

Cooranbong Water Pty Ltd

Network Operator's Licence Operational Audit



Flow Systems

Date: February 2018

Version: 3.00

Final report



T E C H N I C A L F A C I L I T A T I O N S P E C I A L I S T S

Document Status:	Version: 3.00		Final report	
Document History:	Status	Review	Version	Date
	Internal draft	Steven Contos	1.0	29/01/2018
	Client draft	Natalie Crawford	2.0	14/2/2018
	Final report	Dr Annette Davison (Risk Edge)	3.0	25/2/2018
Author:	Dr Annalisa Contos			
Contact:	Annalisa Contos Atom Consulting 65 Cambourne Ave St Ives NSW 2075 annalisa@atomconsulting.com.au 02 9488 7742			
File Name:	FSY1711 Cooranbong Report Version 3.0.docx			



Executive Summary

Auditor's declaration

This report presents the findings of the audit of network operations for Cooranbong Water Pty Ltd, against the Licence Number 15_033 and the *Water Industry Competition Act 2006 (NSW)*, consistent with audit requirements set out in IPART's *Audit Guideline for Greenfield Schemes Water Industry Competition Act 2006 (NSW)* (July 2013) for the audit period 1/6/16 - 31/10/17. Cooranbong Water Pty Ltd is wholly owned by Flow Systems Pty Ltd.

- The auditor has seen sufficient evidence on which to base their conclusions.
- The audit findings accurately reflect the professional opinion of the auditor.
- The auditor has conducted the audit, determined audit findings and prepared the report consistent with audit requirements set out in IPART's *Audit Guideline for Greenfield Schemes Water Industry Competition Act 2006 (NSW)* (July 2013) and IPART's Combined Network Operator's Licence Operational Audit letter dated 9 November 2017.
- The audit findings have not been unduly influenced by the utility and/or any of its associates.

Major findings

A summary of major audit findings for the audit period is shown in Table 1-1.

Table 1-1 Summary of audit findings against audited licence obligations

Aspect	Licence Clause	Audit findings
General obligations for a network operator	WIC Reg Sch1 cl. 1(2)(a)	Compliant
	WIC Reg Sch1 cl. 1(2)(b)	Compliant
	WIC Reg Sch1 cl. 1(2)(c)	Compliant
	WIC Reg Sch1 cl. 1(2)(e)	Compliant
	WIC Reg Sch 1 cl 2 (1)	Compliant
	WIC Reg Sch 1 cl. 2(2)(a)	No requirement
	WIC Reg Sch 1 cl. 2(2)(b)	No requirement
	WIC Reg Sch 1 cl. 3(c)	Compliant
Obligations for water supply infrastructure	WIC Reg Sch 1 cl. 6(2)(a)	Non-compliant Insignificant
	WIC Reg Sch 1 cl. 7(4)(a)	Non-compliant Insignificant
	WIC Reg Sch 1 cl. 11	Compliant
Obligations for non-potable water supply infrastructure	WIC Reg Sch 1 cl.10(a)	No requirement
Obligations for sewerage infrastructure	WIC Reg Sch 1 cl. 14(3)(a)	Non-compliant Insignificant
Obligations in Schedule B to the network operators licence	Cooranbong Licence cl B11	No requirement
	Cooranbong Licence cl B13	No requirement



Recommendations

Recommendations arising from the operational audit are shown in Table 1-2.

Table 1-2 Operational audit recommendations

Aspect	Licence Clause	Recommendation
Obligations for water supply infrastructure	WIC Reg Sch 1 cl. 6(2)(a)	<p>R 6-1 Flow Systems should conduct a thorough review of its Infrastructure Operating Plan to ensure the Infrastructure Operating Plan documents what is occurring across its schemes in practice, this review should include a thorough review of the Incident Management Plan and Asset Management Plan and supporting procedures and processes (including Forms A and B).</p> <p>R 6-2 Flow Systems should review document management in its BMS to ensure only current and approved versions are accessible for operational use.</p> <p>R6-3 Flow Systems should develop triggers and escalation measures to ensure that scheme expansion occurs in a sufficiently timely manner so customer's levels of service are not impacted by the increased water demand.</p>
	WIC Reg Sch 1 cl. 7(4)(a)	<p>R 7-1 The Recycled Water Quality Plan should be reviewed to ensure it documents Flow Systems current approach to recycled water management. References to supporting documentation should be cross-checked to confirm they exist and are current.</p> <p>R7-2 The Drinking Water Quality Plan should be reviewed to ensure it documents Flow Systems current approach to drinking water management. References to supporting documentation should be cross-checked to confirm they exist and are current. Attention should be given to drinking water verification including sampling locations and frequency triggers.</p>
Obligations for sewerage infrastructure	WIC Reg Sch 1 cl. 14(3)(a)	R14-1 The Sewage Management Plan should be reviewed to ensure it documents Flow Systems current approach to sewage management. References to supporting documentation should be cross-checked to confirm they exist and are current.



Contents

EXECUTIVE SUMMARY	I
Auditor’s declaration.....	i
Major findings	i
Recommendations	ii
1 INTRODUCTION	1
1.1 Objectives	1
1.2 Licensee’s infrastructure, systems and procedures	1
1.2.1 Cooranbong Infrastructure	2
1.3 Audit method.....	2
1.3.1 Audit scope	2
1.3.2 Audit standards.....	3
1.3.3 Audit steps	4
1.3.4 Audit team	5
1.3.5 Audit grades.....	6
1.4 Regulatory regime	6
1.5 Quality assurance process	7
2 AUDIT FINDINGS	8
2.1 Recommendations.....	8
2.2 Opportunities for improvement.....	8
APPENDIX A DETAILED FINDINGS: GENERAL OBLIGATIONS FOR A NETWORK OPERATOR	
A-1	
WIC Regulation Schedule 1 Clause 1(2)	A-1
WIC Regulation Schedule 1 Clause 2(1)-2(2).....	A-3
WIC Regulation Schedule 1 Clause 3(c).....	A-5
APPENDIX B DETAILED FINDINGS: OBLIGATIONS FOR INFRASTRUCTURE	B-7
WIC Regulation Schedule 1 Clause 6(2)(a)	B-7
WIC Regulation Schedule 1 Clause 7(4)(a)	B-9
Risk Assessment	B-9
Verification Monitoring.....	B-9
Community Engagement	B-10
Documentation	B-10
WIC Regulation Schedule 1 Clause 11	B-12
WIC Regulation Schedule 1 Clause 10(a).....	B-13
WIC Regulation Schedule 1 Clause 14(3)(a)	B-14
APPENDIX C DETAILED FINDINGS: SCHEDULE B OBLIGATIONS	C-16
Licence clause B11.....	C-16
Licence clause B13.....	C-17



Tables

Table 1-1 Summary of audit findings against audited licence obligations	i
Table 1-2 Operational audit recommendations	ii
Table 1-1. Examples of scheme specific and utility wide supporting documentation	1
Table 1-2. Licence sections within the 2016-17 audit scope	2
Table 1-3. Audit steps	4
Table 1-4. Audit team members and their qualifications	5
Table 1-5. Key legal and formal instruments relevant to Flow Systems’ operating licence	6
Table 2-1. WIC Regulation Schedule 1 Clause 2(1)-2(2).....	A-3
Table 2-2. WIC Regulation Schedule 1 Clause 3(c).....	A-5

Figures

Figure 1-1. Audit grades.....	6
-------------------------------	---



Glossary

Item	Detail
ADWG	NHMRC, NRMCC (2011) <i>Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy</i> . National Health and Medical Research Council, National Resource Management Ministerial Council, Commonwealth of Australia, Canberra. ISBN Online: 1864965118
AGWR	AGWR (2006) <i>Australian Guidelines For Water Recycling: Managing Health and Environmental Risks (Phase1)</i> . Natural Resource Management Ministerial Council, Environment Protection And Heritage Council, Australian Health Ministers' Conference. Web Copy: ISBN 1 921173 06 8
AS/NZS 4020	Australian and New Zealand Standards for testing of products for use in contact with drinking water (2005)
AS/NZS 4801	Occupational Health and Safety Management Systems (2001)
AS/NZS ISO 14001	Environmental management system – Requirements with guidance for use (2016)
AS/NZS ISO 19011	Guidelines for auditing management systems (2014)
AS/NZS ISO 9001	Quality Management Systems - Requirements (the Quality Management System) (2008)
ASAE	Australian Standard on Assurance Engagements
ASAE 3100	Compliance Engagements issued by the Auditing and Assurance Standards Board (2017)
Audit Guideline	Audit Guideline for Greenfield Schemes <i>Water Industry Competition Act 2006 (NSW)</i> (July 2013)
Audit Period	1/6/16 - 31/10/17 over which Flow Systems compliance is checked against certain clauses of its Network Operator's Licence (as determined by IPART)
BMS	Business management system
Framework	This term refers to either the <i>Framework for Management of Drinking Water Quality</i> or the <i>Framework for Management of Recycled Water Quality and Use</i> . Its meaning <i>in situ</i> depends on the context of the clause being assessed
IPART	Independent Pricing and Regulatory Tribunal of NSW
ISO	International Standards Organisation
Licence	The Network Operator's Licence issues under the <i>Water Industry Competition Act 2006 (NSW)</i>
NSW Health	NSW Ministry of Health
Reporting Manual	Network Operators' Reporting Manual under the <i>Water Industry Competition Act 2006 (May 2010)</i>
SCADA	Supervisory Control and Data Acquisition
WIC Act	<i>Water Industry Competition Act 2006 (NSW)</i>
WIC Regulation	Water Industry Competition Regulation 2008
WSA-03	Water Services Association of Australia Water Supply Code of Australia
WSAA	Water Services Association of Australia



This document is designed for double sided printing



1 Introduction

1.1 Objectives

This report presents the findings of the audit of network operations for Cooranbong Water Pty Ltd, against the Licence Number 15_033 and the *Water Industry Competition Act 2006 (NSW)*, consistent with audit requirements set out in IPART's *Audit Guideline for Greenfield Schemes Water Industry Competition Act 2006 (NSW)* (July 2013) for the period 1/6/16 - 31/10/17.

1.2 Licensee's infrastructure, systems and procedures

Cooranbong Water Pty Ltd is wholly owned by Flow Systems Pty Ltd. There is a corporate services agreement in place between Cooranbong Water and Flow Systems. The auditor refers to Flow Systems as the service provider throughout this report for as its was Flow Systems procedures and systems that were audited. Cooranbong Water Pty Ltd as the licensee is ultimately responsible for the implementation of the licence conditions.

Flow Systems uses an integrated Business Management System (BMS), independently certified by a JAS-ANZ accredited independent certifying body to the following international and Australian management standards:

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

The BMS is managed through a SharePoint site. As Flow Systems operates a number of schemes under the WIC Act it has a cross-functional approach to its systems and procedures. Overarching documents and version numbers relevant to the audit period include:

- Infrastructure Operating Plan (Version 6 - 25/5/16, Version 7 - 21/10/16, Version 8 - 21/12/16)
- Recycled Water Quality Plan (Version 5 - 25/5/16, Version 6 2- 1/10/16, Version 7 - 25/7/17, Version 8 - 31/8/17)
- Drinking Water Quality Plan (Version - 4 8/9/15, Version 5 - 22/11/16, Version - 31/8/17)
- Operations Environmental Management Plan (Version 3 --7/1/16, Version 4 - 2/6/2017)
- Incident Management Plan (Version 5 – 25/8/16, Version 6 14/10/16)
- Asset Management Plan (Version 2 - 22/11/16)
- Monitoring and Sampling Plan (Version - 5 8/9/15, Version - 6 22/11/16)

These are supported by both utility wide and scheme specific documentation as illustrated in Table 1-1.

Table 1-1. Examples of scheme specific and utility wide supporting documentation

Utility wide supporting documentation	Scheme specific documentation
Responsibilities and authorities matrix	Cooranbong Scheme Management Plan
Incident Register	Monitoring and Sampling Programme
Incident Report and Investigation Form	Risk Assessment
Monitoring and Sampling Plan	Form A Incident Notification



1.2.1 Cooranbong Infrastructure

Cooranbong had drinking and recycled water reticulation in operation during the audit period. Both systems were supplied with drinking water that had been treated by Hunter Water. During the audit period sewage was collected from the on-lot infrastructure, which included a 900 L wastewater collection tank and pump set and transferred via a manhole connection to Hunter Water's sewerage infrastructure.

1.3 Audit method

1.3.1 Audit scope

The scope of the audit was the operational licence clauses listed in Table 1-2. These clauses were selected by IPART.

Table 1-2. Licence sections within the 2016-17 audit scope

Aspect	Licence Clause	Obligation
General obligations for a network operator	WIC Reg Sch1 cl. 1(2)(a)	A network operator must immediately notify IPART of any incident in the conduct of activities that threatens, or could threaten water quality, public health or safety.
	WIC Reg Sch1 cl. 1(2)(b)	A network operator must immediately notify the Minister administering the <i>Public Health Act 2010</i> (NSW) and the Public Health Regulation 2012 (NSW) of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.
	WIC Reg Sch1 cl. 1(2)(c)	A network operator must immediately notify the Minister administering Part 2 of the <i>Water Industry Competition Act 2006</i> (NSW) of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.
	WIC Reg Sch1 cl. 1(2)(e)	A network operator must immediately notify any other licensed network operator or public water utility whose infrastructure is connected to the licensee's infrastructure, of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.
	WIC Reg Sch 1 cl 2 (1)	A network operator must not bring any new water or sewerage infrastructure into commercial operation without the written approval of the Minister.
	WIC Reg Sch 1 cl. 2(2)(a)	The network operator must provide to the Minister a report, prepared by an approved auditor that indicates the infrastructure complies with the requirements of the Regulation and any licence conditions.
	WIC Reg Sch 1 cl. 2(2)(b)	The network operator must provide to the Minister a report, prepared by an approved auditor that indicates that the infrastructure is capable of operating safely and in accordance with its infrastructure operating plan and its water quality or sewerage management plan, as the case requires.
	WIC Reg Sch 1 cl. 3(c)	The water or sewerage infrastructure is properly designed and constructed, operated in a safe and reliable manner and maintained in a proper condition, having regard to any publicly available standards or codes relating to its design, construction, operation and maintenance.



Aspect	Licence Clause	Obligation
Obligations for water supply infrastructure	WIC Reg Sch 1 cl. 6(2)(a)	The network operator must ensure that its infrastructure operating plan is fully implemented and kept under regular review and, in particular, that all of its activities are carried out in accordance with that plan.
	WIC Reg Sch 1 cl. 7(4)(a)	The network operator must ensure that its water quality plan is fully implemented and kept under regular review and, in particular, that all of its activities are carried out in accordance with that plan.
	WIC Reg Sch 1 cl. 11	The licensee must not allow a customer’s installation to be connected to a licensee’s water main unless the installation is code compliant (within the meaning of the <i>Plumbing and Drainage Act 2011</i>).
Obligations for non-potable water supply infrastructure	WIC Reg Sch 1 cl.10(a)	The network operator under a licence for water infrastructure to supply non-potable water for a particular purpose must ensure that the water supply is fit for that purpose.
Obligations for sewerage infrastructure	WIC Reg Sch 1 cl. 14(3)(a)	A network operator must ensure its sewage management plan is fully implemented and kept under regular review and all its activities are carried out in accordance with the plan.
Obligations in Schedule B to the network operators licence	Cooranbong Licence cl B11	If the Licensee proposes to operate the Specified Water Industry Infrastructure to supply water for an end use which is not set out in the most recent Water Quality Plan provided by IPART, the Licensee must notify IPART in writing at least 3 months before commencing such operation.
	Cooranbong Licence cl B13	This clause B13 applies each time if the Licensee has brought any of the specified Water Industry Infrastructure into commercial operation. The Licensee must: (a) notify IPART in accordance with the Reporting Manual that it has brought the relevant Specified Water industry Infrastructure into commercial operation (b) provide such notification within 10 days after it has brought the relevant Specified Water Industry Infrastructure into commercial operation

1.3.2 Audit standards

In conducting this audit, the auditor has adopted the audit standard ISO 19011:2014 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 provided specific detail that are appropriate to this audit.

- *ISO 14011:1996 Guideline for Environmental Auditing*
- *ASAE 3100 (2017) Compliance Engagements* issued by the Auditing and Assurance Standards Board
- *ISO 17021:2011 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)
- *IPART (2013) Audit Guideline for Greenfield Schemes, Water Industry Competition Act 2006* (NSW) Water —Guideline July 2013



- AS/NZ ISO 19011:2014 Guidelines for auditing management systems
- AS/NZS ISO 9001:2008: Quality management systems – Requirements

1.3.3 Audit steps

A summary of audit steps is shown in Table 1-3.

Table 1-3. Audit steps

Step	Item	Details
Step 1	Initiation	IPART initiates audit
	Engagement of approved auditor	Licensee engages approved auditor to undertake audit
	Audit proposal	Auditor develops audit proposal and seeks licensee approval
		Auditor submits the audit proposal to IPART for approval IPART reviews proposal IPART approves audit proposal
Step 2	Opening meeting	Auditor undertakes opening meeting with the licensee and IPART
	Audit interviews	Auditor undertakes interviews
Step 3	Draft audit report	Auditor prepares draft audit report
		Licensee reviews draft audit report
	Final audit report submission	Auditor finalises audit report Auditor submits final reports to IPART
Step 4	Non-compliance matters	Non-compliance matters will be addressed in accordance with IPART’s Energy and Water Licence Compliance Policy

Source: Audit Guideline for Greenfield Schemes Water Industry Competition Act 2006 (NSW) (July 2013)



1.3.4 Audit team

The audit team and audit qualifications are provided in Table 1-4.

Table 1-4. Audit team members and their qualifications

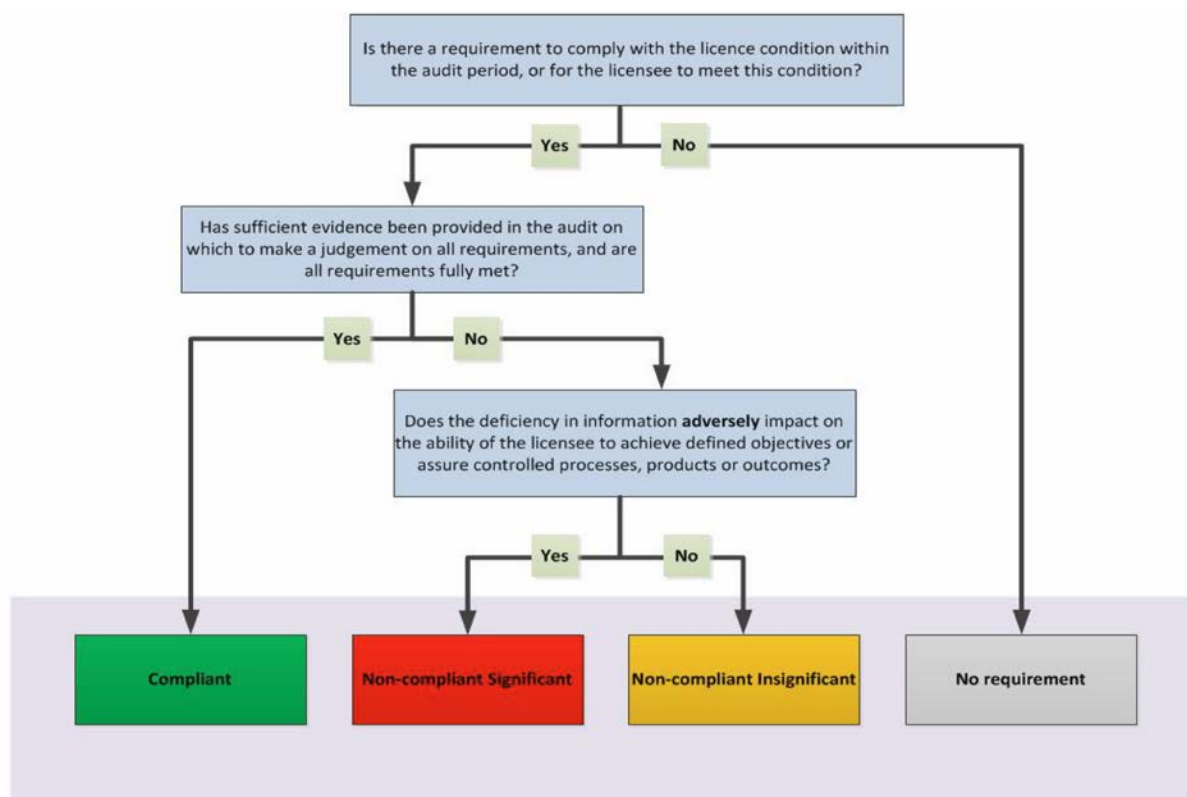
Team Member	Details
Dr Annalisa Contos Atom Consulting Auditor	Dr Annalisa Contos holds the following auditor qualifications: <ol style="list-style-type: none"> 1. Registered Exemplar Global lead auditor (Certificate No. 113465): <ol style="list-style-type: none"> a. Exemplar Global -DW (Drinking Water) b. Exemplar Global -RW (Recycled Water) c. Exemplar Global TL-AU (Lead Auditor) d. Skill Examiner 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
Dr Annette Davison Risk Edge™ Peer Reviewer	Dr Annette Davison holds the following auditor qualifications: <ol style="list-style-type: none"> 1. Moderating Auditor, registered by the Water Services Association of Australia (WSAA) with skills to use the WSAA “Aquality” benchmarking tool 2. Registered Exemplar Global lead auditor (Certificate No. 12454): <ol style="list-style-type: none"> a. Exemplar Global-DW (Drinking Water) b. Exemplar Global TL-AU (Lead Auditor) c. Certified <i>ISO 22000</i> competency from NCSI (Food Safety Management Systems) 3. 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 Recycled Water Quality c. Lead Auditor and Area Specialist Sewage Management d. Lead Auditor and Area Specialist Environmental Management e. Lead Auditor Licence and Regulatory Compliance f. Auditor Retail Supply



1.3.5 Audit grades

The audit grade definitions used in assessing the auditee’s performance against the requirements are set out in Figure 1-1.

Figure 1-1. Audit grades



Source: Audit Guideline for Greenfields Schemes, Water Industry Competition Act 2006 (NSW) (IPART 2013)

1.4 Regulatory regime

Flow Systems operates largely in a NSW context but must also have regard to matters outside of that jurisdiction, where those matters may affect how it does business. A summary of the key legal and regulatory instruments for Flow Systems is provided in Table 1-5.¹

Table 1-5. Key legal and formal instruments relevant to Flow Systems’ operating licence

Instrument	Relevance
<i>Competition and Consumer Act 2010</i> (Cth)	An Act for the promotion of competition and fair trading and provision for consumer protection. Could apply to the ‘fitness for purpose’ of any product or service supplied including drinking water and recycled water.
Current versions of the Australian Drinking Water Guidelines and the Australian Guidelines for Water Recycling	These guidelines are called up under the WIC Regulations
Licence	A licence issued by IPART NSW, which enables Flow Systems to provide relevant services within its area of operations.
<i>Independent Pricing and Regulatory Tribunal Act 1992</i> (NSW)	Allows for the regulation of utilities such as Flow Systems including the administration and auditing of licences.

¹ Intended to be illustrative, not exhaustive, for the purposes of this report.



Instrument	Relevance
<i>Protection of the Environment Operations Act 1997 (NSW)</i>	This Act sets out the environmental operating context for Flow Systems.
<i>Public Health Act 2010 (NSW)</i>	The objectives of this Act are to protect and promote public health, control risks to public health, promote the control and prevent the spread of infectious diseases and recognise the role of local governments in protecting public health. Supporting Regulations are intended to support the smooth operation of the Act. Flow Systems has obligations under this Act including notifying the Minister of any situation that is likely to be a risk to public health.
<i>Water Industry Competition Act 2006 (NSW)</i>	The WIC Act includes provisions for a new licensing regime for private sector providers of reticulated drinking water, recycled water and sewerage services. This Act gives effect to the operational audits (this audit) to which Flow Systems is subject.
<i>Plumbing and Drainage Act 2011 (NSW)</i>	This Act requires plumbing and drainage work to be carried out only by authorised persons, to comply with the Plumbing Code of Australia and to use only authorised (WaterMark) fittings. The Act establishes requirements for plumbers carrying out plumbing and sanitary drainage work, provides regulatory powers to the plumbing regulator and establishes a mandatory inspection scheme for compliance with prescribed codes and standards.

1.5 Quality assurance process

Checks of information received were conducted and included aspects such as dates for audit scope compliance, veracity of information, coverage of the subject area being audited and depth of implementation. Professional scepticism (as per ASAE 3100) was applied as part of the document review and on-site audit. Our quality assurance approach to this audit involved peer review from a qualified auditor (Dr Annette Davison) who was not part of the on-site audit.



2 Audit findings

2.1 Recommendations

Aspect	Licence Clause	Recommendation
Obligations for water supply infrastructure	WIC Reg Sch 1 cl. 6(2)(a)	<p>R 6-1 Flow Systems should conduct a thorough review of its Infrastructure Operating Plan to ensure the Infrastructure Operating Plan documents what is occurring across its schemes in practice, this review should include a thorough review of the Incident Management Plan and Asset Management Plan and supporting procedures and processes (including Forms A and B).</p> <p>R 6-2 Flow Systems should review document management in its BMS to ensure only current and approved versions are accessible for operational use.</p> <p>R6-3 Flow Systems should develop triggers and escalation measures to ensure that scheme expansion occurs in a sufficiently timely manner so customer's levels of service are not impacted by the increased water demand.</p>
	WIC Reg Sch 1 cl. 7(4)(a)	<p>R 7-1 The Recycled Water Quality Plan should be reviewed to ensure it documents Flow Systems current approach to recycled water management. References to supporting documentation should be cross-checked to confirm they exist and are current.</p> <p>R7-2 The Drinking Water Quality Plan should be reviewed to ensure it documents Flow Systems current approach to drinking water management. References to supporting documentation should be cross-checked to confirm they exist and are current. Attention should be given to drinking water verification including sampling locations and frequency triggers.</p>
Obligations for sewerage infrastructure	WIC Reg Sch 1 cl. 14(3)(a)	<p>R14-1 The Sewage Management Plan should be reviewed to ensure it documents Flow Systems current approach to sewage management. References to supporting documentation should be cross-checked to confirm they exist and are current.</p>

2.2 Opportunities for improvement

The following opportunities for improvement were identified:

OFI 7-1 Update s7.1 in the Recycled Water Quality Plan to remove the notification phone numbers and replace with a link to the Stakeholder Register.

OFI 7-2 Consider opportunities to embed testing of the Incident Management Plan and associated staff training as part of the post incident review.

OFI 7-3 Consider on-line monitoring of key drinking water quality parameters at the Hunter Water transfer point to provide real-time water quality verification. Develop appropriate action triggers or automated shutoff if water quality is not acceptable.

OFI 7-4 Review the resourcing requirements to ensure documentation is and remains aligned with current practice and regulatory requirements.



Appendix A Detailed findings: General obligations for a network operator

WIC Regulation Schedule 1 Clause 1(2)

Subclause	Requirement	Compliance grade
WIC Reg Sch1 cl. 1(2)	(a) A network operator must immediately notify IPART of any incident in the conduct of activities that threatens, or could threaten water quality, public health or safety	Compliant
	(b) A network operator must immediately notify the Minister administering the Public Health Act 2010 (NSW) and the Public Health Regulation 2012 (NSW) of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety	Compliant
	(c) A network operator must immediately notify the Minister administering Part 2 of the Water Industry Competition Act 2006 (NSW) of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety	Compliant
	(e) A network operator must immediately notify any other licensed network operator or public water utility whose infrastructure is connected to the licensee's infrastructure, of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety	Compliant
Risk	Target for full compliance	
High	That incidents that threaten, or could threaten water quality, public health or safety are immediately notified to IPART, the appropriate Ministers via their delegated agencies and Hunter Water.	

Evidence sighted

Interviews with:

- Executive Manager Utility Operations
- HSE Manager
- Risk & Compliance Manager

Site inspection of Cooranbong

Incident Register

Incident Report Form Cooranbong Drinking Water Outage 3/2/17

Cooranbong Scheme Management Plan (Version 3 - 24/5/11, Version 4 - 24/10/16, Version 5 - 2/11/16)

Incident Notification Protocol with NSW Health for Supply of Drinking Water & Supply of Recycled Water (Version 2 15/1/15)

Forms A and B Incident Notification Cooranbong (CO-WAT-AUS-FM-INC-1254-0)

Summary of reason for grade

No evidence was found of a water quality, public health or safety incident that required notification under this sub clause. Flow Systems is therefore complaint with the requirements of this sub-clause. Flow Systems has an incident notification protocol with NSW Health.



Discussion and notes

The licensee was asked if there had been any incidents during the audit period that could have threatened water quality, public health or safety. Flow Systems reported no incidents that meet these criteria.

The incident register was reviewed. The register recorded one supply outage at Cooranbong on 3rd February 2017. This outage was from a pipeline break in the Hunter Water network that also affected approximately 5,000 Hunter Water customers. The auditor concurs with Flow Systems that this sub-clause was not triggered by the outage event because the incident did not threaten water quality, public health or safety.

Recommendations

No recommendations were made.

Opportunities for improvement

No opportunities for improvement were identified.



WIC Regulation Schedule 1 Clause 2(1)-2(2)

Table 2-1. WIC Regulation Schedule 1 Clause 2(1)-2(2)

Subclause	Requirement	Compliance grade
WIC Reg Sch1 cl. 2(1)	A network operator must not bring any new water or sewerage infrastructure into commercial operation without the written approval of the Minister.	Compliant
WIC Reg Sch1 cl. 2(2)	(a) The network operator must provide to the Minister a report, prepared by an approved auditor that indicates the infrastructure complies with the requirements of the Regulation and any licence conditions. (b) The network operator must provide to the Minister a report, prepared by an approved auditor that indicates that the infrastructure is capable of operating safely and in accordance with its infrastructure operating plan and its water quality or sewage management plan, as the case requires.	No requirement
Risk	Target for full compliance	
Medium	No new water or sewerage infrastructure has been brought into commercial operation without the written approval of the Minister.	

Evidence sighted

Interviews with:

- Executive Manager Utility Operations
- HSE Manager
- Risk & Compliance Manager

Site inspection of Cooranbong

Infrastructure Operating Plan (Version 6 - 25/5/16, Version 7 - 21/10/16, Version 8 - 21/12/16)

Summary of reason for grade

Network reticulation was constructed during the audit period and an additional 94 customers were connected to the Cooranbong scheme. Under the WIC Regulation, the new network reticulation does not constitute new infrastructure as it did not involve different technology and was not inconsistent with the Infrastructure Operating Plan or Water Quality Plans.

Discussion and notes

The WIC Regulation Schedule 1 (c) states:

For the purposes of this clause, infrastructure that extends or expands existing infrastructure is not new infrastructure unless its design, construction or operation:

(a) involves different technology to that used in connection with the existing infrastructure, or

(b) is inconsistent with the infrastructure operating plan, or the water quality plan or sewage management plan, for the existing infrastructure.

Ministerial approval is not required for the construction of additional network reticulation under previous approved and audited master plans nor does the connection of additional customers trigger this sub-clause.

During the site visit the auditor checked with the auditee and observed that new infrastructure that had been constructed under this clause had not been brought into commercial operation.

Therefore, Flow System is compliant with WIC Regulation Schedule 1 clause 2(1) and there was no requirement for compliance with Clause 2(2).



Recommendations

No recommendations were made.

Opportunities for improvement

No opportunities for improvement were identified.



WIC Regulation Schedule 1 Clause 3(c)

Table 2-2. WIC Regulation Schedule 1 Clause 3(c)

Subclause	Requirement	Compliance grade
WIC Reg Sch1 cl. 3(c)	The water or sewerage infrastructure is properly designed and constructed, operated in a safe and reliable manner and maintained in a proper condition, having regard to any publicly available standards or codes relating to its design, construction, operation and maintenance.	Compliant
Risk	Target for full compliance	
High	Water or sewerage infrastructure has been properly designed and constructed, operated safely and maintained in a proper condition.	

Evidence sighted

Interviews with:

- Executive Manager Utility Operations
- HSE Manager
- Risk & Compliance Manager

Site inspection of Cooranbong

Infrastructure Operating Plan (Version 6 - 25/5/16, Version 7 - 21/10/16, Version 8 - 21/12/16)

Asset Management Plan (Version 2 - 22/11/16)

Pitt Town Masterplan Design Report (Issue C 19/7/10)

Blighton Subdivision Work as Executed 9/6/2017

Email HSE Manager to Auditor 16/2/2017 stating the standards are the same for every scheme.

Summary of reason for grade

The Infrastructure Operating Plan and supporting design documents refer to appropriate codes and standards. While the observable infrastructure was limited at the site visit, the infrastructure that could be observed was found to be compliant with the WSAA Codes.

Discussion and notes

The auditor did not consider in detail whether the equipment in operation was designed or constructed in a safe manner as this fell outside the audit period and had been audited prior to the scheme commencement.

The Infrastructure Operating Plan states that

“Infrastructure is designed and constructed to the following standards:

- *Water Services Association of Australia Water Supply Code of Australia (WSA-03)*
- *Water Services Association of Australia Pressure Sewer Code of Australia (WSA-07)*
- *Plumbing Code of Australia – Volume 3*
- *AS3000 Wiring Rules*
- *AS3735 Concrete Structures Retaining Liquids*
- *Flow’s Design Standards.”*

The WSAA Codes contain detailed references to specific standards such as *AS/NZS 4020 Testing of products for use in contact with drinking water*. The Codes are appropriate for use as overarching design standards. The auditor notes the reference to the *Plumbing Code of Australia Volume 3* should be *National Construction Code Volume 3 Plumbing Code of Australia*.



The auditor requested a copy of Flow's Design Standards and was provided with Pitt Town's Masterplan Design Report and Blighton Subdivision Work as Executed drawings. The cover e-mail advised these standards were the same for every scheme.

The above-ground infrastructure at Cooranbong was limited and the auditor could not assess the in-ground infrastructure. Sites where pipework to the house had been completed were inspected. Lock-outs on the meters were observed as was the lilac colour-coding for recycled water (as required by Table 4.1 of WSA-03). It was noted that flushing points for the sewer had been located near recycled water hydrants which reduces the manual handling associated with sewer flushing (e.g. for septicity control).

Flow Systems' approach to asset management, planned and reactive maintenance is discussed and graded in WIC Regulation Schedule 1 6(2)(a).

Recommendations

No recommendations were made.

Opportunities for improvement

No opportunities for improvement were identified.



Appendix B Detailed findings: Obligations for infrastructure

WIC Regulation Schedule 1 Clause 6(2)(a)

Subclause	Requirement	Compliance grade
WIC Reg Sch1 cl. 6(2)(a)	The network operator must ensure that its infrastructure operating plan is fully implemented and kept under regular review and, in particular, that all of its activities are carried out in accordance with that plan.	Non-compliant Insignificant
Risk	Target for full compliance	
High	Evidence that the infrastructure operating plan is fully implemented, regularly reviewed and that all of its activities are carried out in accordance with the plan.	

Evidence sighted

Interviews with:

- Executive Manager Utility Operations
- HSE Manager
- Risk & Compliance Manager

Infrastructure Operating Plan (Version 6 - 25/5/16, Version 7 - 21/10/16, Version 8 - 21/12/16)

Cooranbong Scheme Management Plan (Version 3 - 24/5/11, Version 4 - 24/10/16, Version 5 - 2/11/16)

Asset Management Plan (Version 2 - 22/11/16)

Incident Management Plan (Version 5 – 25/8/16, Version 6 14/10/16)

Incident Report and Investigation Form

Summary of reason for grade

Flow Systems has procedures and practices in place that meet the intent of the requirements of the Infrastructure Operating Plan. There are discrepancies between what is documented in the overarching Infrastructure Operating Plan, what is documented in the supporting documentation and what is undertaken in practice. While the overarching Infrastructure Operating Plan has been reviewed within the audit period, the discrepancies mean the auditor cannot find that all of Flow's activities were carried out in accordance with the plan. Based on the sampling undertaken by the auditor, the issues did not adversely impact the ability of the licensee to achieve defined objectives nor assure controlled processes, products and outcomes during the audit period.

Discussion and notes

The Infrastructure Operating Plan is built up through a range of documents and work flow practices. There is an overarching Infrastructure Operating Plan covering all of the Flow Systems operations. There is an Asset Management Plan that also describes Flow Systems' approach to Asset Management. The Cooranbong Scheme Management Plan contains scheme specific information relevant to Cooranbong.

A mix of computerised preventative maintenance and other systems is currently being used for preventive maintenance. As the scheme matures, additional formalisation of preventive maintenance programs, documentation and review will be required to support the appropriate management of assets. Currently there is limited infrastructure that requires yearly (or more frequent) maintenance so the current approach is considered acceptable.

Preventive maintenance is set up based on manufacturers' recommendations. Executive Manager Utility Operations advised that the preventive maintenance schedule was reviewed on-line. Auditable evidence of this review was not available.



The Infrastructure Operating Plan is subject to annual reviews. A review was completed in the audit period (21/12/16).

During the interviews the auditor noted there were a number of aspects where statements in the Infrastructure Operating Plan did not align with Flow Systems' practices during the audit period.

The Infrastructure Operating Plan (p32) states there are detailed contingency plans in the Incident Management Plan. These plans are not contained in the Incident Management Plan. During the audit interviews the Risk & Compliance Manager stated Flow Systems had drafted these plans but decided a flow chart would provide a better approach. Flow charts had been developed but weren't in use during the audit period. The Operations Incident Reporting and Investigation procedure has a flowchart in the back. The general incident reporting form contains reporting prompts. During the audit interview, a lack of clarity regarding the current NSW Health Incident Notification Procedure was noted.

The mechanisms for continuity of drinking water supply documented in the Infrastructure Operating Plan didn't align with the infrastructure in place at Cooranbong. This meant that different a different process to that documented in the Infrastructure Operating Plan was implemented. Flow Systems was able to make water available to customers until the supply had been restored. Flow System's response to the outage was to send SMS and Email notifications to affected customers, dispatch a water tanker to provide access to bulk water for toilet flushing and deliver bottled water to each affected customer.

The contact number for IPART on Forms A and B is not consistent with the *Incident Notification by Network Operators and Retail Suppliers* (IPART, March 2016).

The auditor has made a recommendation to review the Infrastructure Operating Plan and its supporting documentation to ensure these documents reflect current practice.

While the Infrastructure Operating Plan contains generic descriptions of how the schemes are designed and operated, there were some areas that appeared related to a specific scheme without explicitly stating so (e.g. p18, p19). The recommendation regarding Infrastructure Operating Plan review should address this issue.

The Infrastructure Operating Plan stated that scheme Operational Scenarios Modelling is used to ensure storage needs to ensure continuity of supply. The auditor noted that low pressure was reported across summer (16/17) by Cooranbong residents. While outside the audit period, this issue indicates that works that should have occurred during the audit period were not progressed sufficiently in the audit period to avoid these low pressure issues.

Recommendations

R 6-1 Flow Systems should conduct a thorough review of its Infrastructure Operating Plan to ensure the Infrastructure Operating Plan documents what is occurring across its schemes in practice, this review should include a thorough review of the Incident Management Plan and Asset Management Plan and supporting procedures and processes (including Forms A and B).

R 6-2 Flow Systems should review document management in its BMS to ensure only current and approved versions are accessible for operational use.

R6-3 Flow Systems should develop triggers and escalation measures to ensure that scheme expansion occurs in a sufficiently timely manner so customer's levels of service are not impacted by the increased water demand.

Opportunities for improvement

No opportunities for improvement were identified.



WIC Regulation Schedule 1 Clause 7(4)(a)

Subclause	Requirement	Compliance grade
WIC Reg Sch1 cl. 7(4)(a)	The network operator must ensure that its water quality plan is fully implemented and kept under regular review and, in particular, that all of its activities are carried out in accordance with that plan.	Non-compliant Insignificant
Risk	Target for full compliance	
High	Evidence that the water quality plan is fully implemented, regularly reviewed and that all of its activities are carried out in accordance with the plan.	

Evidence sighted

Interviews with:

- Executive Manager Utility Operations
- HSE Manager
- Risk & Compliance Manager

Recycled Water Quality Plan (Version 5 - 25/5/16, Version 6 2- 1/10/16, Version 7 - 25/7/17, Version 8 - 31/8/17)

Drinking Water Quality Plan (Version - 4 8/9/15, Version 5 - 22/11/16, Version - 31/8/17)

Audit, Risk & Compliance Committee Meeting April 2017 Minutes

Audit, Risk & Compliance Committee Meeting September 2017 Minutes

Monthly Report - Risk & Compliance April 2017

Monthly Report - Risk & Compliance September 2017

Asset Management Plan (Version 2 - 22/11/16)

Summary of reason for grade

Flow Systems has procedures and practices in place that meet the intent of the requirements of the Drinking and Recycled Water Quality Plans. There are discrepancies between what is documented in the overarching Water Quality Plans, what is documented in the supporting documentation and what is undertaken in practice. While the overarching Water Quality Plans have been reviewed within the audit period, the discrepancies mean the auditor cannot find that all of Flow's activities were carried out in accordance with the plan. Based on the sampling undertaken by the auditor, the issues did not adversely impact the ability of the licensee to achieve defined objectives nor assure controlled processes, products and outcomes during the audit period.

Discussion and notes

The implementation of Cooranbong's Drinking and Recycled Water Quality Plan was audited under this sub-clause.

Flow Systems manages its water products through its Drinking and Recycled Water Quality Plan, the Scheme Specific Management Plan and a range of supporting organisation-wide and scheme specific documentation. The water quality management plans are structured around the 12 elements in the framework. Key audit findings are reported below.

Risk Assessment

There is a risk assessment for the scheme that meets the requirements of the AGWR and ADWG. Both the Drinking and Recycled Water Quality Plan state the risk assessment will be reviewed annually. The Cooranbong Scheme Risk Register had been reviewed on 30/11/16. During the site visit the auditor verified that controls identified in the risk assessment were in place in the field.

Verification Monitoring

Flow Systems advised that monthly water verification sampling was occurring for Cooranbong. The samples were being taken from near the connection with the public water utility. Given the population increase in the scheme, a threshold for monitoring frequency had been passed in the



audit period. Drinking water verification monitoring should be fortnightly when the scheme population is between 100 and 500. The auditor also noted the NSW Health Drinking Water Monitoring Program (2005) and ADWG provide guidance on the selection of sampling locations through the reticulation system for drinking water verification. This contrasts to Flow Systems current practice of sampling at the public water utility connection point.

Incident Management

Flow Systems incident management systems were exercised during the audit period as a result of a live incident. A Hunter Water main failed and over 500 Hunter Water Customers as well as Flow Systems were without main supply for over 5 hours. The auditor notes that due to the different regulatory regimes, Flow System's response to this incident (providing bottled water to call customers and making tankered water available for toilet flushing during this outage) provided a greater level of service that was received by Hunter Water's customers. Incidents are also discussed under WIC Regulation Schedule 1 Clause 1(2).

Community Engagement

Flow Systems has excellent community engagement materials on its website including clear explanation of treatment processes. The auditor can independently verify that during the audit period Flow Systems had undertaken tours of its other recycling facilities for industry, university academics and students.

Documentation

The auditor noted a number of aspects when the suite of documentation was not complete:

1. Issues associated with the incident management plan and notification protocol for NSW Health were noted in WIC Regulation Schedule 1 Clause 7(4)(a).
2. The Monitoring and Sampling Plan called up in both the Drinking and Recycled Water Quality Plans refers to a scheme specific monitoring and sampling programme. When viewed during the interviews, these spreadsheets were marked draft and did not include drinking water quality in the programme.
3. The Recycled Water Quality Plan (p48) makes reference to specific documented plans for eight incidents. As noted in WIC Regulation Schedule 1 Clause 7(4)(a), Flow System is not using detailed plans to manage incidents so the reference to these documented response plans is not correct.

The auditor noted a number of aspects where the documentation did not reflect what occurred in practice:

1. The Incident Management Plan (p31) states that refresher and scenario training should be provided at appropriate intervals and no greater than 12 months. This training was not undertaken during the audit period. Given the frequency at which Flow Systems managed incidents across its sites, the auditor considers this a documentation issue, rather than a potential skill gap. A recommendation is made to update the Incident Management Plan to reflect the current practice. There is also an OFI to utilise incidents as opportunities to train staff and test the incident management plan and its supporting processes.
2. The Recycled Water Management Plan (s7.1) contains a list of stakeholders and contact numbers.

The auditor has noted an OFI that these are removed and replaced with a link to the stakeholder register as the NSW Fire & Rescue local station number (08 8087 2233) is for the Broken Hill Fire Station.

Recommendations

R 7-1 The Recycled Water Quality Plan should be reviewed to ensure it documents Flow Systems current approach to recycled water management. References to supporting documentation should be cross-checked to confirm they exist and are current.



R7-2 The Drinking Water Quality Plan should be reviewed to ensure it documents Flow Systems current approach to drinking water management. References to supporting documentation should be cross-checked to confirm they exist and are current. Attention should be given to drinking water verification including sampling locations and frequency triggers.

Opportunities for improvement

OFI 7-1 Update s7.1 in the Recycled Water Quality Plan to remove the notification phone numbers and replace with a link to the Stakeholder Register.

OFI 7-2 Consider opportunities to embed testing of the Incident Management Plan and associated staff training as part of the post incident review.

OFI 7-3 Consider on-line monitoring of key drinking water quality parameters at the Hunter Water transfer point to provide real-time water quality verification. Develop appropriate action triggers or automated shutoff if water quality is not acceptable.

OFI 7-4 Review the resourcing requirements to ensure documentation is and remains aligned with current practice and regulatory requirements.



WIC Regulation Schedule 1 Clause 11

Subclause	Requirement	Compliance grade
WIC Reg Sch1 cl. 1(11)	The licensee must not allow a customer's installation to be connected to a licensee's water main unless the installation is code compliant (within the meaning of the <i>Plumbing and Drainage Act 2011</i>)	Compliant
Risk	Target for full compliance	
Medium	Customer installation to a Licensee water main must be code compliant (within the meaning of the <i>Plumbing and Drainage Act 2011</i>)	

Evidence sighted

Infrastructure Operating Plan (Version 6 - 25/5/16, Version 7 - 21/10/16, Version 8 - 21/12/16)
 Interview with Executive Manager Utility Operations
 Netsuite Customer Management System
 Drinking Water Quality Plan (Version - 4 8/9/15, Version 5 - 22/11/16, Version - 31/8/17)

Summary of reason for grade

Flow Systems does not connect customers to its water main until they have received evidence from NSW Department of Fair Trading or a delegated inspector that the customer's installation is code compliant under the *Plumbing and Drainage Act 2011* (NSW).

Discussion and notes

Flow uses Netsuite as its Customer Management System. Flow does not connect customers until they have received evidence that the customers installation has been certified as code compliant under the *Plumbing and Drainage Act 2011*. This evidence is associated with the customer record.

The auditor viewed a photograph, held in Netsuite, of the Department of Fair Trading Sticker #14962 for a site in Cooranbong that was connected on 23/6/17. During the site visit lock meters were observed where household connections had not yet been made.

Recommendations

No recommendations were made.

Opportunities for improvement

No opportunities for improvement were identified.



WIC Regulation Schedule 1 Clause 10(a)

Subclause	Requirement	Compliance grade
WIC Reg Sch1 cl. 10(a)	The network operator under a licence for water infrastructure to supply non-potable water for a particular purpose must ensure that the water supplied is fit for that purpose.	No requirement
Risk	Target for full compliance	
High	Non-potable water meets the requirement for the purposes for which its used (as per the requirements in the <i>Australian Guidelines for Water Recycling</i>)	

Evidence sighted

Site visit Cooranbong

Summary of reason for grade

Cooranbong currently supplies potable water through its recycled water line. As non-potable water is not being supplied there is no requirement to comply with this clause and the water being of a potable nature, is inherently fit for purpose.

Recommendations

No recommendations were made.

Opportunities for improvement

No opportunities for improvement were identified.



WIC Regulation Schedule 1 Clause 14(3)(a)

Subclause	Requirement	Compliance grade
WIC Reg Sch1 cl. 14(3)(a)	A network operator must ensure its sewage management plan is fully implemented and kept under regular review and all its activities are carried out in accordance with the plan.	Non-compliant Insignificant
Risk	Target for full compliance	
Medium	Evidence that the sewage management plan is fully implemented, regularly reviewed and that all of its activities are carried out in accordance with the plan.	

Evidence sighted

Sewage Management Plan (Version 3 - 23/3/16, Version 4 - 18/5/17)

Cooranbong Scheme Management Plan (Version 3 - 24/5/11, Version 4 - 24/10/16, Version 5 - 2/11/16)

Operations Environmental Management Plan (Version 3 – 7/1/16, Version 4 - 2/6/2017)

Operations Incident Management, Reporting and Investigation Procedure, FS-WAT-AUS-PR-INC-1295, 22/7/2015

Incident Management Plan (Version 5 – 25/8/16, Version 6 14/10/16)

Asset Management Plan (Version 2 - 22/11/16)

Incident Register

Incident Report and Investigation Form FS-ALL-AUS-FM-INC-1292

Monitoring and Sampling Plan (Version - 5 8/9/15, Version - 6 22/11/16)

Interviews with:

- Executive Manager Utility Operations
- HSE Manager
- Risk & Compliance Manager

Summary of reason for grade

Flow Systems has procedures and practices in place that meet the intent of the requirements of the Sewage Management Plan. There are discrepancies between what is documented in the overarching Sewage Management Plan, what is documented in the supporting documentation and what is undertaken in practice. While the overarching Sewage Management Plan has been reviewed within the audit period, the discrepancies mean the auditor cannot find that all of Flow's activities were carried out in accordance with the plan. Based on the sampling undertaken by the auditor, the issues did not adversely impact the ability of the licensee to achieve defined objectives nor assure controlled processes, products and outcomes during the audit period.

Discussion and notes

The Sewage Management Plan is built up through a range of documents and work flow practices. There is an overarching Sewage Management Plan covering all of the Flow Systems operations. There is an Asset Management Plan that also describes Flow Systems' approach to Asset Management. The Cooranbong Scheme Management Plan contains scheme specific information relevant to Cooranbong. The Responsibilities and Authorities matrix outlines the requirements of the plan. As noted earlier this matrix requires review to ensure responsibilities are appropriately allocated.

The Sewage Management Plan is supported by a range of documents. There is the scheme specific management plan and scheme specific risk assessment.

There is a scheme specific management plan, risk assessment and monitoring programme. The auditor noted that the Scheme specific monitoring program was still in draft for Cooranbong. Review of the Cooranbong Risk Assessment identified a control was hydrants on recycled water mains



adjacent to pressure sewer flushing points to assist flushing. This was verified as being in place on site.

Other company-wide systems also support the Sewage Management Plan. Commentary previously provided on the Incident Management Plan (WIC Regulation Schedule 1 Clause 7(4)(a)) and Asset Management Plan and Asset Management System (WIC Regulation Schedule 1 Clause 6(2)(a)) are also relevant. The issues with currency of these supporting documents is why this clause has been graded as non-compliant insignificant.

Recommendations

R14-1 The Sewage Management Plan should be reviewed to ensure it documents Flow Systems current approach to sewage management. References to supporting documentation should be cross-checked to confirm they exist and are current.

Opportunities for improvement

No opportunities for improvement were identified.



Appendix C Detailed findings: Schedule B obligations

Licence clause B11

Subclause	Requirement	Compliance grade
Licence clause B11	If the Licensee proposes to operate the Specified Water Industry Infrastructure to supply water for an end use which is not set out in the most recent Water Quality Plan provided by IPART, the Licensee must notify IPART in writing at least 3 months before commencing such operation.	No requirement
Risk	Target for full compliance	
High	IPART must be notified 3 months before commencing operation of an end use not set out in the most recent water quality plan	

Evidence sighted

Site visit to Cooranbong 5/2/2018

Summary of reason for grade

The Licensee did not propose to operate the Specified Water Industry Infrastructure for an end use not set out the in Water Quality Plan. Therefore there was no requirement to notify IPART.

Recommendations

No recommendations were made.

Opportunities for improvement

No opportunities for improvement were identified.



Licence clause B13

Subclause	Requirement	Compliance grade
Licence clause B13	<p>This clause B13 applies each time if the Licensee has brought any of the specified Water Industry infrastructure into commercial operation. The licensee must</p> <ul style="list-style-type: none">(a) Notify IPART in accordance with the Reporting Manual that it has brought the relevant Specified Water Industry Infrastructure into commercial operation; and(b) provide such notification within 10 days after it has brought the relevant Specified Water Industry Infrastructure into commercial operation	No requirement
Risk	Target for full compliance	
Medium	IPART must be notified (within 10 days) each time Water Industry infrastructure is brought into commercial operation (in accordance with the Reporting Manual)	

Evidence sighted

Cooranbong Scheme Management Plan (Version 3 - 24/5/11, Version 4 - 24/10/16, Version 5 - 2/11/16)

Site visit

Infrastructure Operating Plan (Version 6 - 25/5/16, Version 7 - 21/10/16, Version 8 - 21/12/16)

Interviews with:

- Executive Manager Utility Operations
- HSE Manager

Summary of reason for grade

This clause applies when specified water industry infrastructure is brought into operation. Flow Systems did not bring any specified water industry infrastructure into commercial operation during the audit period in relation to this clause. Therefore, they had no requirement to notify IPART.

Discussion and notes

The specified water industry infrastructure for Cooranbong is:

Non-potable water:

A treatment plant for non-potable water and other water infrastructure used, or to be used, in connection with the treatment plant, where components of the treatment plant or the other water infrastructure may also be used for one or more of the following:

- a) production of non-potable water;*
- b) treatment of non-potable water;*
- c) filtration of non-potable water;*
- d) storage of non-potable water; and*
- e) conveyance of non-potable water.*

A reticulation network for non-potable water and other water infrastructure used, or to be used, in connection with the reticulation network, where components of the reticulation network or the other water infrastructure may also be used for one or more of the following:

- a) storage of non-potable water;*
- b) conveyance of non-potable water; and*



Drinking water:

A reticulation network for drinking water and other water infrastructure used, or to be used, in connection with the reticulation network, where components of the reticulation network or the other water infrastructure may also be used for one or more of the following:

- a) storage of drinking water;*
- b) conveyance of drinking water; and*
- c) treatment of drinking water.*

Sewerage services

A treatment plant for sewage and other sewerage infrastructure used, or to be used, in connection with the treatment plant, where components of the treatment plant or the other sewerage infrastructure may also be used for one or more of the following:

- a) production of treated non-potable water from sewage;*
- b) treatment of sewage;*
- c) filtration of sewage;*
- d) storage of sewage; and*
- e) conveyance of sewage.*

A reticulation network for sewage and other sewerage infrastructure used, or to be used, in connection with the reticulation network, where components of the reticulation network or the other sewerage infrastructure may also be used for one or more of the following:

- a) storage of sewage; and*
- b) conveyance of sewage.*

No infrastructure meeting this criterion was brought into operation. Therefore there was no requirement for Flow Systems to notify IPART.

Recommendations

No recommendations were made.

Opportunities for improvement

No opportunities for improvement were identified.