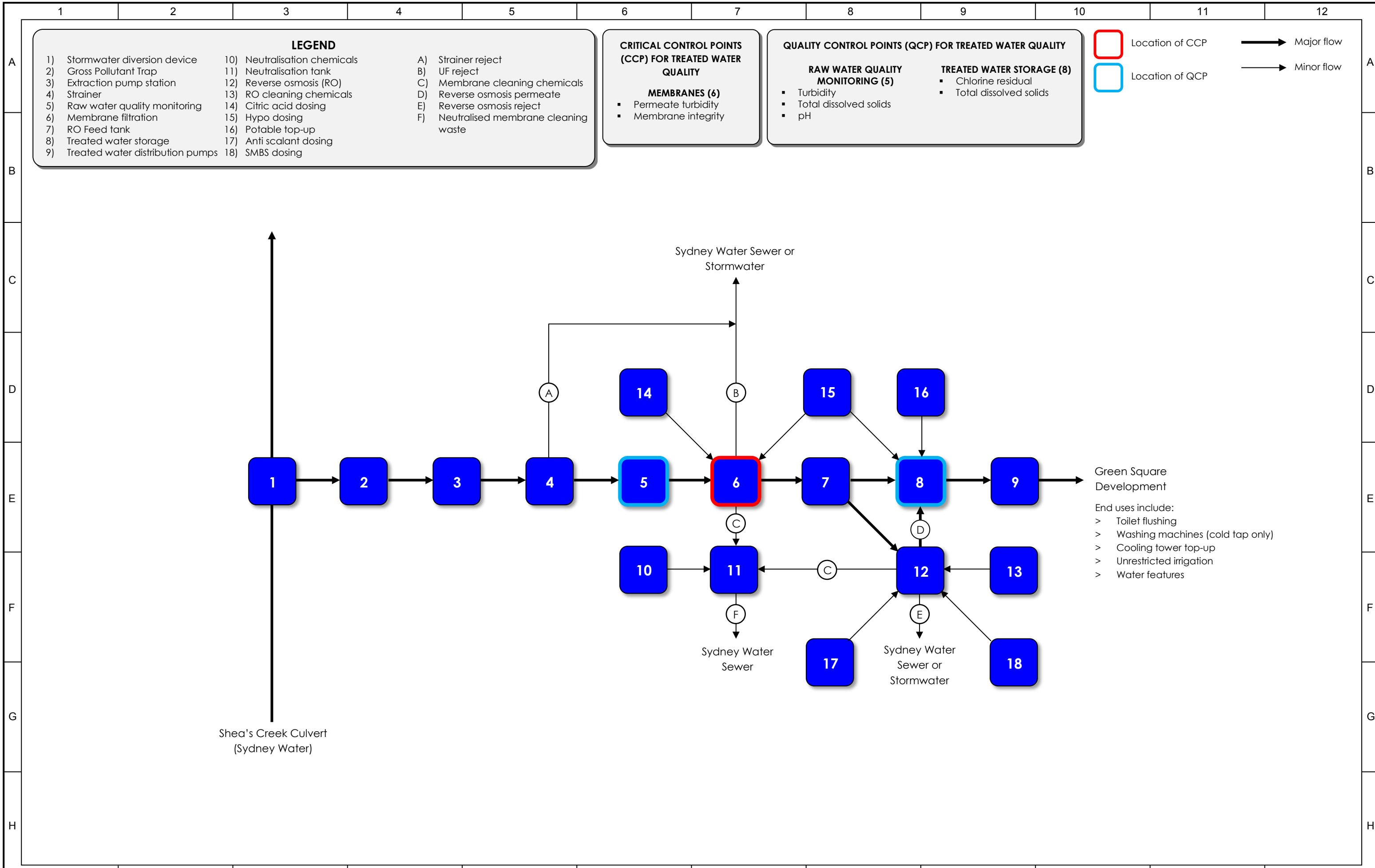


PUBLIC VERSION

4.2 WATER INFRASTRUCTURE – NON-POTABLE WATER

- Appendix 4.2.1 Process Flow Diagram



LEGEND

1) Stormwater diversion device	10) Neutralisation chemicals	A) Strainer reject
2) Gross Pollutant Trap	11) Neutralisation tank	B) UF reject
3) Extraction pump station	12) Reverse osmosis (RO)	C) Membrane cleaning chemicals
4) Strainer	13) RO cleaning chemicals	D) Reverse osmosis permeate
5) Raw water quality monitoring	14) Citric acid dosing	E) Reverse osmosis reject
6) Membrane filtration	15) Hypo dosing	F) Neutralised membrane cleaning waste
7) RO Feed tank	16) Potable top-up	
8) Treated water storage	17) Anti scalant dosing	
9) Treated water distribution pumps	18) SMBS dosing	

CRITICAL CONTROL POINTS (CCP) FOR TREATED WATER QUALITY

MEMBRANES (6)

- Permeate turbidity
- Membrane integrity

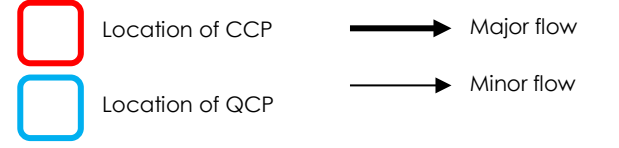
QUALITY CONTROL POINTS (QCP) FOR TREATED WATER QUALITY

RAW WATER QUALITY MONITORING (5)

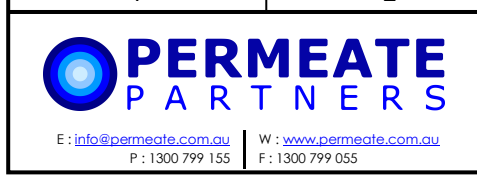
- Turbidity
- Total dissolved solids
- pH

TREATED WATER STORAGE (8)

- Chlorine residual
- Total dissolved solids



- Green Square Development
- End uses include:
- > Toilet flushing
 - > Washing machines (cold tap only)
 - > Cooling tower top-up
 - > Unrestricted irrigation
 - > Water features



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No.	Date	Drafter	Design	Mgmt	Amendment
J	110414		KRD		Minor changes
I	010414		KRD		Minor changes
H	110314		KRD		Minor changes
G	291013		KRD		Minor changes
F	260913		KRD		Minor changes



Name :	Green Square Water		
Project :	Treatment Plant		
Design	Date	Drafting	Date
KRD	110414		

Title :	Process Flow Diagram		
Scale	Permeate Project #	Permeate Drawing #	
NTS	C12061	C12061-200	
Sheet	Client Project #	Client Drawing #	
A3	TBA	TBA	

PUBLIC VERSION

4.2 WATER INFRASTRUCTURE – NON-POTABLE WATER

- Appendix 4.2.11(b) WIC Act NOL Audit Report (Pitt Town)



Independent Pricing and Regulatory Tribunal

Water Industry Competition Act 2006

Network Operator's Licence Audit Report
(initial (pre-commercial operation) stage audit)

Licence No. 10_014: Pitt Town Water Factory Pty Ltd, Pitt Town, Sydney, NSW
(also known as the Pitt Town Scheme)

Pitt Town Water Factory Pty Ltd (ACN 141 705660)

Final Report
30th May 2012

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1 Executive Summary

The purpose of this audit was to assess the adequacy of licence plans in meeting the requirements of the legislation. This infrastructure subject to audit was the Pitt Town Water Factory Pty Ltd (PTWF) Pitt Town Recycled Water Scheme (the Scheme). The scope of this audit was the operation and maintenance of the Scheme which is operated under a WICA Network Operator's Licence. Under the Licence, PTWF must have the licence plans audited by an auditor approved by IPART. The audit was an initial (pre-commercial operation) stage audit of the adequacy of the plans and not a compliance audit.

The auditors referenced the requirements of the audit deed poll and noted the *IPART Audit Guideline Water Industry Competition Act 2006 Water – Guidelines Revision 4 (February 2012)* in conducting the audit, determining audit findings and preparing the report. However, since the audit was started, and the field audit took place, during November 2011, this audit report does not fully reflect the 2012 guidance, even though the report has been issued post the issue of the later guidance. This report fully addresses the *IPART Audit Guideline Water Licence Audits Revision 2 (September 2009)* and partly addresses some aspects of the later guidance. This audit report should not be considered to constitute a document that complies with the later guidance and should not be used as a template or an example by other auditors or Licence Holders that are being audited against the more recent guidance.

The auditors were provided with sufficient and appropriate evidence, as described in *IPART Audit Guideline Water Industry Competition Act 2006 Water – Guidelines Revision 4 (February 2012)* on which to base their conclusions. The audit report findings accurately reflect the professional opinion of the auditors.

The audit report findings have not been unduly influenced by the licence holder nor any of its associates and expresses the auditors' opinions as to whether the licence holder has met the licence conditions and regulatory requirements as specified in the scope.

The audited infrastructure complied with the audited requirements of the Regulation and licence conditions, and was found to be capable of operating safely and in accordance with its Infrastructure Operating Plan (IOP), Water Quality Plan (WQP) and Sewage Management Plan (SMP) and other aspects of the licence and regulations. The licence holder audited (PTWF) was found to be operating the infrastructure in compliance with the audit criteria.

In the opinion of the auditors, the licence holder can commence commercial operation for the safe and reliable supply of fit-for-purpose water. There need be no hesitation in approving the commercial operation of the assets operated under this WICA licence.

The audit finding for a number of the assessed criteria was Adequate rather than Fully Adequate. In addition, some opportunities for improvement were identified against criteria that were assessed as Fully Adequate. However, there were no non-compliances or inadequacies that presented an immediate, significant risk to public health and safety, the environment, customer relations, operations, financial viability or scheme reliability.

The detailed audit findings are presented against the relevant criteria in five attachments, as follows:

- Attachment 1. Infrastructure Operating Plan
- Attachment 2. Water Quality Plan
- Attachment 3. Sewage Management Plan
- Attachment 4. Network Operator's Licence
- Attachment 5. Water Industry Competition (General) Regulation 2008

2 Introduction

2.1 Objectives

The purpose of this audit was to assess the adequacy of licence plans in meeting the requirements of the legislation.

2.2 Licensee's infrastructure, systems and procedures

This infrastructure subject to audit was the Pitt Town Water Factory Company Pty Ltd (PTWF) Pitt Town Recycled Water Scheme (the Scheme). There were three plans that were audited, as follows:

- The Infrastructure Operating Plan (IOP) (for both the Sewerage System and the Recycled Water Treatment Plant).
- The Water Quality Plan (WQP).
- The Sewage Management Plan (SMP).

2.3 Audit method

2.3.1 Audit scope

The scope of this audit was the operation and maintenance of the Scheme which is operated under a WICA Network Operator's Licence. Under the Licence, PTWF must have the licence plans audited by an auditor approved by IPART. The audit was an initial (pre-commercial operation) stage audit of the adequacy of the plans and not a compliance audit. The criteria for the audit for are defined under the *IPART Audit Guideline Water Licence Audits Revision 2 (September 2009)* and some aspects of the *IPART Audit Guideline Water Industry Competition Act 2006 Water – Guidelines Revision 4 (February 2012)*.

2.3.2 Audit standard

The audit approach followed standard audit guidance as set out in, for instance, ISO 19011:2011 Guidelines for auditing management systems.

The auditor and IPART recognise that some information (such as documented reactive maintenance events and performance history) was not be available as the plant and systems are not all operational. Where such exceptions to data availability exist, IPART have advised they will be practical and realistic and the auditor will be reviewing from a system, process and practice perspective. However, where there was no reasonable justification for such omissions (such as the licensee not having installed the asset concerned at the time of audit), then this would likely result in an adverse audit finding.

Audits are by necessity limited to sampling processes. It is not practicable, nor necessary, to inspect 100% of items within an audit scope. Auditing forms part of the broader risk management process by providing an independent check on the veracity of the processes and procedures in place to manage risk. Finding a balance between audit effort and practicality requires the exercise of experienced professional judgement. The amount of effort allocated to this audit has been kept to a reasonable minimum and is summarised in Table 1. More detailed sub-plans are given in following sections of this document.

2.3.3 Audit steps

The audit steps are indicated in Table 1. The field audit, involving interviews on site, took place on Wednesday 23rd November 2011. The detailed audit agenda are given in Tables 2 to 4.

The audit templates used during the audit are attached and form the audit report template. The focus was on substantiating claims and references in the plans and verifying that the plans can and are being operationalised. Where appropriate, the auditors randomly sampled examples sufficient to verify claims made by the licensee.

Quality was assured using a professional review process. Components of the audit report were reviewed by another Panel Member. Specifically, aspects of Dr Deere's work were reviewed and approved by Mr Carpenter, and vice versa.

2.3.3.1 Infrastructure Operating Plan audit

- Purpose:** Verify that the Infrastructure Operating Plan (IOP) was complete and capable of ensuring effective operation of the infrastructure to meet customer level of service and related regulatory compliance requirements.
- Nature of Audit:** Initial (pre-commercial operation) audit of the adequacy of the Infrastructure Operating Plan in accordance with the requirements of Schedule 1 clause 6 (1) and/or clause 13 (1) of the *Water Industry Competition (General) Regulation 2008*.
- Category to be Assessed:** Infrastructure Performance.
- Audit activities:** The site audit focused on assessing the degree of conformity between the as-built system and the descriptions of the system as given in the IOP. In order to test the IOP the auditor reviewed the following referenced systems, processes and practices (as appropriate to the Section of the Plan):
- Policies.
 - Strategies.
 - Plans.
 - Life cycle analyses.
 - Processes and Practices.
 - Data and Knowledge Management Systems.
 - Data and Knowledge.
 - Maintenance and Operation Strategies and associated implementation via Work Instructions and Work Orders for Predictive and Preventive Maintenance and Condition Monitoring Activities.
 - Contingency and Business Continuity Planning.
 - Skills, Training and Resourcing Plans and Records linked to Asset Maintenance and Operational Strategies and Level of Service Specifications.

2.3.3.2 Water Quality Plan audit

- Purpose:** Verify that the Water Quality Plan (WQP) was complete and capable of ensuring that water quality objectives are consistently achieved so that water is fit-for-purpose, and that recycled water is not used for purposes other than those intended and for which it is fit.
- Nature of Audit:** Initial (pre-commercial operation) audit of the adequacy of the Water Quality Plan in accordance with the requirements of Schedule 1 clause 7 (1) of the *Water Industry Competition (General) Regulation 2008*.
- Category to be Assessed:** Water Quality.
- Audit activities:** The site audit focused on assessing the degree of conformity between the as-built system and the descriptions of the system as given in the WQP. In order to test the WQP the auditor reviewed the following referenced systems, processes and practices (as appropriate to the Section of the Plan):
- Recycled Water Quality Policy (or other policy/ies covering this aspect).
 - System description, including water quality process flow diagram, water quality process description and review of historical water quality data.
 - Water quality risk assessment – process adopted and results of assessment.

- Water quality risk management including preventive measures, critical control points, target criteria and critical limits.
- Process control procedures relevant to water quality management including operation, maintenance, calibration, monitoring and response.
- Verification of recycled water quality including laboratory analysis and response to customer complaints and enquiries.
- Recycled water quality incident response plans including notifying customers in the event of recycled water not necessarily being fit-for-purpose.
- Training, awareness and competency systems for operators related to water quality.
- Customer communication protocols related to recycled water quality and use.
- Validation of process controls and systems.
- Supporting documentation, reporting, review and audit, including audit of customers to ensure conformity to intended use restrictions.

2.3.3.3 Sewage Management Plan audit

Purpose: Verify that the Sewage Management Plan (SMP) was complete and capable of ensuring effective management of sewage, involving its conveyance, treatment and disposal, in a manner that meets health, ecological and waste disposal requirements.

Nature of Audit: Initial (pre-commercial operation) audit of the adequacy of the Sewage Management Plan in accordance with the requirements of Schedule 1 clause 14 of the *Water Industry Competition (General) Regulation 2008*.

Category to be Assessed: Sewage Management.

Audit activities: The site audits focused on assessing the degree of conformity between the as-built system and the descriptions of the system as given in the SMPs. In order to test the SMP the auditor reviewed the following referenced systems, processes and practices (as appropriate to the Section of the Plan):

Policy and context:

- Licence conditions issued under the POEO Act 1997 relevant to sewage management (Schedule 1, Clause 14(2)).
- Sewage Management policies and strategies.
- Programs of activities to fully implement the plan, including regular reviews for adequacy and proposed improvement.
- Contingency and Business Continuity Planning, including additional preventative measures where improvements are required.

Waste and site characterisation:

- Processes and Practices of waste characterisation of the sources, characterisation of receiving environment including precursor EIS commitments and approval conditions.
- Flow diagram of the sewage system.

Hazard and risk assessment/management:

- Health assessment including identification of hazardous sources and risk assessment (i.e. events for each component, probability of occurrence of events and measure to prevent occurrences or minimise impacts, and provision of alternate sewerage services, as well as complaints and bad debt recovery procedures).

- Ecological assessment and risk assessment characteristics and sensitivity of receive environment).

Data, monitoring and sampling:

- Data, sampling and knowledge of key characteristics (including performance history) of the sewerage system.

Communications and training:

- Communication strategies with government agencies and the community.
- Skills, Training and Resourcing Plans and Records linked to Asset Maintenance and Operational Strategies and Level of Service Specifications.

Table 1. Approximate time allocated to audit (days) – overall combined audit plan.

Task	Description	Infrastructure Operation Plan and related criteria	Water Quality Plan and related criteria	Sewage Management Plan and related criteria
1	Program and project management of the job in accordance with IPART WICA Auditing Guidelines	0.1	0.1	0.1
2	Plan review, questionnaire and audit preparation	1.5	0.5	0.5
3	Interviews and on site audit assessment against guidelines	1.5	1	0.5
4	Audit gap analysis	1.5	0.5	0.5
5	Prepare draft report	0.2	0.2	0.1
6	IPART/stakeholder/licensee liaison on draft	0.1	0.1	0.1
7	Final report	0.2	0.2	0.1
	Total days	5.1	2.6	1.9

Table 2. Desktop audit agenda of IOP and site visit. Wednesday 23rd November 2011.

Timing	Item	Location
08:00 to 08:15	On site inception meeting	Pitt Town
08:15 to 09:45	Site inspection	Pitt Town
09:45 to 10:45	Travel to Head Office	
10:45 to 11:00	Functional design/process briefing (contextualisation for following agenda items)	Sydney Head Office
11:00 to 11:15	Briefing on Corporate Quality Management and Knowledge Management Frameworks (contextualisation for following agenda items)	Sydney Head Office
11:15 to 11:30	Briefing and demonstration of asset hierarchy, data structures and data in asset management and maintenance management systems	Sydney Head Office
11:30 to 12:15	Provision of details of operational analysis including development of LoS specifications, performance criteria and performance monitoring framework.	Sydney Head Office
12:15 to 12:45	Lunch	Sydney Head Office
12:45 to 13:30	Provision of details of risk assessment processes and practices and application to the facility.	Sydney Head Office
13:30 to 13:45	Review of condition monitoring regime and monitoring and control systems.	Sydney Head Office
13:45 to 14:00	Review Contingency and Business Continuity Planning	Sydney Head Office
14:00 to 14:15	Life cycle planning and forecasting. Demonstration and review of application to the facility.	Sydney Head Office
14:15 to 14:45	Review of maintenance strategy, tactics, processes and practices and supporting systems.	Sydney Head Office
14:45 to 16:30	Review of operational structures, allocation of responsibilities, resourcing arrangements including contracted support services, provision of spare parts and logistics.	Sydney Head Office
16:30 to 17:00	Close out meeting including follow up of any issues identified and preliminary findings	Sydney Head Office

Table 3. Desktop audit agenda of WQP and site visit. Wednesday 23rd November 2011.

Timing	Item	Location
08:00 to 08:15	On site inception meeting	Pitt Town
08:15 to 09:45	Site inspection	Pitt Town
09:45 to 10:45	Travel to Head Office	
10:45 to 11:00	Desktop assessment of the risk assessment and CCP identification process.	Sydney head office
11:00 to 11:15	Review of validation	Sydney head office
11:15 to 11:30	Detailed assessment of nominated Critical Control Points including location of sampling lines for monitoring instruments, SCADA settings, calibration SOPs and records, operational SOPs, monitoring SOPs and corrective action SOPs.	Sydney head office
11:30 to 11:45	Desktop assessment of communication procedures and protocols for recycled water quality incidents including training and awareness of those procedures. Desktop assessment of communication and reporting both under routine and incident conditions.	Sydney head office
11:45 to 12:00	Desktop assessment of water quality monitoring and reporting systems including SCADA systems, quality assurance of data, both on line and laboratory acquired (e.g. laboratory test procedure accreditation and on line instrument calibration).	Sydney head office
12:00 to 12:15	Review of material and chemical receipt, storage and quality control facilities and procedures.	Sydney head office
12:15 to 12:45	Lunch	Sydney head office
12:45 to 16:30	No activity (auditor undertaking SMP audit)	
16:30 to 17:00	Close out meeting including follow up of any issues identified and preliminary findings	Sydney Head Office

Table 4. Desktop audit agenda and site audit of SMP. Wednesday 23rd November 2011.

Timing	Item	Location
08:00 to 08:15	On site inception meeting	Pitt Town
08:15 to 09:45	Site inspection	Pitt Town
09:45 to 10:45	Travel to Head Office	
10:45 to 12:45	No activity (auditor undertaking WQP audit)	
12:45 to 13:30	Policy and Context of the SMP: As detailed under Audit template: Sewage Management Plan (SMP): 'Policy and Context'.	Sydney head office
13:30 to 13:45	Waste and Site Characterisation As detailed under Audit template: Sewage Management Plan (SMP): Waste and Site Characterisation i.e. 2009 guidance paragraphs Number 1-4.	Sydney head office
13:45 to 14:00	Hazard and Risk Assessment/Management As detailed under Audit template: Sewage Management Plan (SMP): Hazard and Risk Assessment/Management i.e. 2009 guidance paragraphs Number 5-10 and 16.	Sydney head office
14:00 to 14:45	Data Monitoring and Sampling As detailed under Audit template: Sewage Management Plan (SMP): Data Monitoring and Sampling i.e. 2009 guidance paragraphs Number 11-15.	Sydney head office
14:45 to 16:30	Communications and Training: As detailed under Audit template: Sewage Management Plan (SMP): Communications and Training i.e. 2009 guidance paragraphs Number 17-18.	Sydney head office
16:30 to 17:00	Close out meeting including follow up of any issues identified and preliminary findings.	Sydney Head Office

2.3.4 Audit team

The Licence Holder (auditee) was Pitt Town Water Factory Pty Ltd (ACN 141 705660) (PTWF). For efficiency, all criteria were audited together using a combined auditing approach. This document sets out the detailed audit report against the audit criteria. The two auditors that conducted the audits were as follows:

- The Water Quality Plan and Sewage Management Plan auditor is Dr Dan Deere: Lead Auditor and Technical Professional, Water Quality and Sewage Management, Water Licensing and Technical Services Panel, Independent Pricing and Regulatory Tribunal, NSW Government.
- The Infrastructure Operating Plan Auditor is Tom Carpenter: Lead Auditor, Infrastructure Performance, Water Licensing and Technical Services Panel, Independent Pricing and Regulatory Tribunal, NSW Government.

2.3.5 Audit grades

The audit was graded as described in Table 2.3 of the IPART Audit Guideline Water Industry Competition Act 2006 Water – Guidelines Revision 4 (February 2012). Briefly, the audit grades are defined as shown in Table 5.

Table 5. Audit grades used in this audit.

Grades of adequacy or compliance	Description
Fully Adequate	Sufficient evidence to confirm that the requirements have been fully met.
Adequate	Sufficient evidence to confirm that the requirements have generally been met apart from a minor shortcoming which does not compromise the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes. For example: the inadequacy is administrative in nature; or the potential impact of the inadequacy is not likely to present a risk to public health, the environment and/or level of service if not rectified.
Inadequate	Sufficient evidence has not been provided to confirm that all major requirements are being met and the deficiency adversely impacts on the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes
No Requirement	The requirement to comply with the licence condition does not occur within the audit period or there is no requirement for the licensee to meet this assessment criterion.

2.4 Regulatory regime

The scheme operates under the *Water Industry Competition Act 2006* (WICA) which in turn calls up the following requirements:

- WICA Licence conditions of Network Operator's Licence No. 10_014 signed 11th November 2010.
- *Water Industry Competition (General) Regulation (2008)*.
- Relevant aspects of the national *Australian Guidelines for Water Recycling (Phase 1) Managing Health and Environmental Risks (2006)*.
- *IPART Audit Guideline Water Licence Audits Revision 2 (September 2009)* and latterly the *IPART Audit Guideline Water Industry Competition Act 2006 Water – Guidelines Revision 4 (February 2012)*.

2.5 Reporting

The audit findings are presented against the relevant criteria in five attachments, as follows:

- Attachment 1. Infrastructure Operating Plan.
- Attachment 2. Water Quality Plan.
- Attachment 3. Sewage Management Plan.
- Attachment 4. Network Operator's Licence.
- Attachment 5. Water Industry Competition (General) Regulation 2008.

Attachment 1. Detailed Audit Findings: Infrastructure Operating Plan (IOP) WIC Reg Sched 1 cl.6(1) and cl.13(1)

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(a) and/or cl.13(1)(a)	The IOP indicates the arrangements in relation to the design, construction, operation and maintenance of the infrastructure, including particulars as to the life-span of the infrastructure, the system redundancy built into the infrastructure and the arrangements for renewal of the infrastructure.	<p>The IOP includes a detailed asset register. As a minimum the asset register will include:</p> <ul style="list-style-type: none"> ▼ A list of all assets ▼ Basic physical data (material, size, age) ▼ Relative locations of major infrastructure ▼ Capacities of infrastructure (eg, pumps, reservoirs, etc) – where applicable current and ultimate ▼ Location of secondary, alternative sources and/or infrastructure 	<p>Comments:</p> <p>PTWF has prepared asset registers in excel (as noted below) in anticipation of uploading it in to a suitable database/management program (MainPlan) within six months of operation. All assets are identified in P&ID's. Base data collected is sufficient to form the basis of a full asset register and management system. Collection and supply system registers are PTWF assets. The GE treatment plant asset register is mirrored in the PTWF register.</p> <p>Asset operation, location and operating characteristics documented.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-0203-111004120308.pdf Section 2</p> <p>SCH-004 Equipment Schedule Pitt Town Rev1 to Peter G.XLS</p> <p>SCH-003 Valve Schedule Pitt Town Rev1 to Peter G.XLS</p> <p>SCH-001 Instrument Schedule Pitt Town Rev1 to Peter G.XLS</p> <p>PTWF-MP-MAINPLAN Asset register-02-111128.xls</p> <p>Pitt Town_PIDs31MAR11-235528-P All.pdf</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> • Demonstrate confirmation of acquisition and implementation of MainPlan as part of the operating audit.

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(a) and/or cl.13(1)(a) (continued...)	The IOP indicates the arrangements in relation to the design, construction, operation and maintenance of the infrastructure, including particulars as to the life-span of the infrastructure, the system redundancy built into the infrastructure and the arrangements for renewal of the infrastructure (continued...)	The IOP includes an operational analysis of the assets to meet present and future needs. Outputs from the operational analysis include a schedule of required capital works for asset renewal, replacement and development.	<p>Comments:</p> <p>PTWF has fully documented the operational requirements and capacity needs for the sewage services, and recycled water treatment and distribution, including staged development and full development capacities and required assets.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-0203-111004120308.pdf Section 2</p> <p>PTWF - MP-RWSMP-0304-111129120308.pdf</p>	<input checked="" type="checkbox"/> Fully Adequate
		<p>The IOP includes details of the:</p> <ul style="list-style-type: none"> ▼ System operating rules to operate the infrastructure in the most effective manner during normal and breakdown conditions ▼ Performance requirements for assets. 	<p>Comments:</p> <p>Operating rules are defined and performance requirements of assets documented. Also documents operation under failure conditions.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-0203-111004120308.pdf Section 3</p> <p>PTWF - MP-RWSMP-0304-111129120308.pdfPTWF-PR-Ancillary functional description-01-110803.pdf</p> <p>45000002231-REP-001 Pitt Town MBR Control Philosophy RevB.pdf</p> <p>3464814_OSC_Pitt Town_RevB.xls</p> <p>3464814_CLSC_Pitt Town_RevB.xls</p>	<input checked="" type="checkbox"/> Fully Adequate

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(b) and/or cl.13(1)(b)	The continued safe and reliable performance of the infrastructure	The IOP outlines the performance criteria and levels of service for the assets. These criteria are consistent with statutory obligations (if any) and there is a clearly defined process for documenting performance.	<p>Comments:</p> <p>Performance of treatment plant and reticulation systems are monitored via instrumentation linked to SCADA/telemetry systems. Performance criteria are documented and monitored for critical control points and for operational performance management of equipment. Performance management of asset maintenance will be logged and reported via the MMS (MainPlan).</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308.pdf</p> <p>PTWF - MP-RWSMP-04-120308.pdf</p>	<input checked="" type="checkbox"/> Fully Adequate

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(b) and/or cl.13(1)(b) (continued...)	The continued safe and reliable performance of the infrastructure (continued...)	<p>The IOP includes an asset condition and risk assessment which is regularly updated and includes::</p> <ul style="list-style-type: none"> ▼ Asset condition; ▼ Asset criticality; and ▼ Asset assessment. 	<p>Comments:</p> <p>Asset criticality and assessment have been incorporated in to the initial risk assessment evaluation. Instrumentation and monitoring equipment are covered by a maintenance program. Their performance is specified in the IOP to be monitored every month and independent 3rd party calibration is proposed every 6 months. Pressure sewer units are telemetry monitored for fault or failure. Scheduling within the MMS could not be verified as the MMS is not yet operational.</p> <p>For the treatment plant itself, two manuals were provided, an early example from a similar plant at Gordon in the city's north and the full Pitt town manual as well. The manuals are comprehensive in particular with regard to the preventive maintenance tasks and inspections.</p> <p>The documentation includes reference to updating and maintenance of the risk register and definition of a period for formal review of plans in the circumstance that an event trigger has not occurred.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308.pdf</p> <p>Gordon Golf Course O&M Manual_0 (EXAMPLE).pdf</p> <p>Pitt Town WF RWTP O&M Manual_A.PDF</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p> <p>OFIs to further improve Fully Adequate findings:</p> <ul style="list-style-type: none"> • Provide evidence of the scheduling and reporting applied against schedule as part of the first operational audit.

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(b) and/or cl.13(1)(b) (continued...)	The continued safe and reliable performance of the infrastructure (continued...)	The IOP documents, or includes reference to documents, that outline the operation and maintenance policies, procedures and schedules for all key infrastructure.	<p>Comments:</p> <p>The IOP and RWSMP contain extensive cross-referencing to support documentation, though some of those related to asset management/maintenance are statements of intent with provision of examples.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308.pdf</p> <p>PTWF - MP-RWSMP-04-120308PTWF.pdf</p> <p>GE Gordon Golf Course O&M Manual</p> <p>Pitt Town WF RWTP O&M Manual_A.PDF</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> As part of the first operational audit, demonstrate verification of the suite of required documentation and explain the final amendments made due to experience gained during commissioning.

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(b) and/or cl.13(1)(b) (continued...)	The continued safe and reliable performance of the infrastructure (continued...)	The relevant operation and maintenance policies and procedures are available at all facilities, personnel are trained in the procedures and training is kept current where appropriate.	<p>Comments:</p> <p>List of SOP's to be developed/provided RWSMP Section 5.</p> <p>IOP documents monitoring and maintenance principles (Sections 3 & 4)</p> <p>Extensive suite of SOP's provided.</p> <p>Documented evidence was provided of training courses available and statements of training intention were made.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308.pdf</p> <p>GE O&M Manual and training documentation</p> <p>WFC-PR-Rectic Response Procedure-01-111010.pdf</p> <p>PTWF - MP-RWSMP-03-111129.pdf Section 5.</p> <p>Pitt Town WF RWTP O&M Manual_A.PDF</p> <p>Training course details and support documentation.pdf</p> <p>FSR Training Courses 2011-10 (CG).pdf</p> <p>NSW Team Training Summary Report.pdf</p> <p>CV Kevin Loughran.pdf</p> <p>CV William Kennedy.pdf</p> <p>SOP's</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> • Demonstrate ongoing maintenance of training for personnel. • Demonstrate completion of full suite of completed (and maintenance of) SOP's.

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(b) and/or cl.13(1)(b) (continued...)	The continued safe and reliable performance of the infrastructure (continued...)	The operation and maintenance procedures contain sufficient information to address the complexity, criticality, condition and age of the infrastructure.	<p>Comments:</p> <p>Review of the IOP, RWSMP, O&M Manual, SOP's and emergency plans indicates that sufficient information will be in place.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308.pdf</p> <p>GE O&M Manual and training documentation</p> <p>PTWF - MP-RWSMP-04-120308.pdf Section 5.</p> <p>SOP's</p> <p>PTWF-MP-IncER-04-120308.pdf</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> Demonstrate completion and ongoing maintenance of all important procedures.

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(b) and/or cl.13(1)(b) (continued...)	The continued safe and reliable performance of the infrastructure (continued...)	<p>The maintenance procedures are linked to asset life cycle optimisation, safe and reliable performance of the infrastructure, service criticality and business risk and outline appropriate blends of:</p> <ul style="list-style-type: none"> ▼ Reactive maintenance ▼ Preventive maintenance ▼ Predictive maintenance. 	<p>Comments: A review of the documentation provided indicated appropriate blends of reactive, preventive and predicative maintenance according to asset type and criticality.</p> <p>Documentary evidence: PTWF-MP-InfOP-03-120308.pdf GE O&M Manual and training documentation WFC-PR-Rectic Response Procedure-01-111010.pdf PTWF - MP-RWSMP-04-120308.pdf Section 5. Maintenance and Calibration Assessment form (303.APACWWPT.001.001).pdf Maintenance and Calibration Induction form (303.APACWWPT.001.002J).pdf Procedure on use of the Maintenance and Calibration Induction form (303 APACWWPT 001).pdf SERV-0001 Membrane Care, Handling and Storage Procedure _2553972.pdf SOP 0006 Ammonia testing procedure.pdf PTWF-MP-IncER-04-120308.pdf</p>	<input checked="" type="checkbox"/> Fully Adequate

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(b) and/or cl.13(1)(b) (continued...)	The continued safe and reliable performance of the infrastructure (continued...)	<p>The infrastructure investment/capital works requirements identified in the IOP are based on sound strategic service planning including:</p> <ul style="list-style-type: none"> ▼ Required levels of service (including future growth in customer base and/or demand and documented performance targets). ▼ Security of supply or service provisions (including inherent reliability, redundancy, alternative sources of supply or service, emergency management and business continuity). ▼ Whole of life cycle cost evaluation. 	<p>Comments:</p> <p>The plans clearly link customer growth/demand and levels of service to capital requirements. Security of supply is adequately addressed.</p> <p>A whole of life cycle cost evaluation has been carried out and implemented. The estimated lives of assets, in particular elements of the buildings, are on the upper limit of an acceptable range and the auditor is of the opinion that there is no margin for error. However, it is possible that, with conscientious maintenance and renewal, they could be achieved.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308.pdf PTWF - MP-RWSMP-04-120308.pdf Detailed life cycle costing sheets (Confidential)</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> • Critically evaluate the estimated lives of assets, in particular elements of the buildings, against the proposed approach to maintenance and renewal.
		<p>The IOP specifies future (life-cycle) expenditures based on forecast expenditure for:</p> <ul style="list-style-type: none"> ▼ Capital (new and replacement) ▼ Operations ▼ Maintenance ▼ Management and Administration. 	<p>Comments:</p> <p>A detailed life cycle analysis has been prepared incorporating identified costs including renewal and replacement and leasing. The estimated effective lives are generous as noted in the previous audit element.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308.pdf</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> • Refer above audit element.

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(b) and/or cl.13(1)(b) (continued...)	The continued safe and reliable performance of the infrastructure (continued...)	The assignment of responsibility, to appropriate management and staff, is clearly articulated for the IOP implementation and on going management, (including prioritising and programming).	<p>Comments:</p> <p>The senior and operations management are documented. Contracts exist for the operation and maintenance of the treatment plant and reticulation systems.</p> <p>Business contact list for service providers documented though contacts for day to day contract management are not nominated/specified in either GE or Mono-NOV contracts.</p> <p>The distribution system maintenance provider (Mono Pumps (Australia) Pty Ltd [Mono-NOV]) contract notes use of a sub-contractor for telemetry/SCADA maintenance.</p> <p>The performance requirements/scope are not attached to the contract.</p> <p>The GE contract refers to a Performance Guarantee to meet a specification 'the Proposal' that is not attached to the contract.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308.pdf</p> <p>PTWF-MP-CLIST-03-111125.xlsx</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> Confirm that the GE Performance Guarantee explicitly relates to a specified, and not an implied, Proposal.
		A review process is in place to ensure that the IOP and associated procedures are kept current	<p>Comments:</p> <p>Documented update procedures are in place, as is an ISO 9001 compliant management system.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308</p> <p>PTWF - MP-RWSMP-04-120308.pdf</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> Confirm that the reviews are conducted as scheduled or required in practice, not merely proposed.

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(c) and/or cl.13(1)(c)	The continuity of the water supply	Operational and maintenance procedures address both normal and abnormal (incident and emergency) conditions. The likelihood and consequences of asset failure are predicted. Other requirements included in the guidance above.	<p>Comments:</p> <p>To the extent that the information available is incomplete (O&M Manual and SOP's) required operational and maintenance procedures are identified. Completed SOP's adequately address the conditions and failure events identified. The range of abnormal events identified is reflective of the operations of the business and the emergency plans adequate.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308</p> <p>PTWF - MP-RWSMP-04-120308.pdf</p> <p>PTWF-MP-IncER-04-120308.pdf</p> <p>PTWF-MP-RASMT-02-110917.pdf</p> <p>PTWF-MP-RVIEW-01-110707.pdf</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p> <p>OFIs to further improve Fully Adequate findings:</p> <ul style="list-style-type: none"> Provide evidence for confirmation of completeness and maintenance of SOP's as part of the first operational audit.

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(d) and/or cl.13(1)(d)	Alternative water supplies when the infrastructure is inoperable	Requirements included in the guidance above.	<p>Comments:</p> <p>Alternative supplies of source water are identified and operable, including provision of potable water supplies. Telemetry and SCADA configuration is such that faster response to reticulation service failures are possible than with current public systems.</p> <p>Documentary evidence:</p> <p>PTWF-MP-InfOP-03-120308.pdf</p> <p>PTWF - MP-RWSMP-04-120308.pdf</p> <p>PTWF-MP-IncER-04-120308.pdf</p>	<input checked="" type="checkbox"/> Fully Adequate

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(e) and/or cl.13(1)(e)	The IOP indicates the arrangements in relation to the maintenance, monitoring and reporting of standards of service	An appropriate quality/performance management system is outlined for monitoring and implementing the IOP, and the system is documented.	<p>Comments:</p> <p>The RWSMP and IOP provide detailed documentation of the standards of service and monitoring for critical control.</p> <p>Documentary evidence:</p> <p>PTWF - MP-RWSMP-04-120308.pdf</p> <p>PTWF-MP-InfOP-03-120308.pdf</p>	<input checked="" type="checkbox"/> Fully Adequate
		<p>The sophistication of the monitoring and control systems is proportional to the complexity of the scheme.</p> <p>The monitoring and control systems, where relevant, provide information on:</p> <ul style="list-style-type: none"> ▼ Leakage assessment and reduction ▼ Energy management ▼ Security of facilities ▼ Overflow events ▼ Flows and/or demands ▼ Warning of potential problems ▼ Internal performance indicators ▼ Regulatory performance indicators. 	<p>Comments:</p> <p>The monitoring systems are sophisticated and extensive, particularly in the distribution system. The level and detail is in excess of that currently provided to gravity sewerage service customers elsewhere. Future proofing has been ensured by the inclusion of electronic monitoring cable runs from the front yard meters to the house utility meter boxes.</p> <p>Not all performance (particularly internal) monitoring could be reviewed as many of the SCADA, telemetry and dashboard reporting screens and reports had not yet been developed. The process designs control narratives and descriptions do, however, document the requirements for internal and regulatory monitoring operation and reporting to a satisfactory level.</p> <p>Documentary evidence:</p> <p>PTWF - MP-RWSMP-04-120308.pdf</p> <p>PTWF-MP-InfOP-03-120308.pdf</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> • Confirm full operational implementation of the intended monitoring and control systems and review as part of the first operational audit.

Document reference	Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl.6(1)(e) and/or cl.13(1)(e) (continued...)	The IOP indicates the arrangements in relation to the maintenance, monitoring and reporting of standards of service (continued...)	The IOP documents the process for keeping records and reporting on operational and maintenance matters.	<p>Comments:</p> <p>These processes are documented in the IOP and in the RWSMP. The proposed recording of maintenance activities and performance via the MainPlan MMS and other records via the ISO 9001-compliant business systems. Evidence of ISO 9001 QA compliance certificate provided.</p> <p>Recommendation:</p> <p>Confirm reviews are conducted as scheduled, required.</p> <p>Documentary evidence:</p> <p>PTWF - MP-RWSMP-04-120308.pdf</p> <p>PTWF-MP-InfOP-03-120308.pdf</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> Confirm that the reviews are conducted as scheduled or required in practice, not merely proposed.


Attachment 2. Detailed Audit Findings: Water Quality Plan (non-potable water) (WQP (npw)) WIC Reg Sched 1 cl.7(1)(b)

Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element one</p> <p>The WQP (npw) shows a commitment to responsible use and management of recycled water quality.</p>	<p>The organisation has a recycled water quality policy endorsed by the senior executive.</p> <p>The policy has been communicated in such a way that it is easily understood and implemented by employees.</p>	<p>Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 Appendix A provides a copy of PTWF's Recycled Water Policy (WFC-PO-Recycled Water-01-110930), highlighting the commitment to responsible, safe and sustainable use of recycled water. Awareness of the policy was evidence. The policy is Fully Adequate and fully compliant with good practice.</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p>
<p>Element one (continued...)</p>	<p>The organisation has identified and documented its regulatory and formal requirements.</p> <p>The responsibilities for managing regulatory requirements are allocated and communicated to the appropriate employees.</p> <p>The organisation has a documented process for reviewing and updating the regulatory and formal requirements.</p>	<p>The summary of regulatory and formal requirements given on page 11 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 is just Adequate. However, a table similar Table (2) should be produced to properly set out the details of the requirements and demonstrate how they are met. The information will be reviewed and updated as part of an annual audit, review and update process (Section 12.1).</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> Develop a table analogous to Table (2) for Regulatory and Formal requirements.

Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
Element one (continued...)	<p>The organisation has employed suitable expertise for the design, management and regulation of the recycled water system.</p> <p>The organisation has a documented process for identifying and involving governmental agencies with responsibilities and expertise in protection of public health and the environment.</p> <p>The organisation has a documented process for identifying relevant stakeholders (government and public).</p> <p>The organisation has appropriate processes and practices in place to ensure stakeholders are engaged and all stakeholder activities and outcomes are documented. The process ensures that stakeholder responsibilities are identified and understood.</p> <p>There is a process in place to ensure the stakeholder list is regularly updated.</p>	<p>The expertise engaged for the design, management and regulation of the recycled water system is adequate and of sufficient depth to be Fully Adequate.</p> <p>Section 2.1 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 provides a comprehensive summary of the project stakeholders and their roles. The summary includes governmental agencies. The summary is Fully Adequate and compliant with good practice. An OFI would be to include key contact details in Table (2). The information will be reviewed and updated as part of an annual audit, review and update process (Section 12.1).</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p> <p>OFIs to further improve Fully Adequate findings:</p> <ul style="list-style-type: none"> • Include key contact details in Table (2) of the RWSMP.



Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element two</p> <p>The WQP (npw) includes an analysis of the recycled water system</p>	<p>The WQP (npw) clearly identifies the source(s) of the water.</p> <p>The intended end uses, routes of exposure, receiving environments, endpoints and effects are identified in the WQP (npw).</p> <p>Unintended and unauthorised end uses are identified and considered in the WQP (npw).</p> <p>The WQP (npw) documents pertinent information and key characteristics of the recycled water system consistent with the complexity of the system.</p> <p>The organisation assembled a team of people with appropriate knowledge and expertise on the recycled water system (from source to end use) to undertake the analysis of the system.</p> <p>There a verified flow diagram of the recycled water system from source to the application or receiving environment.</p> <p>There is a documented process to periodically review the recycled water system analysis.</p>	<p>Section 3.5 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 clearly summarises pertinent information regarding the system from source to point and nature of use and is Fully Adequate.</p> <p>Section 3.1 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 summarises the system assessment team. The risk assessment team was Adequate but was not Fully Adequate since specific, independent public health expertise was lacking, either through using suitable consultants and/or government, e.g. NSW Health, involvement. However, subsequent to the initial assessment, NSW Health was involved in reviewing and commenting on the draft risk assessment, bringing up the compliance to Fully Adequate.</p> <p>Appendices C and D of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 show the process flow diagrams and P&IDs and these are Fully Adequate. The diagrams were consistent with what was observed during the site audit. The diagrams go down to the level of the single lot (e.g. Pitt Town Pressure Sewer Masterplan Rev A Drawing S101. Illustrated the sewerage system to the level of the lot). The Observant Monitor Map system shows each property on a map which links to the telemetry system.</p> <p>The above items will be reviewed and updated as part of an annual audit, review and update process (Section 12.1).</p>	<p> Fully Adequate</p>

Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
Element two (continued...)	<p>The organisation has defined and documented the processes for the collection and retention of historical data about sewage, greywater or stormwater quality, as well as data from treatment plants and/or recycled water supplied to users (over time and following specific events). For brownfield schemes this data was used in the risk assessment.</p> <p>The organisation has documented the process for identifying, listing and examining exceedances.</p> <p>The organisation has processes in place for assessing data to identify trends and potential problems in the recycled water system.</p>	<p>Section 3.6 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 explains that water quality data from similar schemes was used in this case since data from the current scheme is not yet available. This is acceptable and, in the context, is Fully Adequate. Going forward, Permeate Partners have been contracted to provide monthly provide reports evaluating the trends of the key process parameters, which is Fully Adequate.</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p>
Element two (continued...)	<p>The organisation has developed and documented the approach and methodology to be used for hazard identification and risk assessment, considering both public and ecological health.</p> <p>The organisation has a documented process to periodically review and update the hazard identification and risk assessment to incorporate any changes.</p> <p>The organisation has identified and documented hazards, sources and hazardous events for each component of the recycled water system.</p> <p>The organisation has estimated the level of risk for each identified hazard or hazardous event.</p> <p>The major sources of uncertainty associated with each hazard and hazardous event have been evaluated and actions have been considered to reduce uncertainty.</p> <p>The organisation has determined the significant risks and established documented priorities for risk management.</p> <p>The organisation has developed a process for periodically reviewing and updating the hazard identification and risk assessment to incorporate any changes to the system.</p>	<p>Section 3 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and Appendix E provide the risk assessment. This is Fully Adequate. Actions for further reducing risks have been summarised and are set in context. Both maximum and residual risks have been assessed to health and environmental endpoints against likelihood and consequence criteria. However, uncertainties have not been explicitly assessed.</p> <p>The above items will be reviewed and updated as part of an annual audit, review and update process (Section 12.1).</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> When revising the risk assessment, explicitly capture and action relevant uncertainties.


Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element three</p> <p>The WQP (npw) outlines the preventive measures for water quality management.</p>	<p>The organisation has identified existing preventive measures from source to customer for each significant hazard or hazardous event and estimated the residual risk.</p> <p>The organisation has completed an evaluation of alternative or additional preventive measures where improvement is required.</p> <p>The organisation has documented the preventive measures and strategies for addressing each significant risk in a plan.</p> <p>The organisation has assessed the preventive measures throughout the recycled water system to identify the critical control points.</p> <p>The organisation has established mechanisms for operational control at critical control points.</p> <p>The organisation has documented the critical control points, critical limits and target criteria.</p>	<p>Sections 3 and 4 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and Appendices E provide the summary of preventive measures, control points, critical control points and relevant target criteria. This is Fully Adequate. The documented information was consistent with what was observed during the field audit.</p> <p>The scheme includes a number of best practice elements. For instance, the scheme is targeting a pressure differential between recycled and potable water although PTWF don't yet control the drinking water pressure – Sydney Water does. In addition, PTWF is planning to use its smart metering system to detect cross-connections. Currently however PTWF read the sewer and recycled water meters, not the potable meters. The Observant Monitor Map system shows each property and indicates sewer pump recycled water use via the telemetry system. This smart telemetry to the individual lot water and sewer meters should help detect cross-connections if so monitored.</p>	<p> Fully Adequate</p> <p>OFIs to further improve Fully Adequate findings:</p> <ul style="list-style-type: none"> • Press ahead with pioneering attempts to utilise smart metering and pressure differentials to help prevent and detect cross-connections.



Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element four</p> <p>The WQP (npw) outlines the operational procedures and process control for the scheme.</p>	<p>The organisation has developed a process for identifying operational procedures required for processes and activities from source to end use.</p> <p>All the identified procedures have been documented and compiled into an operations manual.</p> <p>The organisation has developed monitoring protocols for operational performance of the system, including the selection of operational parameters and criteria, and the routine analysis of results.</p> <p>The monitoring protocols have been documented and compiled into an operational monitoring plan.</p> <p>The organisation has established and documented procedures for corrective action where operational parameters are not met.</p> <p>The organisation has established rapid communication systems to deal with unexpected events.</p> <p>There are processes in place to ensure that equipment performs adequately and provides sufficient flexibility and process control.</p> <p>The organisation has developed a program for regular inspection and maintenance of all equipment, including monitoring equipment.</p> <p>There are processes and procedures in place to ensure that only approved materials and chemicals are used.</p> <p>The organisation has documented procedures for evaluating chemicals, materials and suppliers.</p>	<p>Sections 5 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and Appendices F and G provide the summary of operational procedures. These are Adequate and in an appropriately final draft stage, given the current state of implementation of the project, prior to full operation. The documented information was consistent with what was observed during the field audit. Gaps between current and desirable levels of development were fully understood and openly acknowledged and are planned for improvement.</p> <p>Chemical and material suppliers were not specifically identified, although chemicals used were listed and requirements to comply with plumbing regulations were clearly set out. Since this is a non-potable water scheme, this gap is not critical, but nor is the situation Fully Adequate. In order to be Fully Adequate, chemical and material suppliers and specific chemical and material products to be used for the scheme should be explicitly listed, along with the process for ensuring quality</p> <p>This item was assessed in more detail in the IOP audit, above.</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> Finalise the relevant O&M information, as discussed in the IOP audit, above. Finalise the list of chemical/material suppliers and products to be used for the scheme and the procedures for ensuring adequate quality of chemicals/materials delivered/installed.


Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element five</p> <p>The WQP (npw) outlines the process for verification of the water quality.</p>	<p>The organisation has determined the characteristics to be monitored in the recycled water system, the application site and the receiving environment (as appropriate).</p> <p>A sampling plan for each characteristic has been established and documented, including the location and frequency of sampling. The monitoring data is representative and reliable.</p> <p>The procedures for sampling and testing are fully documented and staff are appropriately trained (where relevant)</p> <p>The organisation has established an inquiry and response program for users of the recycled water. The program includes the appropriate training of employees.</p> <p>The organisation has developed procedures for the short term review of monitoring data and satisfaction of users of recycled water.</p> <p>Internal and external reporting mechanisms have been developed and documented by the organisation.</p> <p>The organisation has established and documented procedures for corrective action in response to non-conformances or feedback from users of recycled water.</p> <p>The organisation has in place rapid communication systems to deal with unexpected events.</p>	<p>Verification of water quality and user satisfaction, as designed, is Fully Adequate and is cross-referenced to specific process controls, for instance under Section 5 and Appendix U of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and detailed in Section 6 and Appendices F, I and O. Verification is well-embedded within the document and is well integrated. Going forward, Permeate Partners have been contracted to provide monthly review and reporting including evaluating the trends of the key verification and process parameters.</p> <p>The corrective action responses would rapidly escalate to an incident response which may involve unnecessarily involving NSW Health, NOW and IPART. It would be more elegant to have more detailed internal procedures to prevent the need to adopt an 'incident' response in most readily controlled situations.</p> <p>There is a discrepancy between Tables (5) and (6) of Appendix O (no mention of pathogens) and Section 6.1 of the RWSMP (mentions pathogens and indicators). The point of truth was assumed to be Appendix O, and the schedule therein is Fully Adequate, but the discrepancy between the documents leads to an Adequate finding and needs to be resolved. There were a number of other similar minor discrepancies between documents.</p> <p>At the time of the field audit this aspect was Inadequate due to the absence of an agreed position with NSW Health. However, it is understood that at the time of writing this report, NSW Health is content with the verification in place.</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> Clarify the discrepancy between Tables (5) and (6) of Appendix O and Section 6.1 of the RWSMP and seek to eliminate other discrepancies between documents. <p>OFIs to further improve Fully Adequate findings:</p> <ul style="list-style-type: none"> Develop corrective action procedures that encourage the control of excursions detected as part of verification monitoring in house rather than proceeding directly to incident response model

Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element six</p> <p>The WQP (npw) includes details on the management of incidents and emergencies.</p>	<p>Communication protocols have been developed with the relevant (regulatory) agencies defined and a contact list of key people, agencies and businesses (both internal and external).</p> <p>The organisation has developed a public and media communications strategy.</p> <p>Potential incidents and emergencies have been identified and procedures and response plans documented, with the involvement of relevant agencies. The plans reflect the events identified in the risk assessment.</p> <p>Employees are trained in emergency response procedures and the plans are tested as appropriate.</p> <p>The organisation has developed procedures for the investigation of incidents or emergencies. The procedures outline the process for reviewing incidents or emergencies and making any necessary amendments to protocols.</p>	<p>Section 7 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and Appendices J and K, and to some extent H and I, provide a Fully Adequate process for incident response. A number of foreseeable incidents are described and have protocols developed and agreed with relevant third parties.</p> <p>The above items, including Appendix K (contact list) will be reviewed and updated as part of an annual audit, review and update process (Section 12.1).</p> <p>At the time of the field audit this aspect was Inadequate due to the absence of an agreed position with NSW Health. However, it is understood that at the time of writing this report, NSW Health is content with the incident response plan that is now in place.</p>	<p> Fully Adequate</p>
<p>Element seven</p> <p>The WQP (npw) outlines operator, contractor and end user awareness and training requirements</p>	<p>The organisation has developed mechanisms and communication procedures to increase operator contractor and end user awareness of, and participation in managing recycled water quality and environmental protection.</p> <p>The organisation has a process in place for ensuring that employees, including contractors, and end users maintain the appropriate experience and qualifications.</p> <p>The organisation has developed a process for identifying employee training needs and there are appropriate resources available to support any training programs.</p> <p>There are processes and procedures for documenting training and maintaining records of all employees training.</p>	<p>Section 8 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and Appendices L and V provide a Fully Adequate process for training management from the perspective of recycled water quality management. This item is discussed more broadly and in more detail under the IOP audit, above.</p>	<p> Fully Adequate</p>

Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element eight</p> <p>The WQP (npw) outlines the process for community awareness and involvement.</p>	<p>The organisation as assessed the requirements for effective involvement of users of recycled water and the community.</p> <p>The organisation has developed a comprehensive strategy for community consultation.</p> <p>The organisation's communication strategy includes an active two-way communication program to inform users of recycled water and promote awareness of recycled water quality issues.</p> <p>The organisation has developed a process for providing information on unauthorised use as well as the benefits of recycled water to users and the community.</p>	<p>Section 9 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and Appendices N and V provide a Fully Adequate process for community engagement and involvement from the perspective of recycled water quality management.</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p>


Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element nine</p> <p>The WQP (npw) outlines the validation, research and development processes for the scheme.</p>	<p>The organisation has developed validation processes and procedures to ensure that the system is effective at controlling hazards.</p> <p>The organisation has established processes and practices for periodical revalidation of processes when changes in conditions occur.</p> <p>The organisation has a process for validating the selection and design of new equipment and infrastructure to ensure continuing reliability.</p> <p>The organisation able to demonstrate a commitment to increasing their understanding of the recycled water system and to improving their management of the system.</p>	<p>Validation is Fully Adequate and is cross-referenced to specific process controls, for instance under Section 3.7.2, Table (8), Section 10 and Appendix O of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12. Validation is well-embedded within the document and is well integrated. Pathogen log reduction values are demonstrably, conservatively sufficient. Going forward, Permeate Partners have been contracted to provide monthly review and reporting including evaluating the trends of the key validated process critical limit parameters.</p> <p>At the time of the field audit this aspect was Inadequate. Most inadequacies were minor in nature and were addressed through minor operational monitoring changes. However, a major gap was the failure of the UV disinfection system supplier to attest to the pathogen log reduction capability of the UV disinfection system. This unfortunate event caused delays of approximately six months in scheme review and approval and supports. The experience with this scheme, (and some other schemes that hit the same difficulty), demonstrates the wisdom of the new IPART requirement for an early-state Technology Assessment. It is understood that at the time of writing this report, the auditor, NSW Health and IPART are no fully content that validation has been demonstrated.</p>	<p> Fully Adequate</p>


Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element ten</p> <p>The WQP (npw) outlines the process management of documentation and records as well as the reporting requirements.</p>	<p>The organisation has a process for documenting information pertinent to all aspects of recycled water quality management.</p> <p>The organisation has an appropriate document control system to ensure current versions of key documents are in use.</p> <p>The organisation has established a records management system and ensures that employees are trained to fill out records.</p> <p>The organisation has developed a procedure or process to periodically review documentation and revise as necessary.</p> <p>The organisation has established procedures for effective internal and external reporting.</p> <p>The organisation has established processes and procedures for the production of an annual report aimed at the users of the recycled water, regulatory authorities and stakeholders.</p>	<p>Documentation and records and reporting is Fully Adequate and is described under Section 11 and Table (14) of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12.</p> <p>Going forward, Permeate Partners have been contracted to provide monthly review and reporting in addition to the annual PTWF reporting processes.</p>	<p> Fully Adequate</p>
<p>Element eleven</p> <p>The WQP (npw) outlines the process for long-term evaluation of results and the audit of the documentation.</p>	<p>The organisation has established processes and practices for the collection and evaluation of long-term data to assess performance and identify problems.</p> <p>The organisation has established processes and practices for documenting and reporting results.</p> <p>The organisation has established protocols for internal and external auditing to be conducted.</p> <p>The organisation has a process for documenting and communicating audit results to relevant stakeholders.</p>	<p>Auditing and evaluation is Fully Adequate and is described under Section 12 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12. Internal/external audits are scheduled annually/triennially, respectively. Detailed scheme evaluation, review and update is scheduled annually.</p> <p>On an ongoing (monthly) basis, Permeate Partners have been contracted to provide monthly review and reporting of data, including trends analysis.</p>	<p> Fully Adequate</p>

Requirement to be evaluated	Guidance	Evidence / comments	Assessment Finding
<p>Element twelve</p> <p>The WQP (npw) outlines a process for review and continual improvement.</p>	<p>The organisation has developed a process for senior executive to review the effectiveness of the management system and evaluate the need for change.</p> <p>Has the organisation has developed processes and procedures for the continual improvement of the plans and processes.</p> <p>There is a process for communicating and implementing the continual improvement actions.</p> <p>The improvement process is monitored for effectiveness.</p>	<p>Review and continual improvement is Fully Adequate and is described under Section 13 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12. The information given within Section 13 is very brief, but refers back to the detailed information that drives review and improvement, as noted above. Detailed scheme evaluation, review and update is scheduled annually.</p> <p>On an ongoing (monthly) basis, Permeate Partners have been contracted to provide monthly review and reporting of data, including trends analysis.</p>	<p> Fully Adequate</p>

Attachment 3. Detailed Audit Findings: Sewage Management Plan (SMP) WIC Reg Sched 1 cl.14(1)

Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
Licence conditions issued under the POEO Act 1997 relevant to sewage management (Schedule 1, Clause 14(2))	<p>Policy and Context:</p> <p>Advise if any POEO license was issued and, if so, the conditions that relate to sewage system. Based on the POEO and or WICA Licences outline how these conditions are reflected in:</p> <ul style="list-style-type: none"> The sewerage management policies and strategies applied to the site? The programs of activities to be implemented the SMP including regular reviews for adequacy and proposed improvement? Contingency and Business Continuity Planning, including additional preventative measures where improvements are required? 	<p>At the time of the field audit this aspect was Inadequate due to the absence of an agreed position with OEH. Consultation did take place with OEH who indicated that an EPL was not required for this system (letter dated 28/8/11). However, in the opinion of the auditors, that correspondence required additional information from PTWF and closure was not achieved by the time of the field audit. However, it is understood that at the time of writing this report, OEH is content that there is no need for an EPL for this scheme (letter from OEH to PTWF dated 1st March 2012) so that this aspect is Fully Adequate.</p> <p>Spills of sewerage and recycled water, from any assets that carry these grades of water, are unlikely by design. OEH did not require an agreement in relation to these matters. At the time of the field audit, response procedures for such eventualities, rare as they may be, were Inadequate. However, at the time of writing, these revised procedures are Fully Adequate (Section 7 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and Appendices J and K, and to some extent H and I).</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p>

Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
<p>The manner in which the health and ecological assessments will be undertaken and any concerns arising from any such assessment.</p>	<p>The organisation has developed and documented the approach and methodology to be used for the ecological and health assessment incorporating hazard identification and risk assessment.</p> <p>Waste and Site Characterisation:</p> <p>At a minimum the process includes:</p> <ol style="list-style-type: none"> 1 The development of a verified flow diagram of the sewage system from source to the receiving environment (including reticulation, treatment, disposal and by-product streams). 2 The process for waste characterisation of the source of the sewage 3 Identification and characterisation of the proposed site and the receiving environment (i.e. the sensitivity of the receiving environment) both for intended and unintended discharges. 4 Identification of pertinent information and key characteristics of the sewerage system consistent with the complexity of the system. 	<p>Section 3.5 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 clearly summarises pertinent information regarding the system from source to point and nature of use and is Fully Adequate. Section 3.6 explains how a conservative approach was adopted in estimating source water characteristics. Since the scheme is not yet operational, it is quite appropriate to estimate, rather than measure, source water characteristics, and this approach is and is Fully Adequate. This approach is appropriate given that the source is likely to be fairly 'typical' sewage effluent. Sections 3.5 and 3.8, as well as the risk assessment, adequately discuss environmental risks associated with the use of the water. There is no detailed land capability assessment but the nature of this scheme (nature of the water quality and the receiving environment) is considered too low risk to require such an assessment. In the opinion of this auditor, the level of assessment is Fully Adequate for this context but an opportunity for improvement exists to review receiving environment capability in more depth.</p> <p>Appendices C and D of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 show the process flow diagrams and P&IDs and these are Fully Adequate. The diagrams were consistent with what was observed during the site audit. The diagrams go down to the level of the single lot (e.g. Pitt Town Pressure Sewer Masterplan Rev A Drawing S101. Illustrated the sewerage system to the level of the lot). The Observant Monitor Map system shows each property on a map which links to the telemetry system.</p>	<p> Fully Adequate</p> <p>OFIs to further improve Fully Adequate findings:</p> <ul style="list-style-type: none"> • Consider undertaking a basic receiving environment capability assessment for the use of recycled water.

Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
The manner in which the health and ecological assessments will be undertaken and any concerns arising from any such assessment (continued...)	<p>Hazard and Risk Assessment/Management</p> <p>5 The identification and documentation of hazards (both Health and Ecological impacts) sources and hazardous events for each component of the sewerage system.</p> <p>6 The methodology for estimating the level of risk for each identified hazard or hazardous event.</p> <p>7 The identification of existing preventive measures from source to disposal for each significant hazard or hazardous event and estimates of the residual risk.</p> <p>8 An evaluation of alternative or additional preventive measures where improvement is required.</p> <p>9 The assessment of preventive measures throughout the sewage system to identify the critical control points.</p> <p>10 The establishment of mechanisms for operational control at critical control points.</p> <p>11 A documented process to periodically review and update the hazard identification and risk assessment to incorporate any changes.</p>	<p>Section 3 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and Appendix E provide the risk assessment. This is Fully Adequate. Actions for further reducing risks have been summarised and are set in context. Both maximum and residual risks have been assessed to health and environmental endpoints against likelihood and consequence criteria. The above items will be reviewed and updated as part of an annual audit, review and update process (Section 12.1).</p> <p>The system includes a number of best practice preventive measures for which the scheme should be commended. These include pressure sewer design such as PN16 PE welded sewerage assets which mitigate tree root intrusion and wet weather ingress as well as environmental egress. The blockage risks within the sewer are mitigated by a macerating pump at each property connection, and both the macerators and pumps are telemetered. There are pressure monitoring points on line within the sewerage system as well as flushing points to enable detection and response to blockages. There is a 900 L tanks on each lot with a flush out point. Flushing can be to tanker. An aggressive substance would possibly damage the pump seals which would trigger a pump problem alarm and in turn help to mitigate risks from some extreme contaminants. The sewerage catchment is only residential and so the risks as a whole are limited. The plant is built at a level that matches the existing nearby council sewerage plant with critical assets raised 300 mm above that 1/100 year flood level. The flow balance tank on site covers 110,000 L and can take in surge inflows. The pressure network can readily handle any surge. If required, waste can be sent to the nearby council sewage treatment plant on a temporary basis through an existing Access Agreement. An eductor truck could be used to manage the transfer.</p>	<p> Fully Adequate</p>

Requirement to be evaluated	Guidance	Evidence/comments	Assessment Finding
The manner in which the health and ecological assessments will be undertaken and any concerns arising from any such assessment (continued...)	<p>Data Monitoring and Sampling:</p> <p>12 The process for collecting baseline monitoring data for the site and the receiving environment to confirm the risk assessment.</p> <p>13 A process for determining the characteristics to be monitored in the sewage system and the receiving environment (as appropriate).</p> <p>14 The development of a sampling plan for each characteristic that encourages the collection of representative and reliable monitoring data.</p> <p>15 The procedure for the collection and retention of historical data about influent sewage as well as data from the effluent disposed of from the treatment plants and the receiving environment (over time and following specific events).</p> <p>16 Documented process for identifying, listing and examining exceedances.</p>	<p>Data sampling and monitoring, as designed, progressing from start up through to long term, is Fully Adequate and is described under the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 Appendix O.</p> <p>Going forward, Permeate Partners have been contracted to provide monthly review and reporting including evaluating the trends of the key verification and process parameters in addition to the annual reporting provided by PTWF.</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p>
The manner in which the health and ecological assessments will be undertaken and any concerns arising from any such assessment (continued...)	<p>Communication and Training:</p> <p>17 The process for consulting with relevant Government Agencies and the community concerning the proposed scheme.</p> <p>18 The organisation has identified a team of people with appropriate knowledge and expertise on the sewerage system (from source to end use) to undertake the assessment of the system.</p>	<p>Section 3.1 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 summarises the system assessment team. The risk assessment team was Adequate but was not Fully Adequate since specific independent environmental expertise was lacking, either through using suitable consultants and/or government, e.g. OEH, involvement. Section 2.1 provides a comprehensive summary of the project stakeholders and their roles. The summary includes governmental agencies and how they were consulted. The summary is Fully Adequate and compliant with good practice.</p>	<p><input checked="" type="checkbox"/> Adequate</p> <p>Actions to upgrade Adequate findings to Fully Adequate:</p> <ul style="list-style-type: none"> • Ensure specific, independent environmental expertise in the update of the system and risk assessment.

Attachment 4. Detailed Audit Findings: Network Operator's Licence No. 10_014 11th November 2010

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
A1 Activities Authorised - non-potable water supply	This Licence authorises the Licence Holder and the persons specified in Table 1.1 to construct, operate and maintain the water industry infrastructure specified in Table 1.2 for the purposes as specified in Table 1.3 within the area specified in Table 1.4, subject to the conditions imposed by or under the Act, the Regulation and this Licence.	See below	See below
1. Authorised persons	<p>A network operator and specified authorised persons may construct, operate and maintain specified infrastructure for specified purposes within specified areas.</p> <p>Permeate Partners Pty Ltd (ACN 130 112 257)</p> <p>[The organisation and the authorised third parties have constructed, operated and/or maintained the water industry infrastructure for the authorised purposes and within the area of operations only].</p>	Permeate Partners was identified as an authorised person for key aspects of operation and maintenance. Other contractors were identified in them main body of the documentation supplied but did not appear to have management roles of a nature that would require them to be nominated as authorised persons.	<input checked="" type="checkbox"/> Fully Adequate
2. Specified water industry infrastructure	Infrastructure for the production, treatment, filtration, storage, conveyance or reticulation of non-potable water	Described in the WQP and IOP and subordinate documents and assessed as part of those more detailed audit reports, above.	<input checked="" type="checkbox"/> Fully Adequate
3. Authorised purposes	<ol style="list-style-type: none"> 1. Irrigation 2. Toilet flushing 3. Car washing 4. Wash down of hard surfaces 5. Supply of cold water to washing machine <p>The infrastructure is not used for an unauthorised purpose.</p>	<p>Described in Section 1.1 and Section 3.5 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12. The descriptions in the plan match the licence. The descriptions are not identical to those in the licence which may lead to confusion in future and could be amended as an opportunity for improvement.</p> <p>The field inspection revealed signage stating "NOT TO BE USE FOR FIRE FIGHTING PURPOSES" on the accessible recycled water hydrant plugs. Recycled water hydrant on the locked site is intended to be used for hosing down of hard surfaces. There is a separate potable water fire hydrant connection on the site. Recycled water hydrants were lilac and potable ones were yellow.</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p> <p>OFIs to further improve Fully Adequate findings:</p> <ul style="list-style-type: none"> • Literally match the descriptions of the <i>intended use</i> and <i>authorised purposes</i> between the management plan and licence, respectively.
4. Specified area of operations	<p>The area bordered by Old Stock Route Road, Railway Road, Hawkesbury Valley Way, Macquarie Street and the Hawkesbury River in Pitt Town, Hawkesbury, NSW.</p> <p>[The water industry infrastructure constructed, operated and/or maintained by the organisation or an authorised third party does not extend outside the area of operations].</p>	The area was visited, located on a map and described in the supplied documents and matched the licence specifications.	<input checked="" type="checkbox"/> Fully Adequate

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
A2 Activities Authorised - sewerage services	This Licence authorises the Licence Holder and the persons specified in Table 2.1 to construct, operate and maintain the water industry infrastructure specified in Table 2.2 for the purposes as specified in Table 2.3 within the area specified in Table 2.4, subject to the conditions imposed by or under the Act, the Regulation and this Licence.	See below	See below
1. Authorised persons	<p>A network operator and specified authorised persons may construct, operate and maintain specified infrastructure for specified purposes within specified areas.</p> <p>Permeate Partners Pty Ltd (ACN 130 112 257)</p> <p>[The organisation and the authorised third parties have constructed, operated and/or maintained the water industry infrastructure for the authorised purposes and within the area of operations only].</p>	Permeate Partners was identified as an authorised person for key aspects of operation and maintenance. Other contractors were identified in them main body of the documentation supplied but did not appear to have management roles of a nature that would require them to be nominated as authorised persons.	<input checked="" type="checkbox"/> Fully Adequate
2. Specified water industry infrastructure	Infrastructure for the treatment, storage, conveyance or reticulation of sewage, including any outfall pipe or other work that stores or conveys water leaving the infrastructure	Described in the WQP and IOP and subordinate documents and assessed as part of those more detailed audit reports, above.	<input checked="" type="checkbox"/> Fully Adequate
3. Authorised purposes	<p>Treat, store, conveyor reticulate sewage</p> <p>The infrastructure is not used for an unauthorised purpose.</p>	Described in Section Section 3 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12. The descriptions in the plan match the licence.	<input checked="" type="checkbox"/> Fully Adequate
5. Specified area of operations	<p>The area bordered by Old Stock Route Road, Railway Road, Hawkesbury Valley Way, MacQuarie Street and the Hawkesbury River in Pitt Town, Hawkesbury, NSW.</p> <p>[The water industry infrastructure constructed, operated and/or maintained by the organisation or an authorised third party does not extend outside the area of operations].</p>	The area was visited, located on a map and described in the supplied documents and matched the licence specifications.	<input checked="" type="checkbox"/> Fully Adequate
A3 Environmental requirements	<p>A 3.1 Before commencing construction of the water industry infrastructure [A1 or A2] under this licence, the Licence Holder must:</p> <p>(a) prepare and provide IPART with a construction environmental management plan (CEMP). The CEMP must outline the proposed actions and mitigation measures to manage the environmental risks for undertaking construction of the water industry infrastructure.</p> <p>(b) provide IPART with a report, prepared by an approved auditor, in such manner and form as IPART may direct as to the adequacy of the CEMP.</p>	A Review of Environmental Factors was completed March 2010 by DBL Property and a CEMP was developed based on matters identified by IPART and in the original application from the Licence Holder (Section F). The organisation complied with the supplied CEMP and has been independently audited against that CEMP with a compliant finding provided.	<input checked="" type="checkbox"/> Fully Adequate

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
	A3.2 The Licence Holder must implement all actions and mitigation measures in accordance with the 'Response to the DECCW submission to IPART regarding the Pitt Town Water Factory' prepared by Parsons Brinkerhoff Australia Pty Ltd (2010).	Paul Rossington of Parsons Brinkerhoff prepared the response to OEH and he will be signing off that all actions are complete. At the time of writing work is continuing, e.g. landscaping. This action will need to be assessed as part of the next audit.	<input checked="" type="checkbox"/> Adequate Actions to upgrade Adequate findings to Fully Adequate: <ul style="list-style-type: none"> Review this as part of the operational audit.
B1. Ongoing capacity to operate. WIC Act 10.4 (a) & 13.2 (a)	<p>The Licence Holder must have the technical, financial and organisational capacity to carry out the activities authorised by this Licence. If the Licence Holder ceases to have this capacity, it must report this to IPART immediately.</p> <p>[The organisation can demonstrate the level of technical and organisational resourcing and the capacity of those resources have not diminished since the licence was awarded.</p> <p>The organisation has developed and implemented appropriate resource plans which identify personnel requirements for safe operation of the infrastructure. Personnel requirements would include skill sets and appropriate levels of staffing.</p> <p>The organisation undertakes financial audits of the licensed activities at a frequency appropriate for the organisation's exposure to financial risk.</p> <p>The organisation has a procedure to identify if there is insufficient capacity to carry out the licensed activity and the procedure includes notification of IPART.</p> <p>The organisation has a procedure to ensure IPART is informed immediately if the capacity is not retained].</p>	<p>At the time of the audit, in the opinion of the auditors, and in the opinion of IPART (<i>Application for a Network Operator's Licence and a Retail Supplier's Licence from Pitt Town Water Factory Pty Ltd IPART's report to the Minister Water — Ministerial report September 2010</i>) the Licence Holder satisfactorily met these criteria</p> <p>IPART considered that the Licence Holder satisfactorily met these criteria subject to the naming of Permeate Partners as an authorised third party (which has occurred) and adoption of the CEMP (which has occurred, as noted above).</p>	<input checked="" type="checkbox"/> Fully Adequate

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
B2 Obtaining appropriate insurance	<p>B2.1 Before commencing to operate water industry infrastructure under this Licence, the Licence Holder must:</p> <ul style="list-style-type: none"> (a) obtain appropriate insurance sufficient for the size and nature of the activities authorised under this Licence, (b) demonstrate that the insurance obtained is appropriate by providing a report to IPART from an Insurance Expert certifying that in the Insurance Expert's opinion the type and level of insurance obtained by the Licence Holder is appropriate for the size and nature of the activities authorised under this Licence, and (c) provide a copy of each certificate of currency of insurance obtained to IPART. <p>B2.2 The report from the Insurance Expert must:</p> <ul style="list-style-type: none"> (a) identify the key risks of undertaking the activities authorised under this Licence, (b) set out the types and levels of insurance obtained by the Licence Holder in the relation to the activities being undertaken, (c) provide reasons as to why the types and levels of insurance are appropriate for the size and nature of the activities being undertaken, and (d) if any risks arising from undertaking the activities remain uninsured, provide reasons as to why. 	<p>In the opinion of IPART (<i>Application for a Network Operator's Licence and a Retail Supplier's Licence from Pitt Town Water Factory Pty Ltd IPART's report to the Minister Water — Ministerial report September 2010</i>) the Licence Holder satisfactorily met these criteria. IPART reviewed these insurances and provided advise that they were adequate (email from IPART to the auditor, dated 8th December 2011).</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p>

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
B3 Maintaining appropriate insurance	<p>B3.1 The Licence Holder must maintain appropriate insurance sufficient for the size and nature of the activities authorised under this Licence. [The licensee has obtained/maintained appropriate insurance.]</p> <p>B3.2 From time to time when requested in writing by IPART, the Licence Holder must provide a report to IPART, in the manner, form and time specified by IPART, from an Insurance Expert certifying that in the Insurance Expert's opinion the type and level of insurance obtained by the Licence Holder is appropriate for the size and nature of the activities authorised under this Licence. [The licensee provided a report to IPART from an Insurance Expert certifying the level of insurance is appropriate].</p> <p>B3.3 Whenever there is a change in the type, level or period of insurance held by the Licence Holder in relation to the activities authorised under this Licence, the Licence Holder must provide a copy of the certificate of currency to IPART within 10 days of the change being made. [The organisation has evidence to demonstrate it provided such a certificate when required.]</p> <p>[The organisation has provided a report from an independent insurance broker that holds an Australian financial services licence (AFSL) under Part 7.6 of the Corporations Act 2001 (Cth), and the report includes providing the ABN and AFSL number. the letter or report should state:</p> <ul style="list-style-type: none"> • that the insurance obtained is appropriate for the size and nature of the activities authorised under the licence, • attach a copy of each certificate of currency of insurance in relation to the licensed entity & licensed activities • identify the key risks of undertaking the activities authorised under the licence • set out the types and levels of insurance obtained • provides reasons as to why the types and levels of insurance are appropriate • for the size and nature of the activities being undertaken, and • if any risks arising from undertaking the activities remain uninsured, provide reasons as to why. <p>The auditor is to check with IPART whether IPART has received a report that meets the requirements of the licence obligation].</p>	<p>In the opinion of IPART (<i>Application for a Network Operator's Licence and a Retail Supplier's Licence from Pitt Town Water Factory Pty Ltd IPART's report to the Minister Water — Ministerial report September 2010</i>) the Licence Holder satisfactorily met these criteria. IPART reviewed these insurances and provided advise that they were adequate (email from IPART to the auditor, dated 8th December 2011).</p>	<p><input checked="" type="checkbox"/> Fully Adequate</p>

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
B4 Complying with NSW Health requirements	The Licence Holder must carry out the activities authorised by this Licence in compliance with any requirements of NSW Health that IPART has agreed to and are notified from time to time to the Licence Holder by IPART in writing.	<p>The Licence Holder has held discussions with NSW Health and come to agreement through an Operating Protocol Supply of Recycled Water dated 25/11/2011 between the Licence Holder and NSW Health (Nepean Blue Mountains & Western Sydney, Local Health Districts, Public Health Unit).</p> <p>The Licence Holder has replaced the UV disinfection system with an alternative unit to the satisfaction of NSW Health (email from NSW Health to the auditor dated 3rd February 2012).</p>	<input checked="" type="checkbox"/> Fully Adequate
B5 Reporting in accordance with the reporting manual	The Licence Holder must prepare and submit reports in accordance with the applicable Reporting Manual issued by IPART and available from IPART's website www.ipart.nsw.gov.au.	The reporting process in place is as required by IPART's Reporting Manual.	<input checked="" type="checkbox"/> Fully Adequate
B6 Reporting information in relation to the register of licences	<p>Whenever any of the following information changes, the Licence Holder must provide the updated information to IPART within 14 days of the change:</p> <ul style="list-style-type: none"> (a) each source from which the water handled by the infrastructure is derived, (b) the identity of each licensed retail supplier or public water utility that has access to the infrastructure services provided by the infrastructure for the purpose of supplying water to its customers, (c) a description of any other water infrastructure to which the infrastructure is connected. <p>[In the case of any of these changes, the organisation has provided the relevant information to IPART within 14 days of the change].</p>	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate
B7 Monitoring	<p>B7.1 Any monitoring required to be undertaken by the Licence Holder for the purposes of this Licence or any Plans required under the Regulation must be undertaken in accordance with the requirements set out below.</p> <p>B7.2 The following records must be kept of any samples collected:</p> <ul style="list-style-type: none"> (a) The date(s) on which the sample was taken, (b) The time(s) at which the sample was collected, (c) The point or location at which the sample was taken, and (d) The name of the person who collected the sample. <p>B7.3 A laboratory accredited for the specified tests by an independent body acceptable to NSW Health, such as the National Association of Testing Authorities (NATA) or equivalent, shall carry out all analyses of samples.</p>	To the extent that this could be assessed, monitoring plans and accreditation requirements were adequate. However, monitoring records will need to be gathered in future following scheme start up and this was not assessed under this audit. NATA accreditation is required for water quality testing (as noted under the WQP component of this audit).	<input checked="" type="checkbox"/> Fully Adequate

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
B8 Provision of copy of plans	B8.1 Whenever the Licence Holder makes a significant change to its Plans, the Licence Holder must provide a copy of the amended Plan to IPART at the same time it provides a copy to the approved auditor engaged to provide a report as to the adequacy of the changed Plan as required under the Regulation.	Towards the end of the audit period, plans were updated and provided to the auditors but were not simultaneously provided to IPART. However, plans were supplied to IPART by the time the audit report was finalised.	<input checked="" type="checkbox"/> Adequate Actions to upgrade Adequate findings to Fully Adequate: <ul style="list-style-type: none"> • Ensure that in future updated plans are supplied to IPART at the same time as to the auditors.

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
B9 delineating responsibilities – interconnections	<p>B9.1 Where a water industry code of conduct under clause 25 of the Regulation has not been established by order published in the Gazette and the water industry infrastructure specified in Schedule A, clause A1, Table 1.2 and clause A2, Table 2.2 of this Licence is connected to any other water industry infrastructure, the Licence Holder must establish a code of conduct in relation to the respective responsibilities of the Licence Holder and each licensed network operator, licensed retail supplier and/or public water utility that is responsible for the other water industry infrastructure.</p> <p>B9.2 The arrangements are to be agreed in writing between the Licence Holder and the other licensed network operators, licensed retail suppliers and/or public water utilities prior to commencing commercial operation of the water industry infrastructure specified in Schedule A, clause A1, Table 1.2 and clause A2, Table 2.2 of the Licence.</p> <p>B9.3 The arrangements must address the following matters:</p> <ul style="list-style-type: none"> (a) responsibility for the repair, replacement or maintenance of any pipes, pumps, valves, storages or other infrastructure connecting the water industry infrastructure specified in Schedule A, clause A1, Table 1.2 and clause A2, Table 2.2 of this Licence to any other water industry infrastructure, (b) responsibility for water quality, (c) liability in the event of the unavailability of water, (d) liability in the event of infrastructure failure, (e) responsibility for handling customer complaints. <p>[The organisation has identified whether a code of conduct needs to be established.</p> <p>Where relevant, the arrangements have been established, documented and various responsibilities undertaken by the relevant parties.</p> <p>The arrangements address the relevant matters.</p> <p>In the absence of the Water Industry Code of Conduct, the licensee must have relationships established with the relevant parties to deal with issues such as customer complaints. This relationship should be confirmed in a written document such as a Memorandum of Understanding or written agreement. In the case of handling customer complaints, the arrangements need to be consistent with the notifiable events identified in an incident and emergency response plan agreed to with NSW Health.]</p>	There is no connection between this and others' water industry infrastructure.	No Requirement

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
B10 Notification of changes to Authorised Person	If an Authorised Person ceases, proposes to cease or receives notification to cease providing any of the services relating to the activities authorised by this Licence, the Licence Holder must provide IPART with written notice as soon as practicable and in any event no later than 28 days prior to the date of cessation of the services. Such written notice must include details of how the services previously undertaken by the Authorised Person will continue to be undertaken.	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate

Attachment 5. Detailed Audit Findings: Paraphrased aspects of the Water Industry Competition (General) Regulation 2008

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
General requirements			
WIC Act section 14 (3)	A network operator must pay the annual licence fee determined by the Minister.	IPART has confirmed to the auditors that these fees have been paid (email from IPART to the auditor, 30 th May 2012 – fees are paid from 30 th September 2011).	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 1 (1)	A network operator must provide the Minister or IPART with information as directed by the Minister or IPART in relation to licensee's activities under licence and must provide it in the time specified in the direction.	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 5	A network operator must comply with any water industry code of conduct, marketing code of conduct and transfer code of conduct.	The marketing code of conduct and the transfer code of conduct are currently only draft – so compliance is not yet required. The Water Industry code of conduct was written in as licence condition B9, delineating responsibilities and interconnections, which was considered No Requirement.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl 2.1	The licensee must not bring any new water or sewage infrastructure into commercial operation without the written approval of the Minister. [The organisation can demonstrate that all new infrastructure commenced commercial operation after receiving written approval of the Minister].	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl 2.2 (b)	The infrastructure is capable of operating safely. [The organisation can demonstrate that the infrastructure can operate without causing harm to public health and the environment and complies with the requirements of other relevant legislation such as the Occupational Health and Safety Act].	This was assessed as part of the IOP audit. During the site audit a number of minor gaps were identified but these were subsequently rectified. The site has three Safety showers, a HAZCHEM register and PTWF has notified WorkCover of chemical storage (although there are no Dangerous Goods). PTWR has a compliance certificate for BCA.	<input checked="" type="checkbox"/> Fully Adequate

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl 2.2 (b)	<p>The infrastructure is capable of operating in accordance with its infrastructure operating plan and its water quality plan or sewage management plan, as the case requires.</p> <p>[The organisation can demonstrate that the plans are being implemented, for example, the procedures referenced in the plans are being used by the operators and the operators are trained in the procedures.</p> <p>The organisation can show that the practices adopted on site are covered by the plans and the on-site practices are not contradictory to the documented procedures].</p>	This was assessed as part of the IOP, WQP and SMP audits, above.	<input checked="" type="checkbox"/> Fully Adequate
Health requirements			
WIC Act section 18	A network operator must comply with any direction of the Minister to take specified action to reduce or eliminate a risk to public health or public safety arising from certain activities.	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 1(2)	A network operator must immediately notify certain persons of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate
Netw. Op. Licence cl. B4	<p>The licensee must comply with any requirements of NSW Health which IPART has notified the licensee of in writing.</p> <p>[The organisation can show they have developed a relationship with NSW Health. This can be in the form of an MOU or communications protocol.</p> <p>The organisation has a register to record NSW Health/IPART requirements if they come in, and there is evidence of compliance with the requirements.</p> <p>NSW Health, with the agreement of IPART, has required that notifiable events and response protocols (in a document such as an incident and emergency response plan) are agreed with NSW Health before a scheme commences commercial operation]</p>	<p>Under Section 7.3 of the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12, NSW Health and IPART are noted as organisations to be notified in the event of notifiable events.</p> <p>The Licence Holder has involved NSW Health in review of its risk assessment and has held discussions with NSW Health and come to agreement through an Operating Protocol Supply of Recycled Water dated 25/11/2011 between the Licence Holder and NSW Health (Nepean Blue Mountains & Western Sydney, Local Health Districts, Public Health Unit). This document includes discussion of notifiable events.</p> <p>The Licence Holder has replaced the UV disinfection system with an alternative unit to the satisfaction of NSW Health (email from NSW Health to the auditor dated 3rd February 2012).</p>	<input checked="" type="checkbox"/> Fully Adequate
Environmental requirements			
WIC Reg Sched 1 cl. 4	<p>In relation to the protection of the environment, there has been compliance with the requirements of:</p> <p>(a) the Environmental Planning and Assessment Act 1979 and any environmental planning instruments under that Act, and</p> <p>(b) the Protection of the Environment Operations Act 1997 and any regulations under that Act.</p>	These requirements were considered under the audit of the SMP.	<input checked="" type="checkbox"/> Fully Adequate

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
Infrastructure Operating Plan			
WIC Reg Sched 1 cl. 3(a), (b)	<p>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:</p> <p>(a) the purposes for which it is licensed, and</p> <p>(b) the licence conditions.</p>	These requirements were considered under the audit of the IOP.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 3(c)	<p>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.</p> <p>[The organisation has established a procedure for identifying and keeping up to date with any publicly available standards and codes. These may include documents produced by Standards Australia, Water Services Association Australia, regulatory agencies such as the EPA and Health, a relevant public utility, product manufacturers and suppliers.</p> <p>The organisation has established procedures to consider the requirements of all identified standards and codes and to determine if the requirements are relevant for the safe and reliable design, construction and operation of the specific water industry infrastructure.</p> <p>The organisation has established procedures to comply with the standards and codes which are deemed relevant to the specific water industry infrastructure].</p>	These requirements were considered under the audit of the IOP.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 6(2) (a) and WIC Reg Sched 1 cl. 13(2) (a)	<p>The infrastructure operating plan is fully implemented and kept under regular review and all of the licensee's activities are carried out in accordance with that plan.</p> <p>[The relevant staff members are aware of the requirements of the plan and have evidence of implementation, such as up to date checklists and registers for maintenance, training, inductions, monitoring, incidents and emergencies.</p> <p>The organisation has a procedure for reviewing the plan on a regular basis].</p>	These requirements were considered under the audit of the IOP.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 6(2) (b) and WIC Reg Sched 1 cl. 13(2) (b)	<p>If the Minister has directed, amendments to the licensee's infrastructure operating plan, such amendments were completed in accordance with the Minister's direction.</p>	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate

Clause	Requirements [and guidance]	Evidence/comments	Assessment Finding
WIC Reg Sched 1 cl. 6(3) And WIC Reg Sched 1 cl. 13(3) And Netw. Op. Licence cl. B8	If any significant change is made to its infrastructure operating plan (or the Minister or IPART demands it), the licensee provides the Minister or IPART with a report, prepared by an approved auditor regarding the adequacy of the plan and the condition of its infrastructure.	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 8	The water meters connected to a licensee's water main comply with the requirements of the Plumbing and Drainage Code of Practice. The licensee has ensured the water meter is properly maintained and periodically tested, and the water meter is read at least every 4 months, and written notice of each meter reading is sent to the relevant licensed retail supplier. [The organisation has a procedure to check all water meters (both customer's and the licensee's water meters) comply with the requirements and have ongoing maintenance and meter readings].	The Licence Holder is using the same water meters as Sydney Water use, which is the "Elster V100" unit. These comply with the requirements.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 11 And WIC Reg Sched 1 cl. 15	Customer's installations are not connected to the licensee's water main or sewer main unless the installation complies with the Plumbing and Drainage Code of Practice. [The organisation has a procedure for obtaining a plumbing certificate of compliance from Office of Fair Trade through customers regarding compliance of their internal plumbing].	Extensive documentation was provided to demonstrate compliance with the plumbing requirements, both Licence Holder and local council inspections and reports (noted at many points within the Pitt Town Water Factory Company Recycled Water System Management Plan Revision D dated 08/03/12 and in particular at Appendix U).	<input checked="" type="checkbox"/> Fully Adequate
Water Quality Plan			
WIC Reg Sched 1 cl. 7(4)(a)	The water quality plan is fully implemented and kept under regular review and the licensee's activities are carried out in accordance with that plan.	This was audited under the WQP audit.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 7(4)(b)	If the Minister so directs, amendments to the licensee's water quality plan are made in accordance with the Minister's direction.	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 7(5) and Netw. Op. Licence cl. B8	If any significant change is made to its water quality plan (or the Minister or IPART demands it), the licensee provides the Minister or IPART with a report, prepared by an approved auditor regarding the adequacy of the plan	Not yet assessable but no inadequacies identified in this audit. This should be reviewed under future audits.	<input checked="" type="checkbox"/> Fully Adequate
WIC Reg Sched 1 cl. 10	The licensee 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.	This was verified under Element 9 of the WQP.	<input checked="" type="checkbox"/> Fully Adequate

PUBLIC VERSION

4.2 WATER INFRASTRUCTURE – NON-POTABLE WATER

- Appendix 4.2.11(c) Notice of Approval for Commercial Operation (Pitt Town)



New South Wales

Water Industry Competition Act 2006

Notice of approval to bring new infrastructure into commercial operation

I, Greg Pearce MLC, Minister for Finance and Services, have considered the request by Pitt Town Water Factory Pty Ltd (ACN 141 705 660) (**PTWF**) for approval to bring new infrastructure into commercial operation under the *Water Industry Competition Act 2006*. The new infrastructure is described in Schedule A, Table 1 and 2 of PTWF's network operator licence (10_014) (**Licence**).

I have considered a report prepared by approved auditors within the meaning of the *Water Industry Competition (General) Regulation 2008* (**Regulation**), which is included as Attachment A. I am satisfied that the report indicates the new infrastructure:

1. complies with the requirements of the Regulation and the conditions of the Licence; and
2. is capable of operating safely and in accordance with PTWF's infrastructure operating plan and water quality plan.

I therefore give my approval under Schedule 1, clause 2 of the Regulation for PTWF to commence commercial operation of the new infrastructure.

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Hon. Greg Pearce MLC
Minister for Finance and Services

Dated this *15th* day of *June* 2012