required, persons must hold a current licence for plant operation and maintenance.
- When required, persons must hold a current certificate of competency.
4.4 Risk Assessment

REF: PO091 - Risk Management Policy
(Reviewed every thirty-six (36) months)
REF: PR098 - Risk Management Procedure
(Reviewed every thirty-six (36) months)

Identified risks and hazards are assessed using criteria, which are standardised throughout Yorke Peninsula Council, for the likelihood of the event occurring and the consequence if it does occur.

In particular, consequences are not just assessed as the physical or employees impact (e.g. number of injuries or fatalities) but also against other criteria such as financial impact, environmental impacts and reputational impacts where such criteria are relevant.

Financial Impact
Assessment of financial impact considers the cost of a hazardous event to Yorke Peninsula Council including physical repairs, lost production, damages from third parties, legal claims and the like. Various levels of cost are determined and ranked as Low, Moderate, Significant and Major, for use in the risk ranking process described in the Risk Management Procedure.

Environmental Impact
Environmental impacts considered range from those ranked as trivial, which have minor or no effects and are rectified rapidly, through to those with increasing severity.

Minor risks are those where the effect is localised and of short-term duration with manageable consequences, whilst extreme risks represent those where the effects are widespread with possible major off-site and long term severe environmental effects.

Customers or Community Impact
Social and community impacts are those which have an impact on the social standing and reputation of Yorke Peninsula Council towards their customers. They include coverage of the incident in local or national media, effect on communities surrounding the incident site, involvement of regulators and/or shareholders.

Risk Matrix
All risks are assessed using a standard Risk Matrix adopted by Yorke Peninsula Council, which ranks each item against levels of consequence (as described above) and likelihood (see detailed explanation in Risk Management Procedure).

The final step in the formal risk assessment process is consideration of reducing the risk, for risks and hazards that are assessed as medium or higher. Yorke Peninsula Council processes for this consider:

- What can be done? What is possible in the circumstances for ensuring safety and reliability.
- Whether it is reasonable in the circumstances to do all that is possible? Factors that may determine whether something is ‘reasonably practicable’ include:
  - Likelihood of the hazard and associated risks occurring.
  - Degree of damage or harm that might result from the hazard/risks.
  - What the person concerned knows, or ought reasonably to know, about the hazard/risks, and ways of eliminating the hazard/risks through design.
  - The availability and suitability of design approaches to eliminate or minimise the risks.
  - The design costs associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.
Importantly, the issue of influence and control is also considered in what is ‘reasonably practicable’. A risk ranking ‘as low as reasonably practical’ (ALARP) is considered to be reached when all that at a particular time, reasonably able to be done to ensure health, safety and reliability has been done, taking into account and weighing up all relevant matters.

**Residual Risks**
Yorke Peninsula Council’s risk assessment process includes assessing the initial risk using Council’s Risk Matrix Template, and then the residual risk is recorded after appropriate controls or mitigation methods have been implemented. Workers participate in the development of risk assessments and have input into the various controls that are implemented and evaluated to ensure their appropriateness and effectiveness.
5 Asset Management

5.1 Asset Management Systems

REF: Asset Management System

Yorke Peninsula Council has developed a computerised Asset Management System (Conquest) that includes a CWMS Asset Register. This Register is also linked to Council’s GIS Mapping.

The CWMS Register is now considered to be at a reliable standard to manage the CWMS assets.

The information in the CWMS Register is continuously reviewed and updated accordingly.

Asset management should involve coordinated activity to realise value from assets, and requires the balancing of costs, opportunities and risks against the required performance of assets, to achieve the organisational objectives. This balancing is considered over different timeframes.

Yorke Peninsula Council’s goal in managing infrastructure assets is to meet the required level of service in the most cost effective manner for present and future consumers. The key elements of infrastructure management are:

- Taking a life-cycle approach.
- Developing cost-effective management strategies for the long term.
- Providing a defined level of service and monitoring performance.
- Understanding and meeting the demands of growth through demand management and infrastructure investment.
- Managing risks associated with asset failures.
- Sustainable use of physical resources.
- Continuous improvement in asset management practices.

Yorke Peninsula Council’s objective will be to minimise the whole of life cost of its assets whilst ensuring other critical factors such as changes in the risk profile due to external factors and business continuity are considered objectively in the decision making process.

5.2 Operations and Maintenance Decision Making

Yorke Peninsula Council manages the capital and operational expenditure of plant and facilities to maintain a balance between business growth and sustainability with minimum life cycle cost. The decision-making processes for the CWMS and the Potable Water System are supported by well-established documented procedures and checklists for regular maintenance activities, which will continuously be improved.
6 Contract Management

6.1 General
REF: PO058 - Purchasing and Procurement Policy
(Reviewed every forty-eight (48) months)

The Council is committed to ensuring a fair, transparent and accountable process in procuring goods/services on a value for money basis, and in disposing of assets at their market value. Value for money is not restricted to price alone, and a comprehensive list of additional considerations is included in the abovementioned Policy.

The procurement method that may be used depends on the value of the transaction and these may be summarised as:

<table>
<thead>
<tr>
<th>Purchase Method</th>
<th>Specific Requirements</th>
<th>Purchase Value</th>
<th>Authority to Approve Exceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Purchase</td>
<td>Purchase from a single supplier</td>
<td>Up to $5,000</td>
<td>N/A</td>
</tr>
<tr>
<td>Quotations</td>
<td>Minimum of two written quotes required</td>
<td>$5,000 to $20,000</td>
<td>CEO</td>
</tr>
<tr>
<td>Quotations</td>
<td>Minimum of three written quotes required</td>
<td>$20,000 to $50,000</td>
<td>CEO</td>
</tr>
<tr>
<td>Selective Tendering</td>
<td>• Minimum three independent suppliers invited to tender.</td>
<td>$50,001 to $100,000</td>
<td>CEO</td>
</tr>
<tr>
<td></td>
<td>• Approved suppliers should be given equal opportunity to submit a tender.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Tendering</td>
<td>Open invitation issued inviting suppliers to submit a tender</td>
<td>Greater than $100,001</td>
<td>Council Resolution required</td>
</tr>
</tbody>
</table>

Table 6.1: Procurement Methods

Specific officers within Council have been delegated the power to expend Council funds by the CEO, and must also abide by the provisions of the Purchasing and Procurement Policy for the supply of all goods and services.

6.2 Contracting Risks, Mitigation, Review and Audit
REF: PR098 - Risk Management Procedure
(Reviewed every thirty-six (36) months)

Yorke Peninsula Council has in place a Risk Assessment Template (as described in PR098) which can be used to evaluate risks associated with contracting activities. Contract management risks are included if a risk assessment is undertaken at the commencement of the procurement phase, whether for a period operating contract or a specific project contract.

Risks to successful contract management can arise from a number of sources. These include:

- Contract management capability – both within the Council and the contractor.
- Contractor performance – capability, competency, on time delivery, over or under budget.
- Change in circumstances – no change management implemented, variation management, changes not identified and addressed in a timely manner.
- Stakeholder relationships – stakeholders not consulted.
- Risks to safety – use of contract resources rather than in-house employees, contractor safety performance.

6.3 Contractor Management

REF: PO006 - Contractor Management Policy
(Reviewed every thirty-six (36) months)

All Contractors who wish to perform work for Yorke Peninsula Council are required to supply Council with up to date evidence that they are compliant with the Work Health and Safety Act 2012.

It is the responsibility of the appropriate Council employee to identify and communicate foreseeable WHS risks relevant to the contract work, including any specific WHS requirements of the Contractor undertaking the Contract with the Council.

Yorke Peninsula Council is committed under its WHS Contractor Management Policy to:

- Ensure, so far is reasonably practicable, the health and safety of workers engaged, or caused to be engaged by Council while the workers are at work in Council’s business or undertaking.
- Eliminate risks to health and safety, so far as is reasonably practicable and if it is not reasonably practicable to eliminate risks to health and safety, to minimise those risks so far as is reasonably practicable.
- So far as is reasonably practicable, consult, co-operate and co-ordinate activities with other persons who have a duty in relation to the same matter.
7 Customer and Public Protocols and Agreements

7.1 General
REF: PO018 - Hardship Policy for Customers of Minor and Intermediate Water Retailers
(Reviewed every sixty (60) months)

Customer and Public communication protocols are reviewed on a regular basis and updated as required. These protocols are integrated within Yorke Peninsula Council’s Policy and Procedures Registers.

Stakeholder and Public Communication
It is an obligation of Yorke Peninsula Council to be prepared for either a planned or unplanned service outage, and to notify all customers of a planned service outage specifying the date and expected duration of the outage, using the following means as appropriate:

- A letter is posted to customers at least two (2) weeks before the date
- Yorke Peninsula Council website
- Work crews erect signs in the local area of the planned work

Public Notification of Traffic Restrictions
REF: PR106 - Work Zone Traffic Management
(Reviewed every thirty-six (36) months)

At times Yorke Peninsula Council may need to undertake planned or unplanned works on infrastructure that will result in traffic restrictions and, in such cases, the Council will ensure all restrictions comply with the Road Traffic Act and subsequent regulations.

Work Zone Traffic Management risk assessments are completed and appropriate controls (traffic control devices) implemented to reduce risk to employees, contractors and the public. Employees regularly update their Work Zone Traffic Management training to ensure qualifications are maintained in this area.

Public Emergency Announcements and Evacuation Procedures / Drills
REF: PR080 - Emergency Management
(Reviewed every thirty-six (36) months)

An emergency may arise following a hazardous chemical spill at a Council facility. In such an instance, the WHS Emergency Management Procedure will be followed to manage the event, including reference to the spill chemical Material Safety Data Sheet (MSDS).

7.2 Supply Agreements

CWMS Effluent
Yorke Peninsula Council is responsible for the collection, treatment and disposal of effluent from the CWMS it operates.

As detailed in Section 2.2.1, disposal of treated wastewater is to either the local golf course, an agricultural activity or Council woodlot, under arrangements as detailed below.

- Golf Courses - no formal supply agreements exist between the Council and the Ardrossan, Maitland or Yorketown golf courses. In each of these townships there is a large treated water storage dam, which acts as an adequate buffer between supply and demand throughout the year.
- Stansbury - Council leases land under agreement from a local landowner to irrigate a lucerne crop with treated effluent for disposal.

- Sultana Point - Council leases to a farmer under agreement a portion of land adjoining the WWTP for the development and operation of a vineyard.

- Woodlots - No formal supply agreements exist for these Council owned properties where disposal by irrigation continues year round. The woodlots have been sized as per relevant licence conditions to provide adequate disposal capacity without degrading the soil.

- The Council does not currently charge for any treated water supplied for reuse. End users can take as much as they want, subject to such availability being determined by operational supply and demand.
8 Compliance Monitoring

8.1 General
Yorke Peninsula Council operates all its wastewater treatment plants under various government approvals and licences, and a summary of the associated infrastructure is included in Section 2. In several locations Council also provides recycled water to third party users with the water quality again determined by the relevant Department of Health approval conditions.

A more detailed analysis of the overall compliance monitoring and risk management approach to recycled water reuse can be found in one of several recent Recycled Water Management Plans completed for the DHA.

8.2 Safety and Technical Requirements
The wastewater reuse schemes operate under a set of Key Performance Indicators, which are a combination of approval and licence conditions and others, which are a result of plant operating parameters, and the Council’s safe, efficient and economic operation of the systems.

These Key Performance Indicators are regularly reported to external authorities as required and monitored for managing and responding to plant operation trends. The KPIs shown in Table 8.1 provide an on-going measurement of the typical WWTP performance in providing a consistent, compliant outcome. They are used as the first level indicator regarding the health of the plant and system.

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</tr>
<tr>
<td>Suspended Solids</td>
<td>Process parameter</td>
<td>Mean value not greater than 30 mg/L</td>
</tr>
<tr>
<td><em>E coli</em></td>
<td>Process parameter and key indicator for public health</td>
<td>Median thermotolerant coliform count not greater than 100/100mL</td>
</tr>
<tr>
<td>Chlorine level</td>
<td>Process parameter and key indicator for effective disinfection</td>
<td>Median total chlorine level not less than 1 mg/L</td>
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Table 8.1: Typical WWTP Key Performance Indicators

8.3 Periodic Audit of Operations
Yorke Peninsula Council will monitor and audit its operations as required by Licence and Approval conditions to ensure long-term system sustainability and reliability.

8.4 Corrective Action and Continual Improvement
All Yorke Peninsula CWMS and Potable Water Supply systems have been the subject of considerable testing, modification and monitoring to achieve the stable operating regime that currently exists.

There is no structured system in place to regularly address corrective actions and continual improvement for either the CWMS or Potable Water Supply systems, except for those actions arising from a risk assessment or accident/incident report. However, as any improvements in technology or operating procedures are identified they will be considered for implementation in the context of the relevant asset management principles and guidelines.
8.5 Water Quality

**Community Wastewater Management Schemes**
Water quality for treated water from Council’s CWMS is controlled and monitored as detailed in previous Sections.

Several tests are performed onsite by Council operators, including:

- pH testing;
- dissolved oxygen testing;
- chlorine residual testing; and
- turbidity testing.

Every three (3) months water samples are sent for testing, including:

- Biochemical Oxygen Demand [mg/l];
- Suspended Solids[mg/l]; and
- Thermotolerant Coliforms-Ecoli [/100ml].

Results are reported to the DHA annually. An example of these results is included in Appendix B.

**Potable Water Supply**
Potable water supplies to Balgowan, Black Point and Hardwicke Bay from SA Water are the subject of regular three (3) monthly sampling and testing undertaken by AWQC or ALS, including Thermotolerant Coliforms-Ecoli [/100ml] of every tank and a common network supply point.

**Desalinated Water Supply - Marion Bay**
Water from the Desalination Plant is closely monitored according to the plant design parameters.

Council is currently developing a Risk Management Plan for this site in conjunction with SA Health.

Several tests are performed onsite by Council operators, including:

- pH testing;
- chlorine residual testing; and
- permeate conductivity US/cm.

Every three (3) months water samples are sent for testing, including:

- pH testing;
- Thermotolerant Coliforms-Ecoli [/100ml];
- Langelier index;
- permeate conductivity US/cm; and
- metals and chemicals.
### Appendix B: Water Quality Results - CWMS

**Yorke Peninsula Council**

**Water sampling results – Stansbury**

*All samples tested at Australian Water Quality Centre unless otherwise stated*

#### 07/08

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**samples tested at ALS**

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