



Central Park Water

LICENCE PLAN AUDIT **REPORT**

Altogether (formerly Flow Systems)

May 2021

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Executive Summary

Audit scope

This report presents the findings of the licence plan audit of Central Park Water Pty Ltd, 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 Central Park Licence Plans.

An addendum has been added to this audit report on the adequacy of updates to Critical Control Point and Log Reduction Value documentation as Appendix B. No changes have been made to version 3.0 of this report other than the addendum.

The licence plans subject to audit are the:

- Central Park 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 Central Park audit was reduced to:

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

A summary of compliance for the Central Park 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 descriptions and updating of documentation following scheme expansion. These are considered non-material. Recommendations have been included to address these shortcomings.

Table i-i. Summary of compliance with Central Park 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

Twelve audit recommendations were made for the Central Park Water Quality Licence Plans, summaries of these can found in Section 4.1.3 and Section 4.2.3.

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1 Introduction

1.1 Objectives

This report presents the findings of the licence plan audit of Central Park Water Pty Ltd, 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

Central Park Water Pty Ltd is wholly owned by Flow Systems Pty Ltd. 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 Central Park Water Licence Plans.

The licence plans subject to audit were the:

- Central Park Water 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>Water Quality Plan audit</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>7 Water quality plans</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 Central Park 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)
- Confirmation of the process flow diagrams on site
- Assess progress of the recommendations relating to the overarching RWQP and DWQP

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
		5.2 Consumer Satisfaction	×	
		5.3 Short-term Evaluation of Results	×	
		5.4 Corrective Action	×	

Element		Component		Scope	System documents
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 and management of recycled water quality	1.1	Responsible use of recycled water	×	
		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

Elements	Component	Scope	System documents		
	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	×	
		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

Elements		Component		Scope	System documents
		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 (Water Industry Licence Management Application)
	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
		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"> 1. A registered Exemplar Global lead auditor (Certificate No. 113465): <ol style="list-style-type: none"> a. Exemplar Global -DW (Drinking Water) b. Exemplar Global -RW (Recycled Water) c. Exemplar Global TL-AU (Lead Auditor) 2. NSW IPART (Independent Pricing and Regulatory Tribunal) qualified: <ol style="list-style-type: none"> a. Lead Auditor and Area Specialist Drinking Water Quality b. Lead Auditor and Area Specialist Licence and Regulatory Compliance c. Lead Auditor and Area Specialist Infrastructure Performance d. Lead Auditor and Area Specialist Recycled Water Quality e. Lead Auditor and Area Specialist Sewage Management f. Area Specialist Environmental Management

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

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 Central Park Water Licence Plan audit.

Table 3-1 Central Park Water 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>7 Water quality plans</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 Central Park Water site is discussed below.

The Licence Plan as a whole is considered adequate, with a few deficiencies noted in relation to scheme description and documentation of deviation from DWQP 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 Central Park Water 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 Central Park 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 Central Park 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 Central Park scheme are listed in the Scheme Specific Stakeholder and Emergency Contact List. Key stakeholders for Central Park relevant to the drinking water supply include IPART, NSW Health, NSW Department of Planning, Industry and Environment, Sydney Water and City of Sydney. The stakeholders listed are appropriate to the scheme.	DWQP Section 1.3 Central Park Stakeholder and Emergency Contact List
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 apart from an inconsistency noted on the process flow diagram. 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 verified through site visit and discussion with staff. The verification was limited to accessible	DWQP Section 2.1 and 2.2 Responsibilities and Authorities Matrix FS-WAT-AUS-FM-OPS-1316 Central Park Water Process Flow Diagram Drinking Water CP-WAT-NSW-DR-OPS-2614 Risk Assessment Briefing Pack FS-WAT-NSW-RE-OPS-3199

Element	Component	Audit findings	Evidence
		<p>infrastructure (Sydney Water Bulk flow meter and Flow Systems RPZ¹). The Bulk water meter is identified on the process flow diagram as a quality control point (QCP), this is inconsistent with the critical control point tables and the risk assessment register which do not identify this as a QCP.</p> <p>Pertinent system information and key characteristics are included in the Section 2.2.1 Central Park Scheme Management Plan and summarised for workshops in workshop briefing material.</p> <p>Briefing material for the Central Park Risk Assessment was provided as evidence during the Cooranbong Audit that included water. The briefing pack included operational water quality data trends and observations.</p> <p>Recommendation DW 2.1: Resolve inconsistency in the bulk water meter as a quality control point across documentation (process flow diagram, risk assessment and control point tables).</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 Central Park 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>Central Park Scheme Risk Register CP-WAT-NSW-PL-OPS-2480</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 Central Park 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</p>	<p>DWQP Section 3.1 and Attachment B</p> <p>Central Park Scheme Risk Register CP-WAT-NSW-PL-OPS-2480</p>

¹ A Reduced Pressure Zone (RPZ) device is used to prevent back flow

Element	Component	Audit findings	Evidence
		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.	
	Critical control points	<p>The scheme specific documentation referenced in the DWQP for this component is adequate apart from a discrepancy in QCP identification as discussed in Element 2 Assessment of water quality data.</p> <p>Critical control points and quality control points are identified as part of the risk assessment process. Documentation of this assessment was confirmed in the Central Park Scheme Risk Register where CCPs and QCPs are recorded in the "CCP / QCP?" column. No critical control points have been identified for the drinking water supply system. This is adequate with no storage tanks present. The bulk flow meter is identified as a QCP on the process flow diagram, this is inconsistent with the critical control point tables and the risk assessment register which do not identify this as a QCP. A recommendation for this is included under Element 2 Assessment of water quality data.</p>	<p>DWQP Section 3.2</p> <p>Central Park Scheme Risk Register CP-WAT-NSW-PL-OPS-2480</p> <p>Central Park Control Points Table CP-WAT-NSW-PL-OPS-1208</p>
Element 4 Operational procedures and process control	Operational procedures	<p>The scheme specific documentation referenced in the DWQP for this component is adequate apart from a deficiency in documenting deviations from the overarching DWQP in the scheme management plan.</p> <p>The DWQP states that schemes will be operated in accordance with the scheme operations and maintenance manual. There are no operational and maintenance manuals for this site as there are no treatment processes or storage tanks. While it is appropriate that there is not an operations and maintenance manual, this deviation against DWQP requirements should be documented in the scheme management plan.</p> <p>A register of operational procedures was provided. The register lists all Flow Systems procedures, marking those relevant to all systems and specific to the Central Park system.</p>	<p>DWQP Section 4.1</p> <p>Register of Operational Procedures FS-WAT-NSW-RG-OPS-2725</p>

Element	Component	Audit findings	Evidence
		<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>Recommendation 4.1: Document in the Central Park Scheme Management Plan any deviations from DWQP requirements, including the absence of a potable water Operation and Maintenance Manual.</p>	
	Operational monitoring	<p>The scheme specific documentation referenced in the DWQP for this component is adequate.</p> <p>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 operational monitoring requirements. The Central Park Monitoring and Sampling program was provided and was consistent with this.</p>	<p>DWQP Section 4.2</p> <p>Monitoring and sampling plan FS-WAT-AUS-PL-OPS-1288</p> <p>Central Park Monitoring and Sampling Program CP-WAT-AUS-PL-OPS-2859</p>
	Corrective action	<p>The scheme specific documentation referenced in the DWQP for this component is adequate apart from an error in the document issue record.</p> <p>The DWQP references the Central Park Control Point table for corrective actions relating to CCPs and QCPs. It is noted that there are no current CCPs or QCPs identified for Central Park drinking water scheme. Deviations for operational monitoring activities are described in the Central Park Drinking Water Out of Specification Work Instruction. An error in the current version dated, documented in the footer, against the document issue record table is noted. A recommendation for this is included under Element 6 Management of incidents and emergencies.</p>	<p>DWQP Section 4.3</p> <p>Central Park Drinking Water Out of Specification Work Instruction CP-WAT-NSW-WI-OPS-3471</p>
	Equipment capability and maintenance	<p>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</p>	<p>DWQP Section 4.4</p> <p>PPM Schedules Calibration and Control Points High Rise from RAM</p>

Element	Component	Audit findings	Evidence
		management system. A register of calibrations and control point inspections was provided as evidence of scheduling.	
	Materials and chemicals	Flow Systems manages 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 Central Park 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 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 expanded to reflect this.</p> <p>The scheme specific documentation referenced in the DWQP for this component is adequate. Parameters, locations and frequency of sample sites are detailed in the Central Park 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. For Central Park 52 samples per year are required. A check was carried out of the verification requirements in the Monitoring and Sampling Plan against the Central Park Monitoring and Sampling Program - the documents were found to be consistent.</p>	<p>DWQP Section 5.1</p> <p>Monitoring and sampling plan FS-WAT-AUS-PL-OPS-1288 Central Park Monitoring and Sampling Program CP-WAT-AUS-PL-OPS-2859</p>

Element	Component	Audit findings	Evidence
<p>Recommendation DW 5.1: Ensure that the Monitoring and Sampling Plan is updated to reflect the process outlined in the DWQP to ensure sample numbers and locations remain consistent with the requirements of the ADWG and the NSW Health Monitoring Program.</p>			
<p>Element 6 Management of incidents and emergencies</p>	<p>Communication</p>	<p>The scheme specific documentation referenced in the DWQP for this component is adequate.</p> <p>The Central Park Scheme Management Plan references the Central Park 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 Central Park relevant to the drinking water supply include IPART, NSW Health, NSW Department of Planning, Industry and Environment, Sydney Water and City of Sydney. The stakeholders listed are appropriate to the scheme.</p>	<p>DWQP Section 6.1 Central Park Stakeholder and Emergency Contact List</p>
<hr/>			
<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 Central Park Scheme Management Plan and error in documentation control for the Out of Specification Work Instruction.</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 Central Park (WICA Form A and B) were provided as evidence. The Central Park Scheme Management Plan does not currently include a reference to the scheme specific Central Park Incident Notification forms (Form A and B).</p> <p>The Drinking Water Out of Specification Corrective Actions Work Instruction (Rev 1.0, dated 19 November 2020) for Central Park is adequate, apart from an error noted in document control, with the current review date document not included in the document issue record table.</p>			

Element	Component	Audit findings	Evidence
		<p>Recommendation DW 6.1: Reference scheme specific WICA incident notification forms in the Central Park Scheme Management Plan.</p> <p>Recommendation DW 6.2: Amend errors in document issue record tables for the Central Park Drinking Water Out of Specification Work Instruction.</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 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>OFI DW 9.1: Include in the DWQP 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>OFI DW 10.1: Include reference to external reporting obligations in the DWQP.</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 Central Park drinking water quality plan is detailed below:

- Recommendation DW 2.1: Resolve inconsistency in the bulk water meter as a quality control point across documentation (process flow diagram, risk assessment and control point tables)
- Recommendation DW 4.1: Document in the Central Park Scheme Management Plan any deviations from DWQP requirements, including the absence of a potable water Operation and Maintenance Manual.
- Recommendation DW 5.1: Ensure that the Monitoring and Sampling Plan is updated to reflect the process outlined in the DWQP to ensure sample numbers and locations remain consistent with the requirements of the ADWG and the NSW Health Monitoring Program.
- Recommendation DW 6.1: Reference scheme specific WICA incident notification forms in the Central Park Scheme Management Plan
- Recommendation DW 6.2: Amend errors in document issue record tables for the Central Park Drinking Water Out of Specification Work Instruction

4.1.4 Summary of opportunities for improvement

A summary of opportunities for improvement are detailed below:

- OFI DW 9.1: Include in the DWQP explicit requirements for when revalidation will need to occur.
- OFI DW 10.1: Include reference to external reporting obligations in the DWQP.

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>7 Water quality plans</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 schemes are referenced in the Specific Management Plan.

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

The Licence Plan as a whole is considered adequate, with a few deficiencies noted in relation to document errors and processes relating to the updating of documentation following scheme expansion. These are considered non-material. Recommendations have been included to address these shortcomings.

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 Central Park Water 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 Central Park 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 Central Park 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 Central Park 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 Central Park - Stakeholders Emergency Contact List CP-WAT-NSW-RG-INC-3359
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 Central Park Scheme Management Plan with a reference to the Flow WICA Licences - Authorised Purposes Matrix. The approved end uses for Central Park in the authorised purposes matrix are	RWQP Section 2.1 Central Park Scheme Management Plan CP-WAT-NSW-PL-OPS-1344, dated 2 February 2021

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 Central Park on the authorised purposes matrix, i.e. general washdown, street cleaning and process water.</p> <p>Recommendation RW 2.1: 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, 12_022 Central Park Water, dated 26 June 2020.</p>
	<p>Recycled water system analysis</p> <p>Assessment of water quality data</p>	<p>Deficiencies were identified in scheme specific documentation referenced in the RWQP for this component.</p> <p>Scheme characteristics are documented in the Central Park 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 Central Park Scheme Management Plan.</p> <p>Addition of sodium hydroxide into the Flow Balance tank is not included in the Treatment Process description; this is noted as an opportunity for improvement.</p> <p>Inconsistencies are noted in the scheme description for distribution of product. Water is described as being distributed separately from both the general usage and cooling water tank. It was verified onsite that water from the general usage tank is supplied directly into the cooling water tank prior to distribution. It is noted that the description might refer to future infrastructure arrangements, though this is not directly specified.</p> <p>A process flow diagram was provided for the recycled water scheme consistent with requirements of the AGWR to outline steps and processes from source to application. The process flow diagram was verified onsite during the audit. The process flow diagrams were generally correct, with a few errors identified:</p> <ul style="list-style-type: none"> Recycled water LWC & Sewerage Phase 1: 	<p>RWQP Section 2.2 and 2.3</p> <p>Scheme Management Plan Section 7.3</p> <p>Central Park Water Process Flow Diagram Recycled Water LWC & Sewerage Phase 1 CP-WAT-NSW-DR-OPS-2624</p> <p>Central Park Water Process Flow Diagram Recycled Water Network Phase 1 CP-WAT-NSW-DR-OPS-2666</p> <p>Risk Assessment Briefing Pack FS-WAT-NSW-RE-OPS-3199</p>

Element	Component	Audit findings	Evidence
		<ul style="list-style-type: none"> ○ Free chlorine analyser after the storage tank is not in the correct location, ○ not all flow meters are shown ● Recycled water network Phase 1: Incorrect arrangement, with general use and irrigation booster pump arrangements not yet being installed. <p>Assessment of water quality data was used to inform the risk assessment. The risk assessment workshop briefing pack was provided as evidence during the Cooranbong audit and considered adequate as evidence of this requirement.</p> <p>Recommendation RW 2.2: Review and update the Central Park Scheme management plan Distribution of Product description to accurately reflect current arrangements.</p> <p>Recommendation RW 2.3: Review and update the Central Park process flow diagrams to accurately reflect current arrangements.</p> <p>OFI RW 2.1: Include all chemicals in the treatment process, including sodium hydroxide into the flow balance tank (FBT), into the Central Park Scheme Management Plan Treatment Process description.</p>	
	Hazard identification and risk assessment	<p>The scheme specific documentation referenced in the RWQP for this component is adequate.</p> <p>Briefing material for the Central Park 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>Central Park Scheme Risk Register CP-WAT-NSW-PL-OPS-2480</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 Central Park 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>Central Park Scheme Risk Register CP-WAT-NSW-PL-OPS-2480</p>
	Critical control points	<p>The scheme specific documentation referenced in the RWQP for this component is adequate.</p> <p>Critical control points are identified as part of the risk assessment process. Documentation of this assessment was confirmed in the Central Park Scheme Risk Register where CCPs and QCPs are recorded in the "CCP / QCP?" column.</p> <p>Critical control points for Central Park are documented in the Central Park Control Points Table. Critical control points in this table are consistent against those assessed in the risk register. The references used in the justification column are considered appropriate. It was confirmed that the CCP limits were consistent with those in SCADA.</p>	<p>RWQP Section 3.2</p> <p>Central Park Scheme Risk Register CP-WAT-NSW-PL-OPS-2480</p> <p>Central Park Control Points Table CP-WAT-NSW-PL-OPS-1208</p>
Element 4 Operational procedures and process control	Operational procedures	<p>The scheme specific documentation referenced in the RWQP for this component is adequate apart from minor deficiencies associated with document control and the procedure list.</p> <p>The RWQP states that schemes will be operated in accordance with the scheme operations and maintenance manual. A finalised Operations and Maintenance (O&M) Manual – Central Park LWC</p>	<p>RWQP Section 4.1</p> <p>Central Park LWC Operations and Maintenance (O&M) Manual – CP-WAT-NSW-MN-OPS-1467</p>

Element	Component	Audit findings	Evidence
		<p>Operation and Maintenance Manual was provided as evidence (Version 4, dated November 2019). A discrepancy is noted with the date in the footer (27 March 2020) compared to that in the version control table.</p> <p>SOPs and Work Instructions are documented in the register of operational procedures. The procedures identified for Central Park in the register are appropriate; apart from a wrongly attributed procedure 'Box Hill MOS CIP BH-WAT-NSW-PR-OPS-3086'.</p> <p>A procedure Using the Rainwater Source for Central Park was provided as evidence for using top up rainwater at the Flow Balance Tank and the circumstances in which it may be used.</p> <p>Recommendation RW 4.1: Amend the version control discrepancy in the Central Park LWC Operations and Maintenance Manual.</p> <p>Recommendation RW 4.2: Updated the procedure register to ensure the appropriate procedures are referenced, including removing reference to the 'Box Hill MOS CIP' Procedure.</p>	<p>Register of Operational Procedures FS-WAT-NSW-RG-OPS-2725</p> <p>Using the Rainwater Source CP-WAT-NSW-PR-OPS-2915</p>
	Operational monitoring	<p>The scheme specific documentation referenced in the RWQP for this component is adequate.</p> <p>Operational monitoring requirements are detailed in the Monitoring and Sampling Plan. The Central Park Monitoring and Sampling program was provided and sample items were cross checked against the sampling plan; the items checked were found to be consistent.</p>	<p>RWQP Section 4.2</p> <p>Monitoring and sampling plan FS-WAT-AUS-PL-OPS-1288</p> <p>Central Park Monitoring and Sampling Program CP-WAT-AUS-PL-OPS-2859</p>
	Operational corrections	<p>The scheme specific documentation referenced in the RWQP for this component is adequate apart from a deficiency with the Central Park Restart Procedure. Discussions on corrective actions are also included in Element 6 in the Incident and Emergency Response Protocols section.</p>	<p>RWQP Section 4.3</p> <p>Central Park Control Points Table CP-WAT-NSW-PL-OPS-1208</p>

Element	Component	Audit findings	Evidence
		<p>Critical control points summary corrective actions are included in the control point tables. The Central Park Control Points Table procedures for shutdown and off specification water diversion are appropriate.</p> <p>Deviations for other operational monitoring activities are described in the Operational Monitoring Corrective Actions Procedure.</p> <p>The Central Park LWC Restart After Extended Shutdown Procedure describes the process for restarting the Local Water Centre (LWC) after an extended shutdown. It is currently unclear within the procedure that if CT was not reached prior to shut down, whether this requires a different restart process.</p> <p>Recommendation RW 4.3: Clarify in the Central Park LWC Restart After Extended Shutdown Procedure, that if CT was not reached prior to shutdown a different restart process is required.</p>	<p>Central Park LWC Restart After Extended Shutdown Procedure CP-WAT-NSW-PR-OPS-2580</p> <p>Central Park Recycled Water Out of Specification Work Instruction - CP-WAT-NSW-WI-OPS-3472</p>
	Equipment capability and maintenance	<p>The scheme specific documentation referenced in the RWQP for this component is adequate. The Central Park Operations and Maintenance Manual refers to Flow's Computerised Maintenance Management System (CMMS) for maintenance schedules. A register of calibrations and control point inspections was provided as evidence of scheduling. Scheduling included organising annual calibration and quarterly and weekly calibrations and checklists. An example of the Weekly Control Point Checklist for Central Park was provided as evidence of the parameters checked, which included calibrations and checks of CCP equipment included for pH, turbidity, chlorine and UVT.</p>	<p>RWQP Section 4.4</p> <p>Central Park LWC Operations and Maintenance (O&M) Manual – CP-WAT-NSW-MN-OPS-1467</p> <p>PPM Schedules Calibration and Control Points High Rise from RAM</p> <p>Work Order Number 034996, Local Water Centre Central Park, Weekly Control Points Checklist Test New Checklist, 7/12/2020</p>
	Materials and chemicals	<p>The scheme specific documentation referenced in the RWQP for this component is adequate. Signage and labelling of chemical dosing points was noted during the site audit of Central Park. The Central Park Operations and Maintenance Manual specifies details</p>	<p>RWQP Section 4.5</p> <p>Scheme management plan</p>

Element	Component	Audit findings	Evidence
		of chemical dosing in the treatment process. 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 Central Park.	Central Park LWC Operations and Maintenance (O&M) Manual – CP-WAT-NSW-MN-OPS-1467
Element 5 Verification of recycled water quality and environmental performance	Recycled water quality monitoring Documentation and reliability	<p>The scheme specific documentation referenced in the RWQP for this component is adequate.</p> <p>Characteristics to be monitored are included within the overarching Monitoring and Sampling Plan. A check was carried out against the verification requirements in the Monitoring and Sampling Plan against the Central Park Monitoring and Sampling Program; with the documents found to be consistent.</p> <p>The Monitoring and Sampling Plan and Central Park 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.</p> <p>OFI RW 5.1: Correct the date and version in footer of the Monitoring and Sampling plan to be consistent with document control.</p>	<p>RWQP Section 5.1 and 5.3</p> <p>Monitoring and sampling plan FS-WAT-AUS-PL-OPS-1288</p> <p>Central Park Monitoring and Sampling Program CO-WAT-NSW-PL-OPS-3093</p>
	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.	<p>RWQP Section 5.2</p> <p>Central Park Scheme Management Plan</p>

Element	Component	Audit findings	Evidence
		<p>The Central Park Scheme Management Plan (Section 11.5 Recycled Water Irrigation Management) states that the Recycled Water Irrigation Management Plan (RWIMP) is not currently implemented as there are no designated irrigation zones, this is an appropriate approach for this site.</p>	
<p>Element 6 Management of incidents and emergencies</p>	<p>Communication</p>	<p>The scheme specific documentation referenced in the RWQP for this component is adequate.</p> <p>The Central Park Scheme Management Plan references the Central Park stakeholder and emergency contact list and Figure 8-1 sets out how incidents and emergencies are generally managed. Flow Systems has regulatory reporting obligations for incidents.</p> <p>Key stakeholders for Central Park 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 Sydney. The stakeholders listed are appropriate to the scheme.</p>	<p>RWQP Section 6.1 Central Park Stakeholder and Emergency Contact List</p>
	<p>Incident and emergency response protocols</p>	<p>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 Central Park Scheme Management Plan.</p> <p>The RWQP 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 Central Park (WICA Form A and B) were provided as evidence. Scheme specific notification forms for Central Park (WICA Form A and B) were provided as evidence. The Central Park Scheme Management Plan does not currently include</p>	<p>RWQP Section 6.2 WICA Form A – Incident Initial Notification Central Park WICA Form B – Incident Initial Notification Central Park Central Park Recycled Water Out of Specification Work Instruction - CP-WAT-NSW-WI-OPS-3472</p>

Element	Component	Audit findings	Evidence
		<p>a reference to the scheme specific Central Park Incident Notification forms (Form A and B).</p> <p>The Recycled Water Out of Specification Work Instruction for Central Park (Ver 1.0, dated 19 November 2020) provided as evidence is adequate.</p> <p>Recommendation RW 6.1: Reference scheme specific WICA incident notification forms in the Central Park Scheme Management Plan.</p>	
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>OFI RW 8.1: 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 significant change to a licence plan, referencing to requirements for when revalidation should occur, could be more explicit.</p> <p>OFI RW 9.1: Detail more explicit requirements for when revalidation will need to occur in the RWQP.</p>	<p>RWQP Section 9.1, 9.2 and 9.3</p> <p>WICA Change checklist FS-WAT-NSW-FM-GOV-2690</p>
Element 10 Documentatio	Reporting	The Cooranbong Water Quality Plan Licence audit identified a deficiency in the process as described in Section 10.2 with the	RWQP Section 10.2

Element	Component	Audit findings	Evidence
n and reporting		<p>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 the 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>OFI RW 10.1: Include reference to external reporting obligations in the RWQP.</p>	
Element 11 Evaluation and audit	Long-term evaluation of results	<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 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>	RWQP Section 11.1
	Audit of recycled water quality management	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	RWQP Section 11.2

Element	Component	Audit findings	Evidence
		<p>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>OFI RW 11.1.1: Clarify that recycled water quality is covered under the internal audit objective for 'quality'</p>	<p>Audit Procedure FS-ALL-AUS-PR-GOV-1364</p>

4.2.3 Summary of recommendations

A summary of recommendations for the Central Park 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 2.2: Review and update the Central Park Scheme management plan Distribution of Product description to accurately reflect current arrangements.
- Recommendation RW 2.3: Review and update the Central Park process flow diagrams to accurately reflect current arrangements.
- Recommendation RW 4.1: Amend the version control discrepancy in the Central Park LWC Operations and Maintenance Manual
- Recommendation RW 4.2: Updated the procedure register to ensure the appropriate procedures are referenced, including removing reference to the 'Box Hill MOS CIP' Procedure
- Recommendation RW 4.3: Clarify in the Central Park LWC Restart After Extended Shutdown Procedure, that if CT was not reached prior to shutdown a different restart process is required
- Recommendation RW 6.1: Reference scheme specific WICA incident notification forms in the Central Park Scheme Management Plan

4.2.4 Summary of opportunities for improvement

A summary of opportunities for improvement for the Central Park recycled water quality plan are detailed below:

- OFI RW 2.1: Include all chemicals in the treatment process, including sodium hydroxide into the flow balance tank (FBT), into the Central Park Scheme Management Plan Treatment Process description.
- 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 more explicit requirements for when revalidation will need to occur in the RWQP.
- 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 internal audit 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
Central Park Water Scheme Management Plan	6.2	02/02/2021
Central Park Drinking Water Out of Specification Work Instruction - CP-WAT-NSW-WI-OPS-3471	1.0	19/11/2020
Central Park Recycled Water Out of Specification Work Instruction - CP-WAT-NSW-WI-OPS-3472	1.0	19/11/2020
Central Park Control Points Table CP-WAT-NSW-PL-OPS-1208	3.0	4/11/2019
Central Park LWC – Log Reduction Values	2.0	19/11/2020
Central Park Water Process Flow Diagram Drinking Water CP-WAT-NSW-DR-OPS-2614	2	29/5/2019
Central Park Water Process Flow Diagram Recycled Water LWC & Sewerage Phase 1 CP-WAT-NSW-DR-OPS-2624	6	4/11/2019
Central Park Water Process Flow Diagram Recycled Water Network Phase 1 CP-WAT-NSW-DR-OPS-2666	1	29/5/2019
Central Park LWC Operations and Maintenance (O&M) Manual – CP-WAT-NSW-MN-OPS-1467	4.0	27/03/2020
Central Park LWC Restart After Extended Shutdown Procedure	1.0	4/03/2018
Central Park Monitoring and Sampling Program CP-WAT-AUS-PL-OPS-2859	1.4	18/09/2020
Central Park Scheme Risk Register CP-WAT-NSW-PL-OPS-2480	4.2	27/8/2020
Central Park Stakeholder and Emergency Contact List	1.2	19/01/2021
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
Using the Rainwater Source, CP-WAT-NSW-PR-OPS-2915	1.0	14/02/2020
WICA Form A – Incident Initial Notification Central Park	2.0	14/09/2020
WICA Form B – Incident Initial Notification Central Park	2.0	24/09/2020
Work Order Number 034996, Local Water Centre Central Park, Weekly Control Points Checklist Test New Checklist		7/12/2020

Appendix B Addendum



Addendum

Central Park Water Licence Plan Audit

1 Introduction

The findings of the January 2021 licence plan audit for Central Park Water Pty Ltd, are presented in the licence plan audit report (Atom Consulting 2021). This audit was undertaken of the water quality plans in accordance with the requirements set out in IPART's *Audit Guideline, Water Industry Competition Act 2006 (NSW)* (July 2020).

Altogether Group have since proposed changes to critical control point and log reduction value documentation for Central Park and have requested that these documents be audited. The findings of the review of these documents are presented in this addendum to the 2021 Central Park Licence Plan Audit report.

2 Audit method

2.1 Audit scope

The overarching water quality plans (DWQP and RWQP) were audited in November 2020 for the Cooranbong Licence plan audit. The Central Park scheme specific documentation was audited in January 2021.

The audit scope for this addendum was the adequacy of the updates to Critical Control Point and Log Reduction Value documentation referred to as part of the Central Park Water Licence Plans.

The licence plan documents considered in this audit addendum are:

- Central Park – Control Points
- Central Park LWC Log Reduction Values

3 Audit results

Evidence provided as part of the audit is included in Table 2-1.

Table 2-1. Audit evidence

Document name and number	Version	Date
Central Park Control Points Table CP-WAT-NSW-PL-OPS-1291	4.0	6/04/2021
Central Park LWC Log Reduction Values CP-WAT-NSW-PL-OPS-2822	4.0	6/04/2021
Email to NSW Health 'Change Notice - CCP and Log Reduction'		6/04/2021
Change Notice Form: Control Point and Log Reduction Review for Central Park and Discovery Point	1.0	6/04/2021

Version: 1.0
Date: 14/05/2021
Job number: FSY2006

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Critical control points for Central Park are documented in the Central Park Control Point table and referenced in the Scheme Management Plan. Justification for choice of log reduction guideline values and that able to be achieved for control point process steps is documented in the Central Park LWC Reduction Values document.

Critical limits and associated log reduction value documentation have been amended. Changes made and the adequacy of these changes is included in Table 2-1. Log reduction requirements for dual reticulation and municipal irrigation are achieved.

Table 2-2. Summary of amendments

Control point	Document	Amendment	Commentary
Ultrafiltration (CCP 2)	Central Park LWC Log reduction values	<p>Log reduction values achieved for ultrafiltration have decreased</p> <p>Justification for validation of achieved LRVs for ultrafiltration has been changed, referencing "Giving Credit Where Credit is Due – MBR for Potable Water Reuse" by Katz, Salvesson, Fontaine, Bucher and Berryhill 2017, Table 2</p>	<p>Basis for change is adequately documented in the Table 2 Change Assessment of the Change Notice Form</p> <p>Log reduction requirements for dual reticulation and municipal irrigation are achieved. Amended LRVs achieved are more conservative.</p> <p>Paper referenced was presented at IWA Internal Conference on Water Reclamation and Reuse 2016.</p>
UV Disinfection (CCP 2)	Central Park Control points	UV intensity has been removed as a monitoring point	Basis for change is adequately documented in the Table 2 Change Assessment of the Change Notice Form. Removal is appropriate with the UV dose critical limits including UV intensity within its calculation.
	<p>Central Park Control points</p> <p>Central Park LWC Log reduction values</p>	<p>The critical limit for UV dose, has increased from < 39 to < 58 mJ/cm²</p> <p>Target and adjustment limit changes.</p> <p>Reduction in LRVs for viruses</p>	<p>Basis for change is adequately documented in the Table 2 Change Assessment of the Change Notice Form.</p> <p>Limit changes are appropriate to achieve the claimed 1.0 LRV reduction for viruses in accordance with the USEPA Ultraviolet Disinfection Guidance Manual (2006).</p>
Chlorination (CCP 3)	Central Park LWC Log reduction values	Log reduction values achieved for chlorination have increased from 3 LRV to 4 LRV for virus and bacteria.	Basis for change is adequately documented in the Table 2 Change Assessment of the Change Notice Form
	Central Park Control points	Justifications for achieved LRVs have been updated, with an increase in the minimum chlorine contact time (CT) to meet the required LRVs.	Amendment is adequate. The new CT required to achieve log reductions of 4 LRV for virus and bacteria is in line with guidance for parameters stated and is below the current chlorination critical limit of CT < 20 mg.min/L.

Critical control points values are consistent across the Control Point Tables and the Log Reduction Value documents. It was not confirmed as part of this review if the updated CCP limits were consistent with those in SCADA.

Evidence was provided of consultation with NSW Health, in the form of an email where updated documentation and a change notice form was provided.

3.1 Summary of findings

Changes to the critical control point and log reduction value documentation for Central Park are adequate.