



Shepherds Bay scheme

# LICENCE PLAN AUDIT REPORT

**Altogether (formerly Flow Systems)**

February 2021

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# Executive Summary

## Audit scope

This report presents the findings of the licence plan audit of Flow Systems Operations Pty Ltd for the Shepherds Bay scheme, conducted in January 2021, consistent with the audit requirements set out in IPART's *Audit Guideline, Water Industry Competition Act 2006 (NSW)* (July 2020).

The audit scope includes the adequacy and currency of the Shepherds Bay Licence Plans.

The licence plans subject to audit are the:

- Shepherds Bay Water Scheme Management Plan
- Recycled Water Quality Plan
- Drinking Water Quality Plan.

## Audit findings

Flow Systems (now called Altogether) have a Drinking Water Quality Plan (DWQP) and a Recycled Water Quality Plan (RWQP) that details how the ADWG Framework and AGWR Framework elements, components and actions are met. The Plans' structure is simple yet comprehensively documents how Flow Systems meets the requirements of the ADWG and AGWR Frameworks. Documents specific to individual schemes are referenced in the Scheme Management Plan. As the overarching water quality plans (DWQP and RWQP) were audited in November 2020 for the Cooranbong Licence plan audit, the scope of the Shepherds Bay audit was reduced to:

- Audit scheme specific documentation referenced in the RWQP and DWQP, including the scheme management plans and relevant supporting documentation
- Assess progress of the recommendations relating to the overarching RWQP and DWQP.

The recycled water treatment process units have yet to be constructed at Shepherds Bay. Drinking water is currently supplied through the recycled water distribution network. Verification of the process flow diagrams were outside the scope of the audit.

A summary of compliance for the Shepherds Bay Water Quality Plans (drinking and recycled) is shown in Table i-i.

The Licence Plans as a whole are considered adequate, with a few deficiencies noted in relation to scheme specific documentation references. These are considered non-material. Recommendations have been included to address these shortcomings.

**Table i-i. Summary of compliance with Shepherds Bay Water Quality Licence Plans**

Requirement	Licence Plan	Compliance
WIC Regulation Schedule 1 clause 7(1) (a)	Water quality plan (drinking)	Non-compliant non material
WIC Regulation Schedule 1 clause 7(1) (b)	Water quality plan (recycled)	Non-compliant non material

## Recommendations

Six audit recommendations were made for the Shepherds Bay Water Quality Licence Plans, summaries of these can found in Section 4.1.3 and Section 4.2.3.

# Contents

1	Introduction.....	1
1.1	Objectives.....	1
1.2	Licensee’s infrastructure, systems and procedures.....	1
2	Audit method.....	1
2.1	Audit scope.....	1
2.1.1	Audit standards.....	6
2.2	Audit steps.....	7
2.3	Audit grades.....	8
2.4	Audit team.....	8
2.5	Quality assurance process.....	9
3	Audit plan.....	9
4	Audit findings.....	10
4.1	Water quality plan.....	10
4.1.1	Summary of findings.....	10
4.1.2	Detailed findings.....	11
4.1.3	Summary of recommendations.....	19
4.1.4	Summary of opportunities for improvement.....	19
4.2	Recycled water quality plan.....	19
4.2.1	Summary of findings.....	20
4.2.2	Detailed findings.....	21
4.2.3	Summary of recommendations.....	30
4.2.4	Summary of opportunities for improvement.....	30
Appendix A	Audit evidence.....	A-1

## Tables

Table i-i. Summary of compliance with Shepherds Bay Water Quality Licence Plans .....	ii
Table 2-1. Summary of licence plan audit requirements .....	2
Table 2-2. Drinking water licence plan audit reduced scope summary .....	3
Table 2-3. Recycled water licence plan audit reduced scope summary .....	4
Table 2-4. Audit steps .....	7
Table 2-5. Audit grades .....	8
Table 2-6. Audit team .....	8
Table 3-1 Shepherds Bay Scheme Management Plan licence plan audit plan.....	9
Table 4-1. Drinking water quality plan audit requirements .....	10
Table 4-2. Audit findings against the ADWG Framework – reduced scope .....	11
Table 4-3. Recycled water quality plan audit requirements.....	20
Table 4-4. Audit findings against the AGWR Framework – reduced scope.....	21

# 1 Introduction

## 1.1 Objectives

This report presents the findings of the licence plan audit of Flow Systems Operations Pty Ltd for the Shepherds Bay scheme, consistent with audit requirements set out in IPART's *Audit Guideline, Water Industry Competition Act 2006 (NSW)* (July 2020).

## 1.2 Licensee's infrastructure, systems and procedures

On 12 January 2021 Flow Systems changed its name to Altogether. We refer to Flow Systems as the service provider throughout this report as it was Flow Systems' licence plans that were audited.

Flow Systems operations and obligations are managed through an integrated Business Management System (BMS), independently certified to:

- AS/NZS ISO 9001 Quality Management Systems
- AS/NZS ISO 14001 Environmental Management System
- AS/NZS 4801 Work Health and Safety Management Systems
- OHSAS 18001:2007 Occupational Health and Safety Management Systems.

The BMS is managed through a SharePoint site. As Flow Systems operate a number of schemes under the WIC Act it has a cross-functional approach to its systems and procedures. It has overarching documents including its:

- Drinking Water Quality Plan
- Recycled Water Quality Plan
- Infrastructure Operating Plan
- Incident Management Plan
- Asset Management Plan
- Monitoring and Sampling Plan

These are supported by both utility-wide and scheme-specific documentation. The documents that detail how Flow Systems meets their licence plan requirements are called up in these plans. We have recorded the documents we audited as part of these plans in Appendix A.

# 2 Audit method

## 2.1 Audit scope

The audit scope includes the adequacy and currency of the Shepherds Bay Licence Plans for the current stage of operations.

The licence plans subject to audit were the:

- Shepherds Bay Plus Scheme Management Plan
- Recycled Water Quality Plan

- Drinking Water Quality Plan.

Verification of onsite infrastructure to test the accuracy of the process flow diagram was conducted as part of this audit.

The following informed the audit criteria:

- Audit Guideline, Water Industry Competition Act 2006 (NSW) (IPART July 2020)
- Water Industry Competition Regulation requirements
- AS/NZS 19011:2019 Guidelines for Auditing Management Systems.

**Table 2-1. Summary of licence plan audit requirements**

Requirement	Details
Audit Guidelines	<p><b>Water Quality Plan audit</b></p> <p>Audits the adequacy of a licensee’s Water Quality Plan, and its compliance with legislative requirements, in accordance with the requirements of Schedule 1 clause 7(1) of the WIC Regulation.</p> <p>A licensee’s Water Quality Plan for drinking water or non-potable water must be consistent with the actions outlined in the 12 framework elements of the ADWG (for drinking water) and the AGWR (for non-potable water).</p>
WIC Regulation Schedule 1 clause 7(1)	<p><b>7 Water quality plans</b></p> <p>(1) Before commencing to operate water infrastructure commercially, the licensed network operator for the infrastructure must prepare, and forward to IPART, a water quality plan, in relation to the water supplied from the infrastructure, that specifies:</p> <p>(a) if the water so supplied is drinking water, how the 12 elements of the framework for the management of drinking water quality, as detailed in the Australian Drinking Water Guidelines, have been addressed and will be implemented, and</p> <p>(b) if the water so supplied is non-potable water, how the 12 elements of the framework for the management of recycled water quality and use, as detailed in the Australian Guidelines for Water Recycling, have been addressed and will be implemented and, having regard to those guidelines, the purposes for which the water may be used and the purposes for which the water may not be used.</p>

As the overarching water quality plans (DWQP and RWQP) were audited in November 2020 for the Cooranbong Licence plan audit, the scope of the Shepherds Bay audit was reduced to:

- Audit scheme specific documentation referenced in the RWQP and DWQP, including the scheme management plans and relevant supporting documentation (see Table 2-2 and Table 2-3)
- Assess progress of the recommendations relating to the overarching RWQP and DWQP

The recycled water treatment process units have yet to be constructed at Shepherds Bay. Drinking water is currently supplied through the recycled water distribution network. The Process flow diagrams were not verified on site as part of this audit; the



process flow diagrams will be audited as part of the new infrastructure audit following construction.

A summary of the elements and documents to be audited are shown in Table 2-2 for the DWQMP and Table 2-3 for the RWQMP.

**Table 2-2. Drinking water licence plan audit reduced scope summary**

Element	Component	Scope	System documents	
1	Commitment to drinking water quality management	1.1 Drinking water quality policy	×	
		1.2 Regulatory and Formal Requirements	×	
		1.3 Engaging Stakeholders	✓	Stakeholder and emergency contact list
2	Assessment of the drinking water supply system	2.1 Water Supply System Analysis	✓	Risk assessment documentation
		2.2 Assessment of Water Quality Data	✓	System description Process flow diagram
		2.3 Hazard Identification and Risk Assessment	✓	
3	Preventive measures for drinking water quality management	3.1 Preventative Measures and Multiple Barriers	✓	Scheme risk register
		3.2 Critical Control Points	✓	Critical control point documentation
4	Operational procedures and process control	4.1 Operational Procedures	✓	O&M Manual Operational procedures
		4.2 Operational Monitoring	✓	Scheme specific monitoring and sampling programme
		4.3 Corrective Action	✓	Critical control point documentation Scheme - Out of Specification Corrective Action Work Instruction
		4.4 Equipment Capability and Maintenance	✓	O&M Manual
		4.5 Materials and Chemicals	✓	O&M Manual
5	Verification of drinking water quality	5.1 Drinking Water Quality Monitoring	✓	Scheme sampling plan

Element	Component	Scope	System documents
	5.2 Consumer Satisfaction	×	
	5.3 Short-term Evaluation of Results	×	
	5.4 Corrective Action	×	
6 Management of incidents and emergencies	6.1 Communication	✓	Stakeholder and emergency contact list
	6.2 Incident and Emergency Response Protocols	✓	Scheme notification forms Scheme - Out of Specification Corrective Action Work Instruction Scheme emergency manual
7 Employee awareness and training	7.1 Employee Awareness and Involvement	×	
	7.2 Employee Training	×	
8 Community involvement and awareness	8.1 Community Consultation	×	
	8.2 Communication	×	
9 Research and development	9.1 Investigative Studies and Research	×	
	9.2 Validation of Processes	×	
	9.3 Design of Equipment	×	
10 Documentation and reporting	10.1 Management of Documentation and Records	×	
	10.2 Reporting	×	
11 Evaluation and audit	11.1 Long-Term Evaluation of Results	×	
	11.2 Audit of Drinking Water Quality	×	
12 Review and continual improvement	12.1 Review by senior executive	×	
	12.2 Drinking Water Quality Management Improvement Plan	×	

**Table 2-3. Recycled water licence plan audit reduced scope summary**

Elements	Component	Scope	System documents
1 Commitment to responsible use	1.1 Responsible use of recycled water	×	

Elements	Component	Scope	System documents
and management of recycled water quality	1.2	Regulatory and Formal Requirements	✓ WICA Responsibilities and Authorities Matrix
	1.3	Partnerships and engagement of stakeholders (including the public)	✓ Stakeholder and emergency contact list
	1.4	Recycled water policy	×
2 Assessment of the recycled water system	2.1	Source of recycled water, intended uses, receiving environments and routes of exposure	✓ Risk assessment documentation System description Process flow diagram
	2.2	Recycled water system analysis	✓
	2.3	Assessment of Water Quality Data	✓
	2.4	Hazard Identification and Risk Assessment	✓
3 Preventive measures for recycled water management	3.1	Preventative Measures and Multiple Barriers	✓ Scheme risk register
	3.2	Critical Control Points	✓ Critical control point documentation
4 Operational procedures and process control	4.1	Operational Procedures	✓ O&M Manual Operational procedures
	4.2	Operational Monitoring	✓ Scheme specific monitoring and sampling programme
	4.3	Operational corrections	✓ Critical control point documentation Scheme - Out of Specification Corrective Action Work Instruction
	4.4	Equipment Capability and Maintenance	✓ O&M Manual
	4.5	Materials and Chemicals	✓ O&M Manual
5 Verification of recycled water quality and environmental performance	5.1	Recycled Water Quality Monitoring	✓ Scheme specific monitoring and sampling programme
	5.2	Application site and receiving environment monitoring	✓ Irrigation Management Plans
	5.3	Documentation and reliability	✓ Scheme specific monitoring and sampling programme
	5.4	Consumer Satisfaction	×

Elements	Component	Scope	System documents		
	5.5	Short-term Evaluation of Results	×		
	5.6	Corrective responses	×		
6	Management of incidents and emergencies	6.1	Communication	✓	Stakeholder and emergency contact list
		6.2	Incident and Emergency Response Protocols	✓	Scheme notification forms Scheme - Out of Specification Corrective Action Work Instruction Scheme emergency manual
7	Operator, contractor and end user awareness and training	7.1	Operator, contractor and end user awareness and involvement	×	
		7.2	Operator, contractor and end user Training	×	
8	Community Involvement and awareness	8.1	Consultation with users of recycled water and the community	×	
		8.2	Communication and education	×	
9	Validation, research and development	9.1	Validation of processes	×	
		9.2	Design of equipment	×	
		9.3	Investigative studies and research monitoring	×	
10	Documentation and reporting	10.1	Management of Documentation and Records	×	
		10.2	Reporting	×	
11	Evaluation and audit	11.1	Long-Term Evaluation of Results	×	
		11.2	Audit of recycled Water Quality management	×	
12	Review and continual improvement	12.1	Review by senior managers	×	
		12.2	Recycled Water Quality Management Improvement Plan	×	

### 2.1.1 Audit standards

In conducting this audit, we adopted the audit standard *AS/NZS ISO 19011:2019 Guidelines for auditing management systems*. This standard ensures that the audit is conducted in accordance with an established and recognised audit protocol.

Regard was also given to the following standards/guidelines, especially where these provide specific detail that are appropriate to this audit:

- Audit Guideline, *Water Industry Competition Act 2006* (NSW) (IPART July 2020)
- ASAE 3100 (2017) Compliance Engagements issued by the Auditing and Assurance Standards Board
- ISO/IEC 17021-1:2015 Conformity Assessment – Requirements for bodies providing audit and certification of management systems (contains principles and requirements for the competence, consistency and impartiality of the audit and certification of management systems of all types).

## 2.2 Audit steps

A summary of audit steps is shown in Table 2-4.

**Table 2-4. Audit steps**

Step	Item	Details
Step 1	Initiation	Licensee initiates audit via WILMA
	Engagement of approved auditor	Licensee engages approved auditor to undertake audit
	Audit proposal	Auditor develops audit proposal and provides it to licensee for submission to IPART via WILMA (Water Industry Licence Management Application)  Licensee submits the audit proposal to IPART for approval via WILMA. IPART reviews proposal  IPART approves audit proposal
Step 2	Opening meeting	Auditor conducts opening meeting
	Audit interviews	Auditor undertakes interviews
Step 3	Draft audit report	Auditor prepares draft audit report and submits it via WILMA  Licensee and IPART review draft audit report Opportunity for comment on the draft audit report
	Final audit report	Auditor finalises audit report
	Final audit report submission	Auditor submits final report to IPART via WILMA
Step 4	Non-compliance matters	Non-compliance matters will be addressed in accordance with IPART's Compliance and Enforcement Policy

Source: Audit Guideline, *Water Industry Competition Act 2006* (NSW) (IPART, July 2020)

## 2.3 Audit grades

The audit grade definitions used in assessing the auditee's performance against the requirements are set out in Table 2-5.

**Table 2-5. Audit grades**

Grade	Detail
Compliant	Sufficient evidence is available to confirm that the requirements have been met.
Non-compliant (non-material)	Sufficient evidence is not available to confirm that the requirements have been met and the deficiency does not adversely impact the ability of the licensee to achieve defined objectives or assure controlled processes, products or outcomes.
Non-compliant (material)	Sufficient evidence is not available to confirm the requirements have been met and the deficiency does adversely impact the ability of the licensee to achieve defined objectives or assure controlled processes, products or outcomes.
No requirement	There is no requirement for the licensee to meet this criterion within the audit period.

Source: Audit Guideline, *Water Industry Competition Act 2006* (NSW) (IPART, July 2020)

## 2.4 Audit team

The audit team qualifications are shown in Table 2-6.

**Table 2-6. Audit team**

Team Member	Details
Dr Annalisa Contos Lead Auditor	<p>Dr Annalisa Contos holds the following auditor qualifications:</p> <ol style="list-style-type: none"> <li>1. A registered Exemplar Global lead auditor (Certificate No. 113465):             <ol style="list-style-type: none"> <li>a. Exemplar Global -DW (Drinking Water)</li> <li>b. Exemplar Global -RW (Recycled Water)</li> <li>c. Exemplar Global TL-AU (Lead Auditor)</li> </ol> </li> <li>2. NSW IPART (Independent Pricing and Regulatory Tribunal) qualified:             <ol style="list-style-type: none"> <li>a. Lead Auditor and Area Specialist Drinking Water Quality</li> <li>b. Lead Auditor and Area Specialist Licence and Regulatory Compliance</li> <li>c. Lead Auditor and Area Specialist Infrastructure Performance</li> <li>d. Lead Auditor and Area Specialist Recycled Water Quality</li> <li>e. Lead Auditor and Area Specialist Sewage Management</li> <li>f. Area Specialist Environmental Management</li> </ol> </li> </ol>

Team Member	Details
Natalie Crawford Auditor	Natalie Crawford holds the following auditor qualifications: <ol style="list-style-type: none"> <li>1. A registered Exemplar Global lead auditor (Certificate No. 130608):               <ol style="list-style-type: none"> <li>a. Exemplar Global -DW (Drinking Water)</li> <li>b. Exemplar Global -RW (Recycled Water)</li> <li>c. Exemplar Global TL-AU (Lead Auditor)</li> </ol> </li> <li>2. NSW IPART (Independent Pricing and Regulatory Tribunal) qualified:               <ol style="list-style-type: none"> <li>a. Auditor Licence and regulatory compliance</li> <li>b. Drinking Water Quality Auditor and Area Specialist</li> <li>c. Recycled Water Quality Auditor and Area Specialist</li> <li>d. Environmental management Auditor and Area Specialist</li> </ol> </li> </ol>
Steven Contos Peer Review	Steven Contos holds the following auditor qualifications <ol style="list-style-type: none"> <li>1. A registered Exemplar Global auditor (Certificate No. 122777):               <ol style="list-style-type: none"> <li>a. Exemplar Global -DW (Drinking Water)</li> <li>b. Exemplar Global -RW (Recycled Water)</li> <li>c. Exemplar Global -AU (Auditor)</li> </ol> </li> </ol>

## 2.5 Quality assurance process

Checks of information received were conducted and included aspects such as veracity of information, coverage of the subject area being audited and document adequacy. Professional scepticism (as per ASAE 3100) was applied as part of the document review. The quality assurance approach to this audit involved independent peer review from a qualified auditor (Steven Contos) who was not part of the audit, and review by the lead auditor.

## 3 Audit plan

The audit is shown in Table 3-1 for Shepherds Bay Water Licence Plan audit.

**Table 3-1 Shepherds Bay Scheme Management Plan licence plan audit plan**

Task	Details	Timeline
Task 1 Audit Preparation	Develop audit plan	1 December 2020
	Data request, Project management	11 January 2021
Task 2 Desktop Audit	Licence Plan provided to Auditor and IPART Information review and desktop audit	11 January 2021
Task 3 Audit Interviews/site visit	Site visit (verify PFD)	18 January 2021
	Interviews and close out meeting	19 & 20 January 2021
Task 4 Reporting	Draft Report to Flow Systems and IPART	29 January 2021
	Comments received	5 February 2021
	Final Report	12 February 2021

## 4 Audit findings

### 4.1 Water quality plan

A summary of the water quality plan audit requirements and the compliance grade is shown in Table 4-1.

**Table 4-1. Drinking water quality plan audit requirements**

Ref	Requirement	Compliance
WIC Regulation Schedule 1 clause 7(1)	<p><b>7 Water quality plans</b></p> <p>(1) Before commencing to operate water infrastructure commercially, the licensed network operator for the infrastructure must prepare, and forward to IPART, a water quality plan, in relation to the water supplied from the infrastructure, that specifies:</p> <p>(a) if the water so supplied is drinking water, how the 12 elements of the framework for the management of drinking water quality, as detailed in the Australian Drinking Water Guidelines, have been addressed and will be implemented</p>	Non-compliant (non-material)

#### 4.1.1 Summary of findings

Flow Systems have a Drinking Water Quality Plan (DWQP) that addresses the ADWG Framework elements, components and actions. A table is included for each component, that details how the requirement of each action is met (*Discussion* column). Evidence to meet the requirements is detailed for Documents, Records and Responsibly/Monitoring. This approach clearly and comprehensively documents how Flow System meets the requirements of the ADWG Framework. Documents specific to individual schemes are referenced in the Scheme Management Plan.

The overarching DWQP was audited as part of the Cooranbong Licence Plan Audit (November 2020). The adequacy of information specific to the Shepherds Bay scheme is discussed below.

The Licence Plan as a whole is considered adequate, with a few deficiencies noted in relation to monitoring and sampling and scheme specific documentation requirements. These are considered non-material. Recommendations have been included to address these shortcomings.



#### 4.1.2 Detailed findings

Adequacy of the overarching DWQP is discussed in the Cooranbong Licence Plan Audit (November 2020). The adequacy of information specific to the Shepherds Bay scheme is discussed in Table 4-2 for each relevant ADWG Framework element. A sample of documents referenced as evidence (in both the DWQP and Shepherds Bay Scheme Management Plan) were tested as part of the audit process. A summary of audit evidence is included in Appendix A.

Version 11.3 of the DWQP was audited for the Shepherds Bay Scheme. While the overarching DWQP was not reaudited, we checked that the scheme specific requirements set out in the DWQP are met. Elements with recommendations or opportunities for improvement from the Cooranbong Audit are also included in Table 4-2.

**Table 4-2. Audit findings against the ADWG Framework – reduced scope**

Element	Component	Audit findings	Evidence
Element 1 Commitment to drinking water quality management	Engaging stakeholders	The scheme specific documentation referenced in the DWQP for this component is adequate.  Stakeholders specific to the Shepherds Bay scheme are listed in the Scheme Specific Stakeholder and Emergency Contact List. Key stakeholders for Shepherds Bay relevant to the drinking water supply include IPART, NSW Health, NSW Department of Planning, Industry and Environment, Sydney Water and City of Ryde. The stakeholders listed are appropriate to the scheme.	DWQP Section 1.3  Shepherds Bay Stakeholder and Emergency Contact List SB-WAT-NSW-RG-INC-3357
Element 2 Assessment of the drinking water supply system	Water supply system analysis  Assessment of water quality data	The scheme specific documentation referenced in the DWQP for this component is adequate.  A process flow diagram was provided for the drinking water scheme from source (Sydney Water) to customer consistent with requirements of the ADWG. The process flow diagram was not verified on site as part of this audit.  Pertinent system information and key characteristics are included in the Section 2.2.1 Shepherds Bay Scheme Management Plan and summarised for workshops in workshop briefing material. An opportunity for	DWQP Section 2.1 and 2.2  Responsibilities and Authorities Matrix FS-WAT-AUS-FM-OPS-1316  Shepherds Bay Process Flow Diagram Drinking Water SB-WAT-NSW-DR-OPS-2618  Risk Assessment Briefing Pack FS-WAT-NSW-RE-OPS-3199

Element	Component	Audit findings	Evidence
		<p>improvement is noted to improve specific scheme characteristics in the scheme management plan, including detailing customer numbers, including across stages.</p> <p>Briefing material for the Shepherds Bay Risk Assessment was provided as evidence during the Cooranbong Audit. The briefing pack included operational water quality data trends and observations.</p> <p><b>OFI DW 2.1:</b> Ensure that the customer numbers for the drinking water scheme are included in the Scheme Management Plan.</p>	
	Hazard identification and risk assessment	<p>The scheme specific documentation referenced in the DWQP for this component is adequate.</p> <p>Briefing material for the Shepherds Bay Risk Assessment provided as evidence during the Cooranbong Audit was consistent with the Risk Assessment Protocol for Water Products and Services.</p> <p>The risk register is satisfactory in terms of risks considered, control measures and assessment of uncertainty.</p>	<p>DWQP Section 2.3</p> <p>Shepherds Bay Scheme Risk Register SB-WAT-NSW-RG-OPS-2656</p> <p>Outcomes Summary, Risk Assessment Workshop – high rise, 27 August 2020</p>
Element 3 Preventive measures for drinking water quality management	Preventive measures and multiple barriers	<p>The scheme specific documentation referenced in the DWQP for this component is adequate.</p> <p>General controls are included in Attachment B of the DWQP and all controls included in the scheme risk register. The Shepherds Bay Scheme Risk Register was provided as evidence for this component. Controls are included from source to end use for each hazardous event and categorised as either preventive, detective or reactive controls. The sample of controls reviewed are consistent with the ADWG. Additional control measures were identified in the risk assessment and documented in the ‘Specific actions and ALARP considerations’ column of the risk register.</p>	<p>DWQP Section 3.1 and Attachment B</p> <p>Shepherds Bay Scheme Risk Register SB-WAT-NSW-RG-OPS-2656</p>
	Critical control points	The scheme specific documentation referenced in the DWQP for this component is adequate.	DWQP Section 3.2

Element	Component	Audit findings	Evidence
		Critical control points and quality control points are identified as part of the risk assessment process. Documentation of this assessment was confirmed in the Shepherds Bay Scheme Risk Register where CCPs and QCPs are recorded in the "CCP / QCP?" column. No critical or quality control points have been identified for the drinking water supply system. This is adequate with no storage tanks present.	Shepherds Bay Scheme Risk Register SB-WAT-NSW-RG-OPS-2656
Element 4 Operational procedures and process control	Operational procedures	<p>The scheme specific documentation referenced in the DWQP for this component is not currently adequate with a deficiency in documentation associated with the operations and maintenance manual.</p> <p>The DWQP states that schemes will be operated in accordance with the scheme operations and maintenance manual. The Shepherds Bay Scheme Management Plan references an operations and maintenance manual, but states that this is "to be documented during construction". Flow Systems advised that this reference is an error. Any deviations against DWQP requirements should be documented in the scheme specific management plan.</p> <p>A register of Flow Systems operational procedures was provided. The register lists all procedures, marking those relevant to all systems and specific to the Shepherds Bay system.</p> <p>Key operational procedures relevant to the drinking water supply include mains flushing, compliant water sampling and water quality complaints. Procedures are appropriate for the key process units. The status of these key procedures is marked as implemented.</p> <p><b>Recommendation DW 4.1:</b> Update the Shepherds Bay Scheme Management Plan to clarify requirements for a drinking water operations and maintenance manual.</p>	<p>DWQP Section 4.1</p> <p>Register of Operational Procedures FS-WAT-NSW-RG-OPS-2725</p> <p>Shepherds Bay Scheme Management Plan</p>
	Operational monitoring	The scheme specific documentation referenced in the DWQP for this component is adequate.	<p>DWQP Section 4.2</p> <p>Monitoring and sampling plan FS-WAT-AUS-PL-OPS-1288</p>

Element	Component	Audit findings	Evidence
		Operational monitoring requirements are detailed in the Monitoring and Sampling Plan. As there are no drinking water storages or booster disinfection there are no applicable requirements for online analysers. Monitoring at the handover point is consistent with mention undertaken in the Shepherds Bay Monitoring and Sampling Program.	Shepherds Bay Monitoring and Sampling Program SB-WAT-NSW-PL-OPS-2808
	Corrective action	<p>The scheme specific documentation referenced in the DWQP for this component is adequate.</p> <p>The DWQP references Control Point table for corrective actions relating to CCPs and QCPs. It is noted that there are no current CCPs or QCPs identified for Shepherds Bay drinking water scheme as documented in the scheme risk assessment register.</p> <p>Deviations for operational monitoring activities are described in the Shepherds Bay Drinking Water Out of Specification Work Instruction. Further discussion on this are included under Element 6 Incident and emergency response protocols.</p>	<p>DWQP Section 4.3</p> <p>Shepherds Bay Drinking Water Out of Specification Work Instruction SB-WAT-NSW-WI-OPS-3473</p>
	Equipment capability and maintenance	Equipment capability and maintenance is addressed by the Infrastructure operating plan and the Flow Systems Asset Management Plan. Checklists are generated of operator's tasks from the computerised maintenance management system. A register of calibrations and control point inspections was provided as evidence of scheduling.	<p>DWQP Section 4.4</p> <p>PPM Schedules Calibration and Control Points High Rise from RAM</p>
	Materials and chemicals	Flow Systems manage the process of ensuring only approved chemicals and materials are used through the Evaluating Products Materials and Chemicals Procedure. No chemicals are used for the Shepherds Bay drinking water scheme and as such no scheme specific documentation was audited as part of this component. The Evaluating Products Materials and Chemical Procedure includes a requirement for materials that come into contact with recycled or drinking water to be AS/NZS 4020 compliant. No scheme specific documentation was audited in relation to material usage for Shepherds Bay.	DWQP Section 4.5

Element	Component	Audit findings	Evidence
Element 5 Verification of drinking water quality	Drinking water quality monitoring	<p>The Cooranbong Water Quality Plan Licence audit identified a deficiency in the process as described in Section 5.1 of the DWQP. The deficiency noted was the process for identifying additional sample and monitoring locations following scheme expansion. The DWQP has been updated to include that <i>“Any updates required to the Monitoring and Sampling Plan and Program due to scheme changes will be triggered by the System Change checklist”</i>. Flow Systems advised that the Monitoring and Sampling Plan will also be amended to reflect this in the next review. The recommendation has been amended to reflect this change.</p> <p>A deficiency in the scheme specific documentation referenced in the DWQP for this component is noted in monitoring specified in the sampling programme compared to the requirements in the Monitoring and Sampling Plan.</p> <p>Parameters, locations and frequency of sample sites are detailed in the Shepherds Bay Monitoring and Sampling Program. Verification sampling is conducted at the Point of Supply and Point of Use. Frequency of sampling is dependent on population being supplied. The Sampling Plan requires 52 microbial samples per year and 2 chemical samples. A check was carried against the Shepherds Bay Monitoring and Sampling Program – which included 12 samples per year and no chemical samples. While it is noted that monitoring of potable water in the recycled water reticulation is being undertaken for both chemical and microbial samples, there is no explanation included for this deviation in the documentation.</p> <p><b>Recommendation DW 5.1:</b> Ensure that the Monitoring and Sampling Plan is updated to reflect the process outlined in the DWQP process to ensure sample numbers and locations remain consistent with the requirements of the ADWG and the NSW Health Monitoring Program.</p>	<p>DWQP Section 5.1</p> <p>Monitoring and sampling plan FS-WAT-AUS-PL-OPS-1288</p> <p>Shepherds Bay Monitoring and Sampling Program SB-WAT-NSW-PL-OPS-2808</p>

Element	Component	Audit findings	Evidence
		<p><b>Recommendation DW 5.2:</b> Ensure that drinking water verification sampling requirements occur in line with the sampling plan or that any deviations are documented.</p>	
Element 6 Management of incidents and emergencies	Communication	<p>The scheme specific documentation referenced in the DWQP for this component is adequate.</p> <p>The Shepherds Bay Scheme Management Plan references the Shepherds Bay stakeholder and emergency contact list and Figure 8-1 of that document sets out how incidents and emergencies are generally managed.</p> <p>Key stakeholders for Shepherds Bay relevant to the drinking water supply include IPART, NSW Health, NSW Department of Planning, Industry and Environment, Sydney Water and City of Ryde. The stakeholders listed are appropriate to the scheme.</p>	<p>DWQP Section 6.1</p> <p>Shepherds Bay Stakeholder and Emergency Contact List SB-WAT-NSW-RG-INC-3357</p>
	Incident and emergency response protocols	<p>The scheme specific documentation referenced in the DWQP for this component is adequate apart from scheme specific references to the WICA notification forms in the Shepherds Bay Scheme Management Plan.</p> <p>The DWQP refers to the Water Operations Incident Management, Reporting and Investigation Procedure and the Incident Notification and Response Protocol with NSW Health. These documents refer to scheme specific WICA Form A and B (which are the IPART Form A and B pre filled with relevant contact details). Scheme specific notification forms for Shepherds Bay (WICA Form A and B) were provided as evidence. The Shepherds Bay Scheme Management Plan does not currently include a reference to the scheme specific Shepherds Bay Incident Notification forms (Form A and B).</p> <p>The Drinking Water Out of Specification Corrective Actions Work Instruction (Rev 1.0, dated 9 December 2020) for Shepherds Bay is adequate.</p>	<p>DWQP Section 6.2</p> <p>WICA Form A – Incident Initial Notification Shepherds Bay</p> <p>WICA Form B – Incident Initial Notification Shepherds Bay</p> <p>Shepherds Bay Drinking Water Out of Specification Work Instruction SB-WAT-NSW-WI-OPS-3473</p>

Element	Component	Audit findings	Evidence
		<p><b>Recommendation DW 6.1:</b> Reference scheme specific WICA incident notification forms in the Shepherds Bay Scheme Management Plan.</p>	
Element 9 Research and development	Investigative studies and research monitoring Validation of processes Design of equipment	<p>The Cooranbong Water Quality Plan Licence audit assessed that the process for research and development is adequately described in Section 9.1, 9.2 and 9.3 of the DWQP. An opportunity for improvement is identified in the process as described in Section 9 of the DWQP. An observation was noted that the while the WICA Change checklist refers to change that would require significant change to a licence plan, referencing to requirements for when revalidation should occur could be more explicit.</p> <p><b>OFI DW 9.1:</b> Include explicit requirements for when revalidation will need to occur.</p>	DWQP Section 9 WICA Change checklist FS-WAT-NSW-FM-GOV-2690
Element 10 Documentation and reporting	Reporting	<p>The Cooranbong Water Quality Plan Licence audit identified a deficiency in the process as described in Section 10.2 with the DWQP silent on annual reporting to consumers. The DWQP has been updated to included that an annual report will be made available via the Flow website and be produced in concurrence with the annual IPART compliance report. This component is considered adequate.</p> <p>There is no procedure listed that describes the activities required to develop the reports. While there is no explicit requirement for this, we are unable to confirm that Annual report content would meet the requirements of this clause as the implementation of the licence plan is outside the scope of this audit. An area for improvement is to include further details on IPART compliance reporting regulations, such as reference to the Network Operator Reporting Manual and Retail Supplier's Reporting Manual.</p> <p><b>OFI DW 10.1:</b> Include reference to external reporting obligations.</p>	DWQP Section 10.2

Element	Component	Audit findings	Evidence
Element 11 Evaluation and audit	Long-term evaluation of results	<p>The Cooranbong Water Quality Plan Licence audit identified a deficiency in the process as described in Section 11.1 of the DWQP, that the DWQP was silent on the assessment of water quality performance as part of an annual review reporting process.</p> <p>Section 11.1 of the DWQP has been updated to include that an annual review of long-term water quality performance will be conducted at the same time as annual reporting and that this will be recorded in review meeting minutes and the risk review briefing pack.</p> <p>This component is now considered adequate following completion of the identified recommendation.</p>	DWQP Section 11.1



### 4.1.3 Summary of recommendations

A summary of recommendations for the Shepherds Bay drinking water quality plan is detailed below:

- Recommendation DW 4.1: Update the Shepherds Bay Scheme Management Plan to clarify requirements for a drinking water operations and maintenance manual.
- Recommendation DW 5.1: Ensure that the Monitoring and Sampling Plan is updated to reflect the process outlined in the DWQP process to ensure sample numbers and locations remain consistent with the requirements of the ADWG and the NSW Health Monitoring Program.
- Recommendation DW 5.2: Ensure that drinking water verification sampling requirements occur in line with the sampling plan or that any deviations are documented
- Recommendation DW 6.1: Reference scheme specific WICA incident notification forms in the Shepherds Bay Scheme Management Plan

### 4.1.4 Summary of opportunities for improvement

A summary of opportunities for improvement are detailed below:

- OFI DW 2.1: Ensure that the customer numbers for the drinking water scheme are included in the Scheme Management Plan.
- OFI DW 9.1: Include explicit requirements for when revalidation will need to occur.
- OFI DW 10.1: Include reference to external reporting obligations.

## 4.2 Recycled water quality plan

A summary of the water quality plan audit requirements and the compliance grade is shown in Table 4-3.

**Table 4-3. Recycled water quality plan audit requirements**

Ref	Requirement	Compliance
WIC Regulation Schedule 1 clause 7(1)	<p><b>7 Water quality plans</b></p> <p>(1) Before commencing to operate water infrastructure commercially, the licensed network operator for the infrastructure must prepare, and forward to IPART, a water quality plan, in relation to the water supplied from the infrastructure, that specifies:</p> <p>(b) if the water so supplied is non-potable water, how the 12 elements of the framework for the management of recycled water quality and use, as detailed in the Australian Guidelines for Water Recycling, have been addressed and will be implemented and, having regard to those guidelines, the purposes for which the water may be used and the purposes for which the water may not be used.</p>	Non-compliant (non-material)

#### 4.2.1 Summary of findings

Flow Systems have a Recycled Water Quality Plan (RWQP) that addresses the AGWR Framework elements, components and actions. A table is included for each component, that details how the requirement of each action is met (*Discussion* column). Evidence to meet the requirements is detailed for Documents, Records and Responsibly/Monitoring. This approach clearly and comprehensively documents how Flow System meets the requirements of the AGWR Framework. Documents specific to individual scheme are referenced in the Scheme Management Plan.

The overarching RWQP was audited as part of the Cooranbong Licence Plan Audit (November 2020). The adequacy of information specific to the Shepherds Bay scheme is discussed below.

This Licence Plan audit covers the interim recycled water scheme currently in operation, with treated drinking water charged into the recycled water reticulation network. While a number of scheme specific documents relevant to the recycled water scheme have not been developed this is an appropriate approach for the current stage. The Licence Plan as a whole is considered adequate, with minor deficiencies noted. We consider that the processes are in place to trigger documentation updates following scheme updates.

#### 4.2.2 Detailed findings

Adequacy of the overarching RWQP is discussed in the Cooranbong Licence Plan Audit (November 2020). The adequacy of information specific to the Shepherds Bay scheme is discussed in Table 4-4 for each relevant AGWR Framework element. A sample of documents referenced as evidence (in both the RWQP and Shepherds Bay Scheme Management Plan) were tested as part of the audit process. A summary of audit evidence is included in Appendix A.

Version 14.3 of the RWQP was audited for the Shepherds Bay Scheme. While the overarching RWQP was not reaudited, we checked that the scheme specific requirements set out in the RWQP are met. Elements with recommendations or opportunities for improvement from the Cooranbong Audit are also included in Table 4-4.

**Table 4-4. Audit findings against the AGWR Framework – reduced scope**

Element	Component	Audit findings	Evidence
Element 1 Commitment to responsible use and management of recycled water quality	Regulatory and formal requirements	The scheme specific documentation referenced in the RWQP for this component is adequate. Scheme governance is documented in the WIC Responsibilities and Authorities matrix. Responsibilities appear to be appropriate to the included areas.	RWQP Section 1.2 WICA Responsibilities and Authorities Matrix FS-WAT-AUS-FM-OPS-1316
	Partnerships and engagement of stakeholders	The scheme specific documentation referenced in the RWQP for this component is adequate. Stakeholders specific to the Shepherds Bay scheme are listed in the scheme specific Stakeholder and Emergency Contact List. Public and environmental health stakeholders listed are appropriate and include IPART, NSW Health, NSW Department of Planning, Industry and Environment and NSW Environment Protection Authority.	RWQP Section 1.3 Shepherds Bay Stakeholder and Emergency Contact List SB-WAT-NSW-RG-INC-3357
Element 2 Assessment of the recycled water system	Intended uses and source of recycled water	The scheme specific documentation referenced in the RWQP for this component is adequate apart from gaps in the authorised purposes matrix. Intended uses are documented in Table 7-3 of the Shepherds Bay Scheme Management Plan with a reference to the Flow WICA Licences - Authorised Purposes Matrix. The approved end uses for Shepherds Bay in the authorised purposes matrix are	RWQP Section 2.1 Shepherds Bay Water Scheme Management Plan SB-WAT-NSW-LP-OPS-1787, dated 12 November 2020

Element	Component	Audit findings	Evidence
		<p>consistent with the approved end users in the licence, however some approved uses in the license are not marked for Shepherds Bay on the authorised purposes matrix, i.e. general washdown, street cleaning and process water.</p> <p><b>Recommendation RW 2.1:</b> Ensure Authorised Purposes matrix is consistent with the end uses in the Licence.</p>	<p>Flow WICA Licences - Authorised Purposes Matrix FS-WAT-NSW-RG-OPS-2918, dated 7 October 2020</p> <p>Network Operating Licence, 17_042 Shepherds Bay, dated 17 June 2020.</p>
	<p>Recycled water system analysis</p> <p>Assessment of water quality data</p>	<p>The scheme specific documentation referenced in the RWQP for this component is adequate.</p> <p>Scheme characteristics are documented in the Shepherds Bay Scheme Management Plan. Consistent with this requirement, scheme characteristics including connections, source, treatment processes and distribution are included in Table 2-4 Recycled Water system overview description in the Shepherds Bay Scheme Management Plan.</p> <p>A process flow diagram was provided for the stage 1 recycled water scheme consistent with requirements of the AGWR to outline steps and processes from source to application. Verifying the process flow diagram onsite was outside the scope of this audit.</p> <p>As the recycled water scheme has not yet been constructed, an assessment of recycled water quality data for Shepherds Bay was not available to be used to inform the risk assessment.</p>	<p>RWQP Section 2.2 and 2.3</p> <p>Scheme Management Plan Section 7.3</p> <p>Shepherds Bay Water Process Flow Diagram Recycled Water &amp; Sewer Phase 1 SB-WAT-NSW-DR-OPS-2622</p> <p>Risk Assessment Briefing Pack FS-WAT-NSW-RE-OPS-3199</p>
	<p>Hazard identification and risk assessment</p>	<p>The scheme specific documentation referenced in the RWQP for this component is adequate.</p> <p>Briefing material for the Shepherds Bay Risk Assessment provided as evidence during the Cooranbong Audit was consistent with the Risk Assessment Protocol for Water Products and Services.</p> <p>The risk register is satisfactory in terms of risks considered, control measures and assessment of uncertainty.</p>	<p>RWQP Section 2.4</p> <p>Shepherds Bay Scheme Risk Register SB-WAT-NSW-RG-OPS-2656</p> <p>Outcomes Summary, Risk Assessment Workshop – high rise, 27 August 2020</p>

Element	Component	Audit findings	Evidence
Element 3 Preventive measures for recycled water management	Preventive measures and multiple barriers	<p>The scheme specific documentation referenced in the RWQP for this component is adequate.</p> <p>General controls are included in Attachment B of the RWQP and all controls included in the scheme risk register. The Shepherds Bay Scheme Risk Register was provided as evidence for this component. Controls are included from source to end use for each hazardous event and categorised as either preventive, detective or reactive controls. The sample of controls reviewed are consistent with the AGWR. Additional control measures were identified in the risk assessment and documented in the 'Specific actions and ALARP considerations' column of the risk register.</p>	<p>RWQP Section 3.1</p> <p>Shepherds Bay Scheme Risk Register SB-WAT-NSW-RG-OPS-2656</p>
	Critical control points	<p>Gaps in scheme specific documentation referenced in the Scheme Management Plan are noted, however this is appropriate to the current interim stage.</p> <p>Critical control points are identified as part of the risk assessment process. Documentation of this assessment was confirmed in the Shepherds Bay Risk Register where critical control points (CCPs) and quality control points (QCPs) are recorded in the "CCP / QCP?" column. CCPs are identified in the register for chlorine disinfection and contact tank, membrane filtration and UV disinfection. These are appropriate and consistent with those documented in the Table 2-4 of the Shepherds Bay Scheme Management Plan.</p> <p>Control point tables are noted in the Scheme Management Plan "to be documented during construction". As the recycled water treatment process have not yet been constructed this is an appropriate approach.</p>	<p>RWQP Section 3.2</p> <p>Shepherds Bay Scheme Risk Register SB-WAT-NSW-RG-OPS-2656</p>
Element 4 Operational procedures	Operational procedures	<p>Gaps in scheme specific documentation referenced in the Scheme Management Plan are noted as treatment processes are not yet</p>	<p>RWQP Section 4.1</p> <p>Shepherds Bay Scheme Management Plan</p>

Element	Component	Audit findings	Evidence
and process control		<p>constructed, however this is appropriate to the current interim stage.</p> <p>The RWQP states that schemes will be operated in accordance with the scheme operations and maintenance manual. A recycled water operations and maintenance manual and functional descriptions are noted in the Scheme Management Plan "to be documented during construction". As the recycled water treatment process have not yet been constructed this is an appropriate approach.</p> <p>SOPs and Work Instructions are documented in the register of operational procedures. Appropriate procedures for the interim recycled water scheme are included.</p>	Register of Operational Procedures FS-WAT-NSW-RG-OPS-2725
	Operational monitoring	<p>The scheme specific documentation referenced in the RWQP for this component is adequate for the current scheme stage.</p> <p>Characteristics to be monitored are included within the overarching Monitoring and Sampling Plan. Operational monitoring requirements are not included in the monitoring and sampling program. This is appropriate to the interim scheme (treatment processes are not yet constructed).</p>	<p>RWQP Section 4.2</p> <p>Monitoring and sampling plan FS-WAT-AUS-PL-OPS-1288</p> <p>Shepherds Bay Monitoring and Sampling Program SB-WAT-NSW-PL-OPS-2808</p>
	Operational corrections	Discussions on adequacy of operational corrective actions are discussed in Element 3 Critical Control Points and Element 6 in the Incident and Emergency Response Protocols section.	RWQP Section 4.3
	Equipment capability and maintenance	<p>Gaps in developed scheme specific documentation referenced in the Scheme Management Plan are noted, as treatment processes are not yet constructed. Documentation is adequate for the current interim stage.</p> <p>The RWQP refers to the Infrastructure operating plan and the Flow Systems Asset Management Plan and Flow's Computerised Maintenance Management System (CMMS) for maintenance</p>	RWQP Section 4.4

Element	Component	Audit findings	Evidence
		schedules. Scheme specific documentation has not yet been developed for the Shepherds Bay recycled water scheme.	
	Materials and chemicals	The scheme specific documentation referenced in the RWQP for this component is adequate. Flow Systems manages the process of ensuring only approved chemicals and materials are used through the Evaluating Products Materials and Chemicals Procedure. Chemical deliveries are managed through the Chemical Delivery Procedure. These procedures are marked as relevant for Shepherds Bay in the register of operational procedures. The Evaluating Products Materials and Chemical Procedure includes a requirement for materials that come into contact with recycled or drinking water to be AS/NZS 4020 compliant. No scheme specific documentation was audited in relation to material usage for Shepherds Bay.	RWQP Section 4.5 Register of Operational Procedures FS-WAT-NSW-RG-OPS-2725
Element 5 Verification of recycled water quality and environmental performance	Recycled water quality monitoring Documentation and reliability	The scheme specific documentation referenced in the RWQP for this component are adequate. Characteristics to be monitored are included within the overarching Monitoring and Sampling Plan. Requirements for a recycled water scheme (where potable water is supplied through the recycled water network) use those in in Tables 4 to 6 of the Monitoring and Sampling Plan. A check was carried out against the Shepherds Bay Monitoring and Sampling Program; with the documents found to be consistent.  The Monitoring and Sampling Plan and Shepherds Bay Monitoring and Sampling Program are adequate for verification monitoring against the requirements of the AGWR. It was noted however that the date and version in the footer of the Monitoring and Sampling Plan were different to the latest version in the document control table.	RWQP Section 5.1 and 5.3 Monitoring and sampling plan FS-WAT-AUS-PL-OPS-1288 Shepherds Bay Monitoring and Sampling Program SB-WAT-NSW-PL-OPS-2808

Element	Component	Audit findings	Evidence
		<b>OFI RW 5.1:</b> Correct the date and version in footer of the Monitoring and Sampling plan to be consistent with document control.	
	Application site and receiving environment	The Cooranbong Water Quality Plan Licence audit identified a non-material deficiency in documenting the trigger process for updating the monitoring program following relevant scheme changes. The RWQP has been updated included to include <i>“Any updates required to the Monitoring and Sampling Plan and Program due to scheme changes will be triggered by the System Change checklist”</i> . This component is now considered adequate following completion of the identified recommendation.	RWQP Section 5.2 Shepherds Bay Scheme Management Plan
Element 6 Management of incidents and emergencies	Communication	The scheme specific documentation referenced in the RWQP for this component is adequate.  The Shepherds Bay Scheme Management Plan references the Shepherds Bay stakeholder and emergency contact list and Figure 8-1 of this document sets out how incidents and emergencies are generally managed Flow Systems has regulatory reporting obligations for incidents.  Key stakeholders for Shepherds Bay relevant to the recycled water supply include IPART, NSW Health, NSW Department of Planning, Industry and Environment, NSW Environment Protection Authority, Sydney Water and City of Ryde. The stakeholders listed are appropriate to the scheme.	RWQP Section 6.1 Shepherds Bay Stakeholder and Emergency Contact List SB-WAT-NSW-RG-INC-3357
	Incident and emergency response protocols	The scheme specific documentation referenced in the RWQP for this component is adequate apart from scheme specific reference to the WICA notification forms in the Shepherds Bay Scheme Management Plan.  The RWQP refers to the Water Operations Incident Management, Reporting and Investigation Procedure and the Incident Notification	RWQP Section 6.2 WICA Form A – Incident Initial Notification Shepherds Bay WICA Form B – Incident Initial Notification Shepherds Bay



Element	Component	Audit findings	Evidence
		<p>and Response Protocol with NSW Health. These documents refer to scheme specific WICA Form A and B (which are the IPART Form A and B pre filled with relevant contact details). Scheme specific notification forms for Shepherds Bay (WICA Form A and B) were provided as evidence. The Shepherds Bay Scheme Management Plan does not currently include a reference to the scheme specific Shepherds Bay Incident Notification forms (Form A and B).</p> <p>The Recycled Water Out of Specification Work Instruction for Shepherds Bay (Ver 1.0, dated 9 December 2020) provided as evidence is adequate.</p> <p><b>Recommendation RW 6.1:</b> Reference scheme specific WICA incident notification forms in the Shepherds Bay Scheme Management Plan.</p>	Shepherds Bay Recycled Water Out of Specification Work Instruction - SB-WAT-NSW-WI-OPS-3473
Element 8 Community involvement and awareness	<p>Consultation with users of recycled water and the community</p> <p>Communication and education</p>	<p>The Cooranbong Water Quality Plan Licence audit identified an opportunity for improvement to include further information in RWQP Component 8.1 on the assessment process used in developing the customer communication program.</p> <p><b>OFI RW 8.1:</b> Include further information in the RWQP documenting the assessment requirements for developing the consultation program.</p>	RWQP Section 8.1 and 8.2
Element 9 Validation, research and development	<p>Validation of processes</p> <p>Design of equipment</p> <p>Investigative studies and research monitoring</p>	<p>The Cooranbong Water Quality Plan Licence audit assessed that the process for validation, research and development is adequately described in Section 9.1, 9.2 and 9.3 of the RWQP. An opportunity for improvement in the process for revalidation of equipment which occurs on system change. Processes to evaluate system change are assessed using the System Change Checklist and the WICA Change checklist. An observation was noted that while the WICA Change checklist refers to change that would require</p>	<p>RWQP Section 9.1, 9.2 and 9.3</p> <p>WICA Change checklist FS-WAT-NSW-FM-GOV-2690</p>

Element	Component	Audit findings	Evidence
		<p>significant change to a licence plan, referencing to requirements for when revalidation should occur, could be more explicit.</p> <p><b>OFI RW 9.1:</b> Detail in the RWQP more explicit requirements for when revalidation will need to occur.</p>	
<p>Element 10 Documentation and reporting</p>	<p>Reporting</p>	<p>The Cooranbong Water Quality Plan Licence audit identified a deficiency in the process as described in Section 10.2 with the RWQP being silent on annual reporting to end users. The RWQP has been updated to include that an annual report will be made available via the Flow website and be produced in concurrence with the annual IPART compliance report. This component is considered adequate.</p> <p>There is no procedure listed that describes the activities required to develop the reports. While there is no explicit requirement for this, we are unable to confirm that Annual report contents would meet the requirements of this clause as the implementation of the licence plan is outside the scope of this audit. An area for improvement is to include further details on IPART compliance reporting regulations, such as reference to the Network Operator Reporting Manual and Retail Supplier's Reporting Manual.</p> <p><b>OFI RW 10.1:</b> Include reference to external reporting obligations in the RWQP.</p>	<p>RWQP Section 10.2</p>
<p>Element 11 Evaluation and audit</p>	<p>Long-term evaluation of results</p>	<p>The Cooranbong Water Quality Plan Licence audit identified a deficiency in the process described in Section 11.1 of the RWQP. The RWQP was silent on the assessment of recycled water quality performance as part of an annual review reporting process.</p> <p>Section 11.1 of the RWQP has been updated to include that an annual review of long-term water quality performance will be conducted at the same time as annual reporting and that this will</p>	<p>RWQP Section 11.1</p>

Element	Component	Audit findings	Evidence
		<p>be recorded in review meeting minutes and the risk review briefing pack.</p> <p>This component is now considered adequate following completion of the identified recommendation.</p>	
	Audit of recycled water quality management	<p>The Cooranbong Water Quality Plan Licence audit identified an opportunity for improvement in the Audit Procedure. Internal audits are conducted at a minimum annually. The internal audit program did not explicitly specify recycled water quality audits. It was confirmed in interviews that quality audits included recycled water. The Internal Audit Program for 2020-21 was provided as evidence of this process.</p> <p><b>OFI RW 11.1.1:</b> Clarify that recycled water quality is covered under the audit objective for 'quality'</p>	<p>RWQP Section 11.2</p> <p>Audit Procedure FS-ALL-AUS-PR-GOV-1364</p>

#### 4.2.3 Summary of recommendations

A summary of recommendations for the Shepherds Bay recycled water quality plan is detailed below:

- Recommendation RW 2.1: Ensure Authorised Purposes matrix is consistent with the end uses in the Licence
- Recommendation RW 6.1: Reference scheme specific WICA incident notification forms in the Shepherds Bay Scheme Management Plan

#### 4.2.4 Summary of opportunities for improvement

A summary of opportunities for improvement for the Shepherds Bay recycled water quality plan are detailed below:

- OFI RW 5.1: Correct the date and version in footer of the Monitoring and Sampling plan to be consistent with document control
- OFI RW 8.1: Include further information in the RWQP documenting the assessment requirements for developing the consultation program
- OFI RW 9.1: Detail in the RWQP more explicit requirements for when revalidation will need to occur
- OFI RW 10.1: Include reference to external reporting obligations in the RWQP
- OFI RW 11.1.1: Clarify that recycled water quality is covered under the audit internal objective for 'quality'

## Appendix A Audit evidence

Document name and number	Version	Date
Drinking Water Quality Plan	11.3	19/01/2021
Recycled Water Quality Plan	14.3	19/01/2021
Shepherds Bay Water Scheme Management Plan SB-WAT-NSW-LP-OPS-1787	5	12/11/2020
Shepherds Bay Drinking Water Out of Specification Work Instruction SB-WAT-NSW-WI-OPS-3473	1.0	9/12/2020
Shepherds Bay Recycled Water Out of Specification Work Instruction - SB-WAT-NSW-WI-OPS-3473	1.0	9/12/2020
Shepherds Bay Water Process Flow Diagram Drinking Water SB-WAT-NSW-DR-OPS-2618	1	15/08/2019
Shepherds Bay Water Process Flow Diagram Recycled Water & Sewer Phase 1 SB-WAT-NSW-DR-OPS-2622	1	15/8/2019
Shepherds Bay Monitoring and Sampling Program SB-WAT-NSW-PL-OPS-2808	1.4	18/09/2020
Shepherds Bay Scheme Risk Register SB-WAT-NSW-RG-OPS-2656	4.2	27/8/2020
Shepherds Bay Stakeholder and Emergency Contact List SB-WAT-NSW-RG-INC-3357	1.1	30/12/2020
Flow WICA Licences - Authorised Purposes Matrix FS-WAT-NSW-RG-OPS-2918	2	7/10/2020
Monitoring and sampling plan FS-WAT-AUS-PL-OPS-1288	13.1	16/12/2020
Register of Operational Procedures FS-WAT-NSW-RG-OPS-2725	3	1/10/2020
Responsibilities and Authorities Matrix FS-WAT-AUS-FM-OPS-1316	6.2	7/10/2020
WICA Form A – Incident Initial Notification Shepherds Bay	2.0	14/09/2020
WICA Form B – Incident Initial Notification Shepherds Bay	2.0	24/09/2020