

Sydney Water Corporation Operational Audit 2015-16

Report to the Minister

Water — Compliance Report
December 2016

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Executive summary

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) has completed the first operational audit (the audit) of Sydney Water Corporation's (Sydney Water) compliance with the requirements of its 2015-2020 Operating Licence (the licence). This audit covers the period from 1 July 2015 to 30 June 2016 (2015-16).

We engaged a specialist auditing firm Cobbitty Consulting (Cobbitty), in partnership with BBTech Consulting (BBTech), to assist with the audit. We have prepared this report to summarise the audit findings for the Minister for Lands and Water (the Minister).

The 2015-16 audit findings demonstrate that Sydney Water has shown a high level of compliance with its licence.

Sydney Water has demonstrated that it has made progress towards implementing recommendations from previous audits, thereby improving its compliance. In areas where full compliance has not been achieved we have made recommendations for Sydney Water to continue to improve compliance with its licence obligations.

Our recommendations

The final auditor's report (Appendix C) details the audit findings and recommendations. We endorse all of these findings. There were three clauses for which the auditor did not assign Full Compliance. Our recommendations in relation to these clauses are listed below.

Licence and Licence Authorisation

- 1 Sydney Water should complete, register and apply the Development Servicing Plan for the Oran Park/Turner Road development (by 30 June 2017).

Water Quality

- 2 Sydney Water should review recycled water monitoring requirements in consultation with NSW Health to confirm that all validated UV units are operating within their UVT validation envelope, appropriate to the dose monitoring strategy in place (by 30 March 2018)

Customers and Consumers

- 3 By 30 June 2017 Sydney Water should develop and implement a procedure or process to ensure that it advertises in a Sydney-based newspaper at least once each year on:
 - a) the types of account relief available for Customers experiencing financial hardship, and
 - b) rights of Customers to claim rebates and the conditions that apply to those rights.

Subject to the Minister's endorsement of the recommendations, we will request Sydney Water provides us with a report on its progress in implementing these recommendations by 31 March 2017.

Overview of audit findings

The 2015-16 audit found that Sydney Water demonstrated a high level of compliance with its licence. This is the first audit in the 5-year term of the licence. Two non-compliances and one high compliance were identified by the audit.

The compliance grades that we applied to the audit are explained in Appendix A. Sydney Water achieved Full Compliance with 31 of the 34 clauses audited, High Compliance for one clause and non-compliant for two clauses. In summary, the audit found that Sydney Water was assigned:

- ▼ **Full Compliance** with all auditable requirements relating to:
 - water quality relating to drinking water (clauses 2.1.1 and 2.1.2) and recycled water (clause 2.2.1),
 - water quantity relating to economic level of water conservation (clauses 3.2.1 and 3.2.5),
 - assets relating to asset management system (clause 4.1.5),
 - customers and consumers (clauses 5.3.1, 5.4.1, 5.4.4, 5.5.1, 5.5.2, 5.5.3, 5.5.4, 5.5.5, 5.5.6, 5.6.1, 5.6.2, 5.6.3, 5.6.4, 5.7.1, and 5.7.2),
 - environment (clauses 6.1.1, 6.1.2, 6.1.4, and 6.2.1),
 - performance monitoring (8.2.1. and 8.2.2), and
 - memorandum of understanding (clauses 9.1.1, 9.1.2, 9.4.1, and 9.4.4).
- ▼ **High Compliance** with requirements relating recycled water under water quality (clause 2.2.2).
- ▼ **Non-compliant** with requirements relating to:
 - Licence and Licence Authorisation relating to pricing (clause 1.9.1), and
 - Customers and Consumers relating to providing information (clause 5.2.4).

Sydney Water's compliance is summarised in Table 1 below.

Table 1 Sydney Water's compliance in 2015-16, the first year of its 2015-2020 Operating Licence

Licence part	Number of audited clauses	Compliance grade assigned				
		Full	High	Adeq	NC	NR
1. Licence and Licence authorisation	1	-	-	-	1 ^a	-
2. Water quality	4	3	1	-	-	-
3. Water quantity	2	2	-	-	-	-
4. Assets	1	1	-	-	-	-
5. Customers and consumers	16	15	-	-	1 ^a	-
6. Environment	4	4	-	-	-	-
7. Quality management	0	-	-	-	-	-
8. Performance monitoring	2	2	-	-	-	-
9. Memorandum of understanding	4	4 ^b	-	-	-	-
Total	34	31	1	0	2	0

a Sydney Water self-identified two areas of non-compliance in parts 1 and 5 of the operating licence. These clauses were also audited.

b Although not originally part of the audit scope NSW Health raised concerns regarding the MOU in its letter to us providing comments and concerns relating to compliance during the audit period. As a result clauses 9.1.1 and 9.1.2 were subsequently audited.

Note: Full = Full Compliance; High = High Compliance; Adeq = Adequate Compliance; NC= Non-Compliant; NR = Not Required.

Note: 34 clauses were audited, but only 32 were in the original scope. The additional two clauses were audited in response to a letter from NSW Health highlighting some concerns regarding public messaging in relation to water quality

Source: Sydney Water Statement of Compliance 1 September 2016, and Cobbitty Consulting, Sydney Water Corporation 2015/16 Operational Licence Audit (RFQ16/150) for IPART. 27 May 2016.

Annual statement of compliance

In preparing this report we have also reviewed Sydney Water's annual Statement of Compliance (Appendix E). This is an exception based report certified by the Managing Director and the Chairman of the Board of Directors of Sydney Water. It lists any licence breaches that occurred during the year. Further, any remedial action taken, or in the process of being taken, is reported. This year Sydney Water reported two breaches of its licence.

Progress with previous recommendations

Finally, we note that Sydney Water has completed eight out of nine outstanding recommendations from previous operating audits. While one recommendation is ongoing, and warrants further monitoring of progress, we have revised the due date in light of the audit findings which indicate that an additional nine months is required to complete the actions and this has been agreed with NSW Health. Therefore although on-going we have closed it out and created a new recommendation (Recommendation 2 above) and will continue to monitor and report on progress against this recommendation during future audits.

1 | Introduction and scope

Sydney Water Corporation (Sydney Water) is a State Owned Corporation, wholly owned by the NSW State Government. Sydney Water provides water, sewerage and stormwater services and disposes of wastewater within its area of operations in Sydney, Illawarra and the Blue Mountains. Sydney Water's roles and responsibilities, as well as its objectives, are prescribed by the *State Owned Corporations Act 1989* (NSW), the *Sydney Water Act 1994* (NSW) (the Act) and the Operating Licence (licence) issued to Sydney Water under part 5, section 12 of the Act.

We have completed the 2015-16 annual operational audit of Sydney Water's compliance with obligations outlined in its licence. We do this by receiving and reviewing reports, attending audit interviews with utility staff, and undertaking field verification site visits to investigate how effectively requirements of the licence are met in practice. At the completion of the audit we publish the audit report and report our findings to the Minister for Lands and Water (the Minister).

We have applied a risk based approach to determine which clauses to audit. Further, we assessed compliance by reviewing an annual Statement of Compliance prepared by Sydney Water (Appendix E). This is an exception based report listing any licence breaches that occurred during the year. This Statement also includes what remedial action has been taken, or is being taken, to resolve any reported breaches.

1.1 Purpose and structure of this report

The purpose of this report is to inform the Minister of Sydney Water's performance against its audited licence obligations for the audit period and to set out recommendations in response to these findings.

- ▼ This chapter (Chapter 1) explains the scope of the audit review and the process followed in undertaking the audit.
- ▼ Chapter 2 presents a summary of the audit findings and recommendations.
- ▼ Chapter 3 summarises the progress by Sydney Water to address and implement recommendations from previous audits.
- ▼ Appendix A contains the table of compliance grades used for this audit.
- ▼ Appendix B contains the audit scope.

- ▼ Appendix C provides the auditor's detailed audit report.
- ▼ Appendix D provides a letter from the auditor on the status of Sydney Water's management systems
- ▼ Appendix E provides Sydney Water's annual Statement of Compliance.

1.2 Audit scope

This audit covers the period from 1 July 2015 to 30 June 2016.

The audit scope for this year included obligations relating to:

- ▼ Licence and licence authorisation (Part 1) – requirement relating to pricing.
- ▼ Water Quality (Part 2) – requirements relating to drinking water and recycled water.
- ▼ Water Quantity (Part 3) – requirement relating to economic level of water conservation.
- ▼ Assets (Part 4) – requirement relating to the implementation of the asset management systems.
- ▼ Customer and Consumers (Part 5) – requirements relating to providing information, consumers, assistance options for payment difficulties and actions for non-payment, and Customer Council and Charter, Internal complaints handling, and External dispute resolution scheme.
- ▼ Environment (Part 6) – requirements relating to the environmental management system and environmental indicators.
- ▼ Performance monitoring (Part 8) – requirement relating to reporting obligations.
- ▼ Memorandum of understating (Part 9) – requirements relating to NSW Health and Fire and rescue NSW.

No clauses from Part 7 and 10 (Quality management and End of term review) were audited this year, following the risk-based approach used in the auditing program.

We consulted with the NSW Ministry of Health (NSW Health) and sought public submissions in determining the scope of the audit. The audit scope is provided in Appendix B. This year, NSW Health identified the following areas of interest¹ which were included in the audit:

- ▼ NSW Health's role in relation to Sydney Water's public communication and education as described in the MoU is that of a regulator.

¹ Letter to IPART, Dr Ben Scalley, Director Environmental Health Branch, NSW Health. D16/22453

- ▼ Collaborative relationship under the Operating Licence and MoU. The MoU forms the basis for the relationship and has been revised recently to include two additional clauses on communication as a result of issues raised in the submission.

We sought submissions from the public on matters related to the licence prior to the audit interviews. We advertised for public submissions in the Sydney Morning Herald, Daily Telegraph, and Newcastle Herald on 6 July 2016 and the Land on 7 July 2016. We received no public submissions.

1.3 The audit process

The audit is the main regulatory process that we use to assess compliance with the licence. We apply a risk based approach to the audit. Under this approach, we assess the risk of non-compliance with a licence obligation to determine an appropriate audit frequency for that requirement. We audit clauses that we consider to be 'high risk' more frequently, while low risk clauses are audited less frequently. We audit all requirements of the licence at least once during the 5-year term of the licence.

Adopting a risk based approach has improved the effectiveness and efficiency of the auditing process, without increasing risks to the community. The approach allows audit resources to be targeted to areas of higher risk. It also reduces the overall burden of compliance for the utility.

We engaged Cobbitty Consulting Pty Ltd (Cobbitty), in partnership with BBTech Consulting Pty Ltd (BBTech), to assist with the 2015-16 audit of Sydney Water. The auditor was required to undertake the following tasks:

1. Receive stakeholder submissions and comments for inclusion in the audit scope.
2. Prepare an information request (questionnaire), setting out all information and evidence requirements, at least two weeks prior to the commencement of audit interviews.
3. Review evidence and reports provided by Sydney Water in response to the questionnaire.
4. Conduct face-to-face interviews with Sydney Water staff at its offices.
5. Conduct field verification and assess the implementation of Sydney Water's systems and procedures.
6. Assess the level of compliance the Sydney Water achieved against each of the identified obligations of the licence (as per our risk-based audit scope), provide supporting evidence for this assessment and reporting on the level of compliance according to our compliance grades (Appendix A).

7. Assess and report on progress by Sydney Water in addressing any comments made by the relevant Minister and/or recommendations endorsed by us following previous audits, providing supporting evidence for these assessments.
8. Verify the calculation of performance indicators associated with requirements of the relevant licence and undertake an assessment of any underlying trends in performance arising from these indicators.
9. Provide drafts of the audit report to us and address comments from Sydney Water and us regarding draft audit findings.
10. Prepare a final report outlining audit findings.

The auditor adopted an audit methodology that was consistent with *ISO 19011:2011 Guidelines for Auditing Management Systems*. This guideline sets out a systematic approach to defining the requirements of an audit, ensuring that it is conducted in accordance with an established and recognised audit protocol. Where appropriate, the auditor also sought guidance from *ASAE 3100 (2008) Compliance Engagements*, *Auditing and Assurance Standard AUS 110 Assurance Engagements other than Audits or Reviews of Historical Financial Information*, and *International Standard on Quality Control ISQC 2009*.

The auditor also carried out the audit according to our *Audit Guideline for Public Water Utilities May 2016*.² Under this guideline, the auditor can make recommendations or suggest opportunities for improvement. Where we support an auditor's recommendation and it is endorsed by the Minister, we follow up the matter to ensure that it is addressed.

Where the auditor has suggested opportunities for improvement, we take a different approach. Sydney Water can decide to implement an opportunity, based on its own assessment of whether the improvement is a prudent and efficient way to achieve its objectives. We take this approach to balance improved performance with the investment required to achieve it. That is, we want the utility to consider the pricing implications of continued improvement and value for money, before the utility implements further improvements. As a consequence, we do not follow up the auditor's suggested opportunities for improvement.

We held a project start up meeting with the auditor on 1 August 2016, to agree on the project milestones, audit timing, and outline our expectations. We also held an audit inception meeting with Sydney Water and the auditor on the first day of the audit interviews, on 26 September 2016. At this meeting, expectations and protocols for the conduct of the audit were agreed. All parties adhered to the agreed protocols throughout the audit.

² Available on our website (www.ipart.nsw.gov.au).

The licence audit interviews were conducted from 26 to 28 September 2016 at Sydney Water's offices in Parramatta. On 27 September 2016, the auditor also undertook a site visit to the following locations:

- ▼ Preston maintenance depot for sampling of processes, practices and programs for field implementation of planned and reactive asset maintenance.
- ▼ Orchard Hills drinking water filtration plant including SCADA control room, laboratory, and chemical storages.
- ▼ Cronulla wastewater treatment plant including odour control, cogeneration plant, and SCADA control room.

Sydney Water's compliance with the audited requirements of the licence was assessed according to the compliance grades outlined in Appendix A.

2 | Summary of audit findings and recommendations

This chapter provides a summary of the auditor's findings and recommendations for each of the audited clauses of the licence. The 2015-16 audit is the first audit of the 2015-2020 licence.

Each section includes a table providing a comparison of Sydney Water's audit performance during its licence period. However, comparison data will only be available from 2016-17 onwards as this is the first year of the new operating licence. Compliance grades are described in Appendix A and abbreviated according to the following convention:

- ▼ **Full** = Full Compliance
- ▼ **High** = High Compliance
- ▼ **Adeq** = Adequate Compliance
- ▼ **NC** = Non-Compliant
- ▼ **NR** = No requirement.

Following each table, we discuss compliance and reasoning for the grade. We also discuss any recommendations for improving compliance and opportunities for improvement.

2.1 Licence and licence authorisation

Sydney Water was assigned non-compliant grade for clause 1.9.1.

Clause 1.9.1 of the licence, Pricing, outlines the obligation for Sydney Water to set the level of fees, charges and other amounts payable for its Services subject to the terms of the Licence, the Act and the maximum prices and methodologies determined by IPART. Under the risk based auditing framework, we consider that this part of the licence poses a low risk with respect to likelihood and consequence of non-compliance.

Table 2.1 Summary of compliance with Part 1 of the licence – Licence and licence authorisation

Clause	Requirement	Compliance grading				
		2015-16 ^a	2016-17	2017-18	2018-19	2019-20
1	Licence and licence authorisation					
1.9.1	Pricing	NC	-	--	-	-

^a Cobbitty Consulting, 2015-16 Operational Audit of Sydney Water – Final Audit Report, November 2016.

Clause 1.9.1 – Pricing

In relation to two recycled water schemes, Hoxton Park and Oran Park/Turner Road, Sydney Water non-compliances relating to the way that Sydney Water had collected capital contributions for the schemes we identified. Namely that they applied without a registered Development Servicing Plan being in place and without Treasurer approval to charge a price that was lower than maximum price set in the determination.

This non-compliance follows on from the non-compliance previously reported in 2014-15 and relating to charges that were applied from 2009 and 2010, and has occurred until 2016 for some scheme specific Development Servicing Plans.

Sydney Water declared a non-compliance in relation to clause 1.9.1 prior to the audit in the Statement of Compliance. During the audit it also identified a new non-compliance in relation to the Oran Park/Turner Road scheme. It has also reported details of the non-compliance in its 2015-16 Annual Report.

Steps have been taken by Sydney Water to prevent any further non-compliance in relation to Development Servicing Plans by preventing automated charges being issued. The previously declared non-compliance in the 2014-15 audit period for Hoxton Park resulted in this clause being audited again in this audit period to assess progress. The auditor found that Sydney Water has adhered to the relevant IPART price determinations for Hoxton Park, and has completed the recommendation from the 2014-15 audit. The same process will be followed for the Oran Park/Turner Road scheme.

Accordingly, the auditor assigned Sydney Water a non-compliant grade for clause 1.9.1. We will audit this clause again next year to assess progress.

We make one recommendation in relation to clause 1.9.1, based on the auditor's recommendations.

Recommendations

- 1 Sydney Water should complete, register and apply the Development Servicing Plan for the Oran Park/Turner Road development by 30 June 2017.

2.2 Water Quality

Sydney Water achieved full compliance for clauses 2.1.1, 2.1.2, and 2.2.1. Sydney Water was assigned high compliance for clause 2.2.2.

Clauses 2.1.1 and 2.1.2 of the licence, Drinking Water, outline the obligations for Sydney Water to manage drinking water quality to the satisfaction of NSW Health in accordance with the Australian Drinking Water Guidelines.

Clauses 2.2.1 and 2.2.2 of the licence, Recycled Water, outline the obligations for Sydney Water to manage recycled water quality to the satisfaction of NSW Health in accordance with the Australian Guidelines for Recycled Water.

Under the risk based auditing framework, we consider that this part of the licence poses a high risk with respect to likelihood and consequence of non-compliance.

Table 2.2 Summary of compliance with Part 2 of the licence – Water Quality

2	Clause Requirement	Compliance grading				
		2015-16 ^a	2016-17	2017-18	2018-19	2019-20
2.1.1	Drinking water quality management system – consistent with ADWG	Full	-	-	-	-
2.1.2	Drinking water quality management system - implementation	Full	-	-	-	-
2.2.1	Recycled water quality management system consistent with AGWR	Full	-	-	-	-
2.2.2	Recycled water quality management system - implementation	High	-	-	-	-

^a Cobbitty Consulting, 2015-16 Operational Audit of Sydney Water – Final Audit Report, November 2016.

Clauses 2.1.1 and 2.1.2 – Drinking Water Quality Management System

The auditor found that Sydney Water has complied with the requirement to maintain a Management System that is consistent with the Australian Drinking Water Guidelines, except to the extent that NSW Health specifies otherwise. In assessing Sydney Water's compliance with this condition, the auditor reviewed the Drinking Water Management Manual and the associated documents, procedures, registers, work instructions, records and reports. The auditor noted that Sydney Water was able to demonstrate that it has developed and maintained its Drinking Water Quality Management System to be consistent with the ADWG and tailored to Sydney Water's operations. Sydney Water's overarching Drinking Water Management Manual is comprehensive, and is supported by a range of high level and detailed documentation. In reviewing the evidence relating to the Drinking Water Quality Management System the auditor considered that the DWQMS was fully implemented to the with all relevant

activities carried out in accordance with the system and to the satisfaction of NSW Health.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clauses 2.1.1 and 2.1.2 and no recommendation or opportunities for improvement were identified.

Clause 2.2.1 – Recycled Water Quality Management System (AGWR)

This clause requires Sydney Water to maintain a Management System that is consistent with the Australian Guidelines for Water Recycling, except to the extent that NSW Health specifies otherwise.

Sydney Water was able to demonstrate that it has developed and maintained its Recycled Water Management System to be consistent with the AGWR. Sydney Water has developed the Recycled Water Management Manual and scheme specific Recycled Water Quality Management Plans. Together, these documents constitute a comprehensive recycled water quality management system package that closely follows the structure and content of the 12 elements of the AGWR. The result is a recycled water quality management system that, in all key respects, is tailor-made to comprehensively address every requirement of the AGWR that is relevant to Sydney Water operations.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 2.2.1 and no recommendation to improve compliance or opportunities for improvement were identified.

Clause 2.2.2 – Recycled Water Quality Management System (implementation)

This clause requires Sydney Water to ensure that the Recycled Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Recycled Water Quality Management System, and to the satisfaction of NSW Health.

Sydney Water has made significant progress towards addressing implementation issues identified in previous audits. Sydney Water reconsidered priorities and approach during the audit period, resulting in a consistent approach to the risk assessment process. The documentation system is now adequately implemented, and an internal audit program has been introduced. The work remaining is related to the detailed verification monitoring program that all schemes have to undergo.

Accordingly, the auditor assigned Sydney Water high compliance for clause 2.2.2. The auditor identified that the recommendation made last year to review recycled water monitoring requirements is progressing well and is due to be in place by 30 March 2018. As discussed in Table 3.1 below, this is later than the initial date included with the 2014-15 recommendation; however we consider the revised timeframe as agreed with NSW Health to be appropriate. As such we

have replaced the 2014-15-4 recommendation with the recommendation below which has updated the date.

Recommendations

- 2 Sydney Water should review recycled water monitoring requirements in consultation with NSW Health to confirm that all validated UV units are operating within their UVT validation envelope, appropriate to the dose monitoring strategy in place (by 30 March 2018)

2.3 Water Quantity

Sydney Water achieved full compliance for clause 3.2.1 and 3.2.5.

Part 3 of the licence, Water quantity, outlines the obligation for Sydney Water in relation to its activities relating to water conservation. This is namely through its roles and responsibilities protocol with the Metropolitan Water Directorate for the development and implementation of the Metropolitan Water Plan and the development of a Methodology to determine and report on its Economic Level of Water Conservation. Under the risk based auditing framework, we consider that this part of the licence poses a medium risk with respect to likelihood and consequence of non-compliance.

Table 2.3 Summary of compliance with Part 3 of the licence – Water quantity

Clause	Requirement	Compliance grading				
		2015-16 ^a	2016-17	2017-18	2018-19	2019-20
3	Water quantity					
3.2.1	Economic level of water conservation approach	Full	-	-	-	-
3.2.5	Water usage and leakage targets	Full	-	-	-	-

^a Cobbitty Consulting, 2015-16 Operational Audit of Sydney Water – Final Audit Report, November 2016.

Clause 3.2.1 – Economic level of water conservation approach

The auditor found that Sydney Water has complied with the requirement to submit to IPART a report outlining Sydney Water's approach to, and principles for, developing a methodology for determining its economic level of water conservation.

The auditor noted that the report was submitted to IPART for approval prior to 1 November 2015. As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 3.2.1 and no recommendations or opportunities for improvement were identified.

Clause 3.2.5 – Water usage and leakage targets

The auditor found that Sydney Water has complied with the requirement to maintain the weather corrected quantity of drinking water usage to equal to or less than 329L/person/day and leakage levels to below 121 megalitres per day as set in the licence. Sydney Water must also continue to promote, foster, and encourage efficient use of water and the production and use of recycled water, where financially viable.

The auditor noted that Sydney Water demonstrated that it had achieved the set targets. Sydney Water achieved a drinking water usage level of 293L/person/day and water leakage levels of 103 megalitres per day. Sydney Water continued programs such as PlumbAssist and WaterFix, and continued promote the production and use of recycled water.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 3.2.5 and no recommendations to improve compliance or opportunities for improvement were identified.

2.4 Assets

Sydney Water achieved full compliance for clause 4.1.5.

Part 4 of the licence, Asset Management System, outlines the obligation for Sydney Water to continue to maintain and implement the Asset Management Framework whilst transitioning to an ISO 55001:2014 compliant Asset Management System. IPART must be notified of any significant change to the Asset Management Framework that does not assist the transition to the Asset Management System. The auditor also reviewed Sydney Water's progress to-date towards development of its management systems. The auditor expressed no concerns regarding progress and expects that Sydney Water will be able to comply with the future deadlines for completion. (See AppendixD)

Under the risk based auditing framework, we consider that this part of the licence poses a high risk with respect to likelihood and consequence of non-compliance.

Table 2.4 Summary of compliance with Part 4 of the licence – Assets

Clause Requirement		Compliance grading				
4	Assets	2015-16 ^a	2016-17	2017-18	2018-19	2019-20
4.1.5	Asset Management System	Full	-	-	-	-

^a Cobbitty Consulting, 2015-16 Operational Audit of Sydney Water – Final Audit Report, November 2016.

The auditor found that Sydney Water has complied with the requirement to maintain and implement the current asset management framework while transitioning to the international standard. The auditor noted that Sydney Water

has made progress towards developing an ISO 55001:2014 compliant Asset Management System, and that implementation of the asset management processes was clearly demonstrated at all three sites visited as a part of the audit. As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 4.1.5 and no recommendations or opportunities for improvement were identified.

The auditor identified two opportunities for improvement for clause 4.1.5. These opportunities related to capturing asset condition on work order completion, and consistencies in review dates recorded in the Business Management Information System and individual documents. Further details of the opportunities for improvement are available in the audit report in Appendix C.

2.5 Customers

Sydney Water was assigned a non-compliant grade for clause 5.2.4.

Sydney Water achieved full compliance for clauses 5.3.1, 5.4.1, 5.4.4, 5.5.1, 5.5.2, 5.5.3, 5.5.4, 5.5.5, 5.5.6, 5.6.1, 5.6.2, 5.6.3, 5.6.4, 5.7.1, and 5.7.2.

Part 5 of the licence, Customers and consumers, outlines the obligation of Sydney Water relating to customer and consumer rights, complaints and dispute handling. Under the risk based auditing framework, we consider that this part of the licence poses a low to medium risk with respect to likelihood and consequence of non-compliance.

Table 2.5 Summary of compliance with Part 5 of the licence – Customers and consumers

Clause	Requirement	Compliance grading				
		2015-16 ^a	2016-17	2017-18	2018-19	2019-20
5	Customers and consumers					
5.2.4	Annual advertising hardship account relief and rebate options	NC	-	-	-	-
5.3.1	Obligations to consumers	Full	-	-	-	-
5.4.1	Assistance options for payment difficulties and actions for non-payment	Full	-	-	-	-
5.4.4	Assistance options available on website	Full	-	-	-	-
5.5.1	Maintain and consult with Customer Council	Full	-	-	-	-
5.5.2	Utilise the Customer council to obtain advice	Full	-	-	-	-
5.5.3	Membership of Customer Council	Full	-	-	-	-
5.5.4	Content of Customer Council Charter	Full	-	-	-	-
5.5.5	Provision of information to the Customer Council	Full	-	-	-	-
5.5.6	Charter and meeting minutes must be made available	Full	-	-	-	-
5.6.1	Internal complaints handling Procedure consistent with AS/NZS 10002:2014	Full	-	-	-	-
5.6.2	Internal complaints handling procedure implementation	Full	-	-	-	-
5.6.3	Annual provision of internal complaints handling information with bills	Full	-	-	-	-
5.6.4	Internal complaints handling information availability	Full	-	-	-	-
5.7.1	External dispute resolution scheme (EWON Membership)	Full	-	-	-	-
5.7.2	External dispute resolution scheme making information available	Full	-	-	-	-

^a Cobbitty Consulting, 2015-16 Operational Audit of Sydney Water – Final Audit Report, November 2016.

Clause 5.2.4 – Annual advertising hardship account relief and rebate options

This clause requires Sydney Water to advertise in a Sydney-based newspaper at least annually on the types of account relief available for Customers experiencing financial hardship; and the rights of Customers to claim rebates and the conditions that apply to those rights.

Sydney Water declared non-compliance in respect of this sub-clause in the Statement of Compliance provided prior to the audit. Whilst the requisite newspaper advertisements were placed on 27 July 2016, this lies outside of the audit period, and more specifically means that they were not placed “at least annually” as required under this obligation. This is a new licence obligation that first came into effect at the beginning of the audit period.

Accordingly, the auditor assigned Sydney Water non-compliant for clause 5.2.4.

We make one recommendation in relation to clause 5.2.4, based on the auditor's recommendations.

Recommendations

- 3 Sydney Water should develop and implement a procedure (or process) to ensure that it advertises in a Sydney-based newspaper at least once each year on:
 - a) the types of account relief available for Customers experiencing financial hardship, and
 - b) rights of Customers to claim rebates and the conditions that apply to those rights.

Clause 5.3.1 – Obligations to Consumers

The auditor found that Sydney Water has complied with the requirement to extend its obligations under the *Customer Contract* relating to complaint handling and complaint resolution to Consumers as if Consumers were parties to the *Customer Contract*.

The auditor noted that Definitions/terminology presented in Sydney Water's *Complaints Policy* and *Customer Complaint Procedure* provide documentary evidence that Sydney Water extends its obligations in respect of complaint handling and complaint resolution to consumers as if they were parties to the *Customer Contract*.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.3.1 and no recommendations or opportunities for improvement were identified.

Clause 5.4.1 – Assistance options for payment difficulties and actions for non-payment

The auditor found that Sydney Water has complied with the requirement to maintain and fully implement arrangements for assisting residential customers who are experiencing financial hardship to better manage their current and future bills.

The auditor noted that Sydney Water's Payment Assistance Policy identified various mechanisms that customers can access Government funded and Sydney Water sponsored programs. This provided evidence to demonstrate that it has maintained and fully implemented arrangements for assisting residential customers who are experiencing financial hardship to better manage their current and future bills.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.4.1 and no recommendations or opportunities for improvement were identified.

Clause 5.4.4 – Assistance options available on website

The auditor found that Sydney Water has complied with the requirement to make an explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment available on its website.

The auditor noted that an explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment is available on Sydney Water's website and that copies of the *Payment Assistance Policy* and a *Payment Assistance Program Summary* are available for downloading.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.4.4 and no recommendations or opportunities for improvement were identified.

Clause 5.5.1 – Maintain and consult with Customer Council

The auditor found that Sydney Water has complied with the requirement to regularly consult with organisations representing a broad cross-section of its Customers and Consumers through the Customer Council.

The auditor sighted evidence to demonstrate that during the audit period Sydney Water regularly consulted with its Customer Council, which represents a broad cross-section of its customers and consumers. Consultation was achieved through quarterly meetings as well as out of session involvement in relevant workshops, forums and meetings, and through a secure on-line discussion forum.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.5.1 and no recommendations or opportunities for improvement were identified.

Clause 5.5.2 – Utilise the Customer Council to obtain advice

The auditor found that Sydney Water has complied with the requirement to obtain advice on the interests of Sydney Water's customers and consumers, the *Customer Contract* and such other key issues related to Sydney Water's planning and operations as Sydney Water may determine.

The auditor sighted minutes of meetings held within the audit period to determine that during the audit period Sydney Water consulted with the Customer Council in respect of a range of issues including (for example) a review of the *Customer Council Charter*, the Economic Level of Water Conservation, and the disposal of surplus property.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.5.2 and no recommendations or opportunities for improvement were identified.

Clause 5.5.3 – Membership of Customer Council

The auditor found that Sydney Water has complied with the requirement to ensure that membership of the Customer Council is appointed in accordance with the *Customer Council Charter*, and that Sydney Water has used its best endeavours to include representatives of the nominated categories.

The auditor noted the efforts of Sydney Water to include representatives from all the listed categories. Members of the customer council represented most but not all of the listed categories. The auditor sighted invitations to three organisations representing the categories of Indigenous Australians which were declined. In light of this evidence the auditor concluded that Sydney Water had in its opinion used its best endeavours to include members representing each of the listed categories of the operating licence.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.5.3 and no recommendations or opportunities for improvement were identified.

Clause 5.5.4 – Content of Customer Council Charter

The auditor found that Sydney Water and members of the Customer Council have complied with the requirement to maintain a *Customer Council Charter* that addresses a number of specific issues such as the role of the customer council, selection criteria, appointment and term of membership. The charter is also to describe matters for discussion, procedures for the conduct of meetings, roles, communication, monitoring and funding.

The auditor reviewed the *Customer Council Charter* which was endorsed during the audit period, and a review of the charter confirmed that it addressed all the required issues.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.5.4 and no recommendations or opportunities for improvement were identified.

Clause 5.5.5 – Provision of information to the Customer Council

The auditor found that Sydney Water has complied with the requirement to provide the Customer Council with information in its possession or under its control necessary to enable the Customer Council to discharge the tasks assigned to it.

The auditor sighted specific examples of information provided to the Customer Council during the audit period, including papers, emails and presentations. This evidence demonstrated that Sydney Water had provided information necessary to enable the Customer Council to operate in an effective manner.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.5.5 and no recommendations or opportunities for improvement were identified.

Clause 5.5.6 – Charter and meeting minutes must be made available

The auditor found that Sydney Water has complied with the requirement to make copies of the *Customer Council Charter* and minutes from proceedings of the Customer Council available on its website and from the Contact Centre upon request.

The auditor verified that a copy of the *Customer Council Charter* and meeting minutes were available from the Sydney Water website.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.5.6 and no recommendations or opportunities for improvement were identified.

Clause 5.6.1 – Internal complaints handling procedure consistent with AS/NZS 10002:2014

The auditor found that Sydney Water has complied with the requirement to maintain a Complaints Handling Procedure for receiving, responding to and resolving Complaints, which is consistent with AS/NZS 10002:2014 Customer satisfaction – Guidelines for complaints handling in organizations.

The auditor reviewed the Customer complaint procedure with reference to the Australian Standard and determined its content, which provides guidance for the management of complaints, roles and responsibilities and detailed processes, to be consistent with AS/NZS 10002:2014.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.6.1 and no recommendations or opportunities for improvement were identified.

Clause 5.6.2 – Internal complaints handling procedure implementation

The auditor found that Sydney Water has complied with the requirement to ensure that the Internal Complaints Handling Procedure is fully implemented and that all relevant activities are carried out in accordance with the procedure.

Sampling of complaint records and performance statistics were used to inform the audit. The auditor sighted sample complaint records and aggregated statistics

of total complaints received and records of resolution within the audit period which demonstrated that Sydney Water had continued to implement its *Customer Complaint Procedure*.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.6.2 and no recommendations or opportunities for improvement were identified.

Clause 5.6.3 – Annual provision of internal complaints handling information with bills

The auditor found that Sydney Water has complied with the requirement to provide information concerning the Internal Complaints Handling Procedure to customers at least annually with their bills.

The auditor noted that by sampling a quarterly billing cycle, information had been provided to both residential and non-residential customers that demonstrated compliance.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.6.3 and no recommendations or opportunities for improvement were identified.

Clause 5.6.4 – Internal complaints handling information availability

The auditor found that Sydney Water has complied with the requirement to make information concerning the Internal Complaints Handling Procedure available on its website and from the Contact Centre upon request.

The auditor verified that a copy of the “Our contract with you” document, which provides information regarding internal complaints handling, is available for downloading on the Sydney Water website. Sydney Water explained the mechanisms now in place to enable customers to request copies of these documents via the Contact Centre, which are considered appropriate.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.6.4 and no recommendations or opportunities for improvement were identified.

Clause 5.7.1 – External dispute resolution scheme (EWON Membership)

The auditor found that Sydney Water has complied with the requirement to be a member of the Energy and Water Ombudsman NSW to facilitate the resolution, by a dispute resolution body, of disputes between Sydney Water and its Customers and Consumers.

The auditor verified that the webpage of the Energy and Water Ombudsman NSW confirms that Sydney Water subscribes to the complaint management services provided by the Ombudsman.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.7.1 and no recommendations or opportunities for improvement were identified.

Clause 5.7.2 - External dispute resolution scheme (making information available)

The auditor found that Sydney Water has complied with the requirement to prepare a pamphlet that explains the operation of the dispute resolution service provided by the Energy and Water Ombudsman NSW; to provide a copy to customers at least annually with their bills; and to make the pamphlet available on its website and from the Contact Centre upon request.

The auditor noted that compliance was demonstrated by providing a sample of information sent for a billing cycle to both residential and non-residential customers.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 5.7.2 and no recommendations or opportunities for improvement were identified.

2.6 Environment

Sydney Water achieved full compliance for clauses 6.1.1, 6.1.2, 6.1.4, and 6.2.1.

Part 6 of the licence, Environment, outlines the obligation for Sydney Water to maintain a Management System that is certified to AS/NZS ISO 14001:2004 Environmental Management System, and report on performance. Under the risk based auditing framework, we consider that this part of the licence poses a medium risk with respect to likelihood and consequence of non-compliance.

Table 2.6 Summary of compliance with Part 6 of the licence – Environment

Clause	Requirement	Compliance grading				
		2015-16 ^a	2016-17	2017-18	2018-19	2019-20
6	Environment					
6.1.1	Environmental management system certified to AS/ANZ 140001:2004	Full	-	-	-	-
6.1.2	Environmental Management System must be fully implemented	Full	-	-	-	-
6.1.4	Report Environmental Management System outputs to IPART	Full	-	-	-	-
6.2.1	Environmental indicators	Full	-	-	-	-

^a Cobbitty Consulting, 2015-16 Operational Audit of Sydney Water – Final Audit Report, November 2016.

Clause 6.1.1 – Environmental management system certified to AS/ANZ 140001:2004

The auditor found that Sydney Water has complied with the requirement to maintain its certification to the 2004 version of the standard.

The auditor sighted evidence of an independent surveillance audit which was completed during the audit period. The auditor also noted that Sydney Water is planning to seek certification to the most recent version of the standard in the next audit period.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 6.1.1 and no recommendations or opportunities for improvement were identified.

Clause 6.1.2 – Environmental Management System must be fully implemented

The auditor found that Sydney Water has complied with the requirement to implement and carry out activities in accordance with the Environmental Management System.

The auditor noted that an independent surveillance audit of the Environmental Management System found that it was well implemented throughout the organisation.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 6.1.2 and no recommendations or opportunities for improvement were identified.

Clause 6.1.4 – Report Environmental Management System outputs to IPART

The auditor found that Sydney Water has complied with the requirement to report outputs of the Environmental Management System in accordance with the Reporting Manual.

The auditor noted that the Environment Plan Annual Report had been appropriately prepared and submitted on time (1 October 2015).

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 6.1.4 and no recommendations or opportunities for improvement were identified.

Clause 6.2.1 – Environmental Indicators

The auditor found that Sydney Water has complied with the requirement to prepare and report on environmental indicators in accordance with the Reporting Manual.

The auditor noted that all fourteen indicators listed had been reported, and tested two (E5 percentage renewable energy consumption and E8 total mass of biosolids produced) for accuracy.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 6.2.1 and no recommendations or opportunities for improvement were identified.

2.7 Performance Monitoring

Sydney Water achieved full compliance for clause 8.

Part 8 of the licence, Performance monitoring, outlines the obligation for Sydney Water to comply with reporting obligations set out in the Reporting Manual. Under the risk based auditing framework, we consider that this part of the licence poses a low risk with respect to likelihood and consequence of non-compliance.

Table 2.7 Summary of compliance with Part 8 of the licence – Performance monitoring

Clause Requirement		Compliance grading				
8	Performance Monitoring	2015-16 ^a	2016-17	2017-18	2018-19	2019-20
8.2.1	Reporting obligations compliance	Full	-	-	-	-
8.2.2	Maintain records for accurate reporting	Full	-	-	-	-

^a Cobbitty Consulting, 2015-16 Operational Audit of Sydney Water – Final Audit Report, November 2016.

Clause 8.2.1 – Reporting obligations compliance

The auditor found that Sydney Water has complied with the requirement to report to IPART and NSW Health in accordance with the Reporting Manual and against the National Water Initiative indicators, and make reports and other information publicly available.

The auditor reviewed records of submissions and concluded that Sydney Water had fulfilled its obligation in respect of annual, periodic and intermittent reporting during the audit period. The auditor verified that all the reports required to be made publically available on the website are available.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 8.2.1 and no recommendations or opportunities for improvement were identified.

Clause 8.2.2 – Maintain records for accurate reporting

The auditor found that Sydney Water has complied with the requirement to maintain sufficient records systems to comply with clause 8.2.2.

In assessing compliance for this clause the auditor sampled the records systems enabling the preparation of a quarterly drinking water quality report and two customer indicators. The auditor was able to review the data sources and the queries which input to the reports. The auditor noted that one of the indicators had been incorrectly reported, the error occurred as a result of the interpretation of the indicator and not as a result of the record systems.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 8.2.2 and no recommendations were identified. The auditor identified one opportunity for improvement for clause 8.2.2. This opportunity related to seek clarification of definitions from IPART of performance indicators. Further details of the opportunities for improvement are available in the audit report in Appendix C.

2.8 Memorandum of Understanding

Sydney Water achieved full compliance for clauses 9.1.1, 9.1.2, 9.4.1, and 9.4.4.

Part 9 of the licence, Memorandum of understanding, outlines the obligation for Sydney Water to maintain relationships with NSW Health and Fire and Rescue NSW. Under the risk based auditing framework, we consider that this part of the licence poses a low to medium risk with respect to likelihood and consequence of non-compliance.

Table 2.8 Summary of compliance with Part 9 of the licence – Memorandum of understanding

9	Clause Requirement	Compliance grading				
		2015-16 ^a	2016-17	2017-18	2018-19	2019-20
9.1.1	Maintain a Memorandum of Understanding with NSW Health	Full	-	-	-	-
9.1.2	Role of NSW Health defined in the Memorandum of Understanding	Full	-	-	-	-
9.4.1	Development of Memorandum of Understanding with Fire and Rescue NSW	Full	-	-	-	-
9.4.4	Minimum requirements for Memorandum of Understanding with Fire and Rescue NSW	Full	-	-	-	-

^a Cobbitty Consulting, 2015-16 Operational Audit of Sydney Water – Final Audit Report, November 2016.

Clause 9.1.1/9.1.2 – Memorandum of understanding with NSW Health

The auditor found that Sydney Water has complied with the requirement to maintain its Memorandum of Understanding during the audit period.

These clauses were not a part of the original audit scope, but were added in response to a letter from NSW Health highlighting some concerns regarding public messaging in relation to water quality. The auditor noted that the concerns were effectively resolved under the provisions of the Memorandum of Understanding, demonstrating that the provisions were working.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 9.1.1 and 9.1.2 and no recommendations were identified.

The auditor identified two opportunities for improvement for clauses 9.1.1 and 9.1.2. These opportunities related to internal communications and awareness training. Further details of the opportunities for improvement are available in the audit report in Appendix C.

Clause 9.4.1 – Memorandum of understanding with FRNSW development

The auditor found that Sydney Water has complied with the requirement to develop and enter into a Memorandum of Understanding with Fire and Rescue NSW.

The auditor noted that the Memorandum of Understanding was formally signed on 1 December 2015.

As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 8.2.2 and no recommendation was identified.

Clause 9.4.4 - Memorandum of understanding with NSWFR minimum requirements

The auditor found that Sydney Water has complied with the requirement to include the minimum requirements specified in the licence in the Memorandum of Understanding. These include arrangements for a working group (comprised of representatives from Sydney Water and FRNSW) for information sharing, availability of water for firefighting (including flow and pressure), design of new assets and planning of system maintenance, and other matters agreed by both parties.

In reviewing the MoU the auditor noted that all requirements had been met, and an effective working group had been operating. As a result, the auditor found that Sydney Water has achieved Full Compliance for clause 8.2.2 and no recommendation was identified.

3 Progress on previous audit recommendations

The previous audits in 2013-14 and 2014-15 identified areas where Sydney Water's performance with its licence obligations did not receive Full Compliance. We previously made recommendations to the Minister to address these issues.³ The following table outlines Sydney Water's progress in implementing these recommended actions.

Sydney Water has completed eight out of nine outstanding recommendations from previous audits. One recommendation is ongoing.

Where a recommendation is ongoing in Table 3.1, it will be followed up in 2016-17, together with the recommendations from this year's audit.

Table 3.1 Sydney Water's progress in 2015-16 to address our recommendations from the previous audits

	Recommendation	Progress
2013/14-1	Sydney Water should maintain an ongoing commitment to the review and update of its Recycled Water Quality Management Plans via the four-year rolling program agreed with NSW Health.	Complete. To ensure that all Recycled Water Quality Management Plans were reviewed every four years, Sydney Water updated common tasks as appropriate and applied a consistent approach to the updates. Of the fourteen (14) schemes for which the RWQMP risk assessments needed to be updated, nine (9) were completed in the audit period, and the remaining five (5) were completed by the time of the audit interviews. The only remaining task is to complete the LRV verification monitoring, that is captured in the 2014/15-4 recommendation, and therefore this task is assessed as complete. This is consistent with the 4-year rolling program agreed with NSW Health.
2013/14-4	Sydney Water should ensure that document control is implemented across the organisation for all key documents relating to its services and activities covered by the operating licence. Key knowledge processes and	Complete Sydney Water's BMIS is the principal document management system for all ISO-based documentation. Currency of documents increased to greater than 90% during the audit period, consistent

³ IPART, *Sydney Operational Audit 2014-15 Report to the Minister – Compliance Report*, 2016.

	practices should be documented, controlled and endorsed with appropriate signoff.	with set targets. While there is still some finessing to do with recording review dates, the recommendation is assessed as complete.
2014/15-1	Sydney Water should complete, register and apply the Developer Service Plan for Hoxton Park. Sydney Water should ensure that it publically reports on its compliance with its Price determinations each year in its annual report (by 30 June 2016) (clause 1.9).	Complete The Development Servicing Plan was registered and applied prior to the audit interviews; hence the recommendation is assessed as complete. Treasurer's approval was obtained. A number of outstanding Notices of Requirements have not been finalised, and clause 1.9.1 will be audited again next year.
2014/15-2	Sydney Water should develop organisation wide controls for use in recycled water quality management (including linkages between controls and personnel responsibilities). Organisation wide controls should be implemented within individual Scheme Recycled Water Quality Management Plans (by 30 June 2017) (clause 2.2).	Complete The Recycled Water Product specification, developed late 2015, identifies the appropriate level of organisation wide controls and scheme specific controls as appropriate. The controls are also defined in the individual RWQMPs.
2014/15-3	Sydney Water should review recycled water management risk assessment procedures to ensure consistent application of HIDRA risk matrix and consequence key across the organisation (by 30 June 2017) (clause 2.2).	Complete Sydney Water applied a consistent approach using the HIDRA matrix to risk assessments for all active recycled water schemes prior to the audit interviews. The appropriate stakeholders were involved, and NSW Health is satisfied.
2014/15-4	Sydney Water should review recycled water monitoring requirements in consultation with NSW Health to confirm that all validated UV units are operating within their UVT validation envelope, appropriate to the dose monitoring strategy in place (by 30 June 2017) (clause 2.2).	Ongoing – Replaced by recommendation 2015/16-2 This recommendation has been partially addressed and is progressing to schedule agreed with NSW Health. The program to confirm that all validated UV units are operating within their UVT validation envelopes is advancing, but is not yet complete. The schedule agreed with NSW Health extends beyond the 30 June 2017, therefore this recommendation has been replaced by recommendation 2015/16-2 in section 2 of this report.
2014/15-5	Sydney Water should establish and implement review frequencies for each action within the Australian Guidelines for Water Recycling Framework for both the Recycled Water Management Manual and Scheme Recycled Water Quality Management Plans (by 30 September 2016) (clause 2.2).	Complete The document management procedure has been amended and a notice has been included in the procedure to ensure correct entries are recorded. The auditor found all review dates accurate that were sampled.
2014/15-6	Sydney Water should review and implement measures relating to obtaining asset information to ensure that mechanical and electrical asset data quality and coverage for works completed by contractors provide sufficient detail to maintain robust asset	Complete New arrangements for the capture of data in relation to mechanical and electrical assets were introduced during the audit period. The use of mobile assets has enabled the capture and introduction of KPIs as a means of

	inventories and support asset planning, replacement and other business needs (by 30 September 2016) (clauses 3.1.1 and 3.1.2).	monitoring performance. During the audit period a data recovery program was implemented for missing historical data. On the basis of actions taken this recommendation is assessed as complete
2014/15-7	<p>Sydney Water should review technical asset registers to identify:</p> <ul style="list-style-type: none"> ▼ whether existing asset hierarchy across all asset classes meets business needs ▼ the extent to which asset data conforms to the hierarchy (structure, coverage and quality) <p>and commence programs of work to improve asset registers to achieve business needs identified, which may include regulatory requirements) (30 September 2016) (clauses 3.1.1 and 3.1.2).</p>	<p>Complete</p> <p>This recommendation has met the short-term objective, that is, to commence programs of work within the audit period, but warrants ongoing monitoring of progress due to the forecasted timeline.</p>

Source: Cobbitty Consulting, 2015-16 Operational Audit of Sydney Water – Final Audit Report, November 2016; Report to the Minister D16/178.

The auditor found that eight of the nine previous recommendations were complete.

- ▼ Sydney Water demonstrated advancement in several key areas of asset management, business information systems management, and approach to the management of recycled water schemes for the duration of the audit period.
- ▼ Eight of the nine recommendations, 2013/14-1, 2013/14-2, 2014/15-1, 2014/15-2, 2014/15-4, 2014/15-5, 2014/15-6, and 2014/15-7 were completed during 2015-16 as planned in accordance with the due dates.






The actions undertaken by Sydney Water listed in the table above; demonstrate its progress towards completing the previous audit recommendations.



Appendices

A Compliance grades

Compliance grades for public utilities

Grades of compliance	Description
Full Compliance 	Sufficient evidence to confirm that the requirements have been fully met.
High Compliance 	Sufficient evidence to confirm that the requirements have generally been met apart from very few minor shortcomings which do not compromise the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes.
Adequate Compliance 	Sufficient evidence to confirm that the requirements have generally been met apart from a number of minor shortcomings which do not compromise the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes
Non compliant 	Sufficient evidence has not been provided to confirm that all major requirements are being met and the deficiency adversely impacts 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 utility to meet this assessment criterion.

B | 2015-16 Audit Scope

2015-16 operational audit scope

Sydney Water Corporation

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2015-16 audit scope

This scope is based on the five year audit program for Sydney Water's 2015-2020 Operating Licence. Auditors should note any directions in the comments column of Table 1.

Previous recommendations

Table 2 outlines outstanding audit recommendations. These recommendations are reviewed to determine progress and are reported on separately within the audit report.

Statement of compliance

The utility is required to provide a Statement of Compliance (SC), signed by the CEO and a Board Member, by 1 September. The SC is an exception based report that outlines any non-compliance with licence conditions during the previous financial year. It also identifies what remedial action has or is being taken with respect to these non-compliances.

The SC covers all licence conditions regardless of whether they are scheduled to be audited in that year. The SC may cause a late variation to the audit scope to allow non-compliances to be reviewed if necessary.

Development and implementation of management systems

Where a management system needs to be developed and/or implemented by a date outside the audit period, we have requested the utility provide a verbal update on progress during the audit interviews. The purpose is to inform us and the auditor of progress made toward developing an effective management system by the date set out in the licence.

This applies to Sydney Water as follows:

- ▼ the development of an Asset Management System (AMS) by 30 June 2018 that is certified and implemented by 30 June 2019, and
- ▼ the development a Quality Management System (QMS) by 30 June 2017 that is certified and implemented by 30 June 2018.

We request that the auditor provides a summary of Sydney Water's progress, to date, on developing, certifying and implementing the management systems. This should include if, in

the auditor's view, sufficient progress was made to meet the future licence requirement. This should be provided in the cover letter to the audit report.

Key

Requirement	Meaning
Audit/Review	Audit/review clause in 2015-16
SC	We will rely on the utility's Statement of Compliance. All clauses require a Statement of Compliance unless there is a "no requirement" designation.
NR	No requirement (for audit or statement of compliance).

Table 1 2015-16 audit scope for Sydney Water Corporation

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
1	Licence and licence authorisation		
1.1	Objectives of this licence		
1.1.1	The objective of the licence is to enable and require Sydney Water to lawfully provide the services within its area of operations. Consistent with this objective, the licence requires Sydney Water to: <ul style="list-style-type: none"> a) meet the objectives and other requirements imposed on it in the Act and other relevant legislation b) comply with the quality and performance standards in the licence c) recognise the rights given to customers and consumers d) be subject to audits of compliance with the licence. 	NR	
1.2	Licence authorisation		
1.2.1	a) The licence is granted to enable and require Sydney Water to provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable systems for providing the services throughout the area of operations.	NR	
1.3	Stormwater drainage system		
1.3.1	Sydney Water must provide, operate, manage and maintain a stormwater drainage system as described in section 14(1)(b) of the Act, except to the extent that the Minister is satisfied under sections 14(4) and 14(5) of the Act that satisfactory arrangements have been made for the service to be provided by another appropriate body, including a council (within the meaning of the Local Government Act 1993 (NSW)).	NR	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
1.3.2	Sydney Water may provide, construct, operate, manage and maintain efficient, co-ordinated and commercially viable Stormwater Drainage Systems and Services within the Area of Operations including for the purpose of increasing the capacity of the Stormwater Drainage System included in the business undertaking (referred to in Part 3 of the Act) transferred under Part 3 of the Act from the Water Board to Sydney Water as at the date of the transfer of the business undertaking.	NR	
1.4	Term of this licence		
1.4.1	The term of the licence is five years from the commencement date. [Note: the Commencement Date is 1 July 2015, which means that the term of this Licence will end on 30 June 2020.]	NR	
1.5	Licence amendment		
1.5.1	Subject to the Act and clause 1.5.2, this Licence may be amended by the Governor by notice in the New South Wales Government Gazette.	NR	
1.5.2	Before notice of a proposed amendment to this Licence is tabled in Parliament under section 16 of the Act, the Minister must provide Sydney Water with reasonable notice of the proposed amendment to enable it to comply with the amendment if it takes effect. [Note: The Customer Contract may be varied in accordance with section 59 of the Act and clause 14.2 of the Customer Contract. Such a variation is --not an amendment to this Licence for the purpose of section 16 of the Act.]	NR	
1.6	Connection of services		
1.6.1	Subject to any applicable laws, Sydney Water must ensure that Drinking Water and Wastewater Services are available on request for connection to any Property situated in the Area of Operations.	NR	
1.6.2	Connection to Sydney Water's systems for the supply of Services relating to Drinking Water and Wastewater is subject to any conditions that Sydney Water may lawfully determine to ensure the safe, reliable and financially viable supply of its Drinking Water and Wastewater Services to Properties situated in the Area of Operations in accordance with this Licence.	NR	
1.7	Non-exclusive licence		
1.7.1	The licence does not prohibit another person from providing services in the area of operations that are the same as, or similar to, the services, if the person is lawfully entitled to do so.	NR	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
1.8	Availability of Licence		
1.8.1	Sydney Water must make a copy of this Licence available to any person, free of charge: a) website for downloading b) upon request made to the contact centre.	SC	
1.9	Pricing		
1.9.1	Sydney Water must set the level of fees, charges, and other amounts payable for its Services subject to the terms of the licence, the Act and the maximum prices and methodologies for Services determined from time to time by IPART under the IPART Act.	Audit	This clause will be audited in relation to the non-compliance in the 2014-15 Operating Licence audit.
2	Water quality		
2.1	Drinking water		
2.1.1	<p>Sydney Water must maintain a Management System that is consistent with the Australian Drinking Water Guidelines, except to the extent that NSW Health specifies otherwise (the Drinking Water Quality Management System).</p> <p>[Note: Sydney Water is to implement the Drinking Water Quality Management System to the Drinking Water system under its control in light of its knowledge of the entire drinking water supply system (from the water catchment to the Consumer).</p> <p>It is expected that the Drinking Water Quality Management System will be consistent with the Framework for Management of Drinking Water Quality. However, where NSW Health considers it appropriate, the application of the Australian Drinking Water Guidelines may be amended or added to, to take account of Sydney Water's circumstances and/or Drinking Water quality policy and practices within New South Wales.]</p>	Audit	The system must be consistent with the ADWG except to the extent that NSW Health specifies (specification from NSW Health must be consistent with the requirements of clause 2.1.4).
2.1.2	Sydney Water must ensure that the Drinking Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Drinking Water Quality Management System, and to the satisfaction of NSW Health.	Audit	<p>The system must be in place and implemented from the commencement of the licence.</p> <p>Evidence must demonstrate that a compliant system was in place for the whole period to award Full Compliance.</p>
2.1.3	Sydney Water must notify IPART and NSW Health, in accordance with the Reporting Manual, of any significant changes that it proposes to make to the Drinking Water Quality Management System.	SC	<p>Audit if required by clause 2.1.2 (to be decided during the audit).</p> <p>The Drinking Water Quality Management System is subject to a continual review regime. Thus changes within an audit period should be assessed by the auditor to determine if they are significant, Sydney Water to provide evidence that it notified of changes in accordance with the Reporting Manual</p>

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
2.1.4	Sydney Water must obtain NSW Health's approval for any significant changes that it proposes to make to the Drinking Water Quality Management System before implementing, or carrying out its activities in accordance with, such changes.	SC	NSW Health considers that this clause does not need to be audited in 2015-16.
2.1.5	By 31 December 2016, Sydney Water must: <ul style="list-style-type: none"> a) in consultation with its Customer Council and NSW Health, complete a review of its public reporting on water quality. The review must address (at a minimum) the frequency of Sydney Water's public reporting and the key parameters reported on water quality; and b) provide IPART with a report detailing the outcomes of the review referred to in clause 2.1.5(a). 	SC	
2.2	Recycled water		
2.2.1	<p>Sydney Water must maintain a Management System that is consistent with the Australian Guidelines for Water Recycling, except to the extent that NSW Health specifies otherwise (the Recycled Water Quality Management System).</p> <p><i>[Note: It is expected that the Recycled Water Quality Management System will be consistent with the Australian Guidelines for Water Recycling, including the Framework for Management of Recycled Water Quality and Use. However, where NSW Health considers it appropriate, the application of the Australian Guidelines for Water Recycling may be amended or added to, to take account of Sydney Water's circumstances and/or Recycled Water quality policy and practices within New South Wales.]</i></p>	Audit	<p>Recycled Water Quality was previously awarded High and Adequate Compliance for consecutive years (2012-13, 2013-14 and 2014-15).</p> <p>Related recommendations were made and should be audited in accordance with Table 2 below.</p> <p>Deviations from the AGWR should be in accordance with pre-approved requirements of 2.2.4.</p>
2.2.2	Sydney Water must ensure that the Recycled Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Recycled Water Quality Management System, and to the satisfaction of NSW Health.	Audit	<p>The system must be in place and implemented from the commencement of the licence.</p> <p>Evidence must demonstrate that a compliant system was in place for the whole period to award Full Compliance.</p>
2.2.3	Sydney Water must notify IPART and NSW Health, in accordance with the Reporting Manual, of any significant changes that it proposes to make to the Recycled Water Quality Management System.	SC	The RWQMS is subject to continuous review. Changes considered to be 'significant' should be reported in accordance with this clause.
2.2.4	Sydney Water must obtain NSW Health's approval for any significant changes that it proposes to make to the Recycled Water Quality Management System before implementing, or carrying out its activities in accordance with, such changes.	SC	<p>Audit if required.</p> <p>If the auditor finds non-compliances with the AGWR.</p> <p>Approval from NSW Health must be demonstrated.</p>

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
2.3	Fluoridation code		
2.3.1	Sydney Water must comply with the Fluoridation Code.	SC	
3	Water Quantity		
3.1	Roles and Responsibilities Protocol		
3.1.1	Sydney Water must use its best endeavours to: <ul style="list-style-type: none"> a) develop and agree a Roles and Responsibilities Protocol with the Metropolitan Water Directorate for the development and implementation of the Metropolitan Water Plan; and b) maintain and comply with the Roles and Responsibilities Protocol that has been developed and agreed under clause 3.1.1(a). 	SC	
3.2	Economic level of water conservation		
3.2.1	By 1 November 2015, Sydney Water must submit to IPART (for IPART's approval) a report outlining Sydney Water's approach to, and principles for, developing a methodology for determining its economic level of water conservation, including (at a minimum) each of the following elements of water conservation: <ul style="list-style-type: none"> a) water leakage; b) water recycling; and c) water efficiency (including demand management) 	Audit	
3.2.2	Once the approach and principles referred to in clause 3.2.1 are approved by IPART, Sydney Water must develop a methodology (Methodology) in accordance with the approach and principles.	SC	
3.2.3	By 31 December 2016, Sydney Water must obtain IPART's approval for the Methodology.	NR	
3.2.4	Once the Methodology is approved by IPART, Sydney Water must, from the date that such approval is given: <ul style="list-style-type: none"> a) notify IPART, in accordance with the Reporting Manual, of any significant changes that it proposes to make to the Methodology; and b) obtain IPART's written consent to make any significant changes to the Methodology prior to making such changes. 	SC	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
3.2.5	<p>Until Sydney Water has developed and obtained IPART's approval for the Methodology (in accordance with clauses 3.2.2 and 3.2.3), Sydney Water must:</p> <ul style="list-style-type: none"> a) maintain the weather corrected quantity of Drinking Water that it draws from all sources to a level of water usage equal to, or less than, 329 litres per person per day (the Water Usage Level). In calculating water usage for the purpose of the Water Usage Level, Sydney Water may make reasonable adjustments to account for the effects of weather on water usage, using a methodology approved by IPART; b) ensure that the level of water leakage from its Drinking Water supply system (the Water Leakage Level) does not exceed 121 megalitres per day; and c) promote, foster and encourage the efficient use of water and the production and use of Recycled Water, where financially viable. 	Audit	
3.2.6	<p>By 1 September 2017, Sydney Water must develop a water conservation program consistent with its economic level of water conservation and in accordance with the methodology approved by IPART under clause 3.2.3.</p> <p><i>[Note: The water conservation program will be outlined in the first Water Conservation Report, which is to be submitted to IPART by 1 September 2017 in accordance with clause 3.2.1 of the Reporting Manual.]</i></p>	NR	
3.2.7	Sydney Water must report to IPART, in accordance with the Reporting Manual, on water conservation.	SC	
4	Assets		
4.1	Asset Management System		
4.1.1	By 30 June 2018, Sydney Water must develop a Management System that is consistent with the International Standard ISO 55001:2014 Asset Management System - Requirements (the Asset Management System).	Review	<p>A verbal update of the progress will be reviewed at the audit and documented by the auditor until the system is developed.</p> <p>Any potential issues should be identified in this update.</p>
4.1.2	<p>Sydney Water must ensure that:</p> <ul style="list-style-type: none"> a) by 30 June 2019, the Asset Management System is certified by an appropriately qualified person to be consistent with the International Standard ISO 55001:2014 Asset Management System – Requirements; and b) once the Asset Management System is certified, the certification is maintained during the remaining term of this Licence. 	NR	As per clause 4.1.1.

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
4.1.3	Once the Asset Management System has been certified in accordance with clause 4.1.2(a), Sydney Water must notify IPART, in accordance with the Reporting Manual, of any significant changes that it proposes to make to the Asset Management System.	NR	
4.1.4	By 30 June 2019, Sydney Water must ensure that the Asset Management System is fully implemented and that all relevant activities are carried out in accordance with the Asset Management System.	NR	
4.1.5	<p>Until the Asset Management System has been developed in accordance with clause 4.1.1, certified in accordance with clause 4.1.2(a) and implemented in accordance with clause 4.1.4:</p> <ul style="list-style-type: none"> a) Sydney Water must continue to maintain and implement the asset management framework that was required to be maintained and implemented by Sydney Water under the licence that was the immediate predecessor to this Licence (the Asset Management Framework), b) to avoid doubt, until the Asset Management System has been developed in accordance with clause 4.1.1, Sydney Water may only make changes to the Asset Management Framework that will assist in the transition of the Asset Management Framework to the Asset Management System; and c) Sydney Water must notify IPART, in accordance with the Reporting Manual, of any significant changes that it proposes to make to the Asset Management Framework. 	Audit	The Asset Management Framework must continue to be implemented until the certified system is in place.

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
4.2	System Performance Standards		
4.2.1	<p>Water Pressure Standard</p> <p>a) Sydney Water must ensure that, in any financial year, no more than 6,000 Properties experience a Water Pressure Failure (the Water Pressure Standard).</p> <p>b) A Property is taken to have experienced a Water Pressure Failure:</p> <ul style="list-style-type: none"> i. when a person notifies Sydney Water that the Property has experienced a Water Pressure Failure and Sydney Water confirms that the Property has experienced a Water Pressure Failure; or ii. when Sydney Water identifies that the Property has experienced a Water Pressure Failure (including through its data collection systems and hydraulic analysis). <p>c) Despite clause 4.2.1(b), a Property will not be taken to have experienced a Water Pressure Failure if that Water Pressure Failure occurred only because of:</p> <ul style="list-style-type: none"> i. water usage in the case of a fire or other abnormal demand; or ii. a short term or temporary operational problem (such as a main break) which is remedied within Four days of its commencement. <p>d) For the purpose of the Water Pressure Standard:</p> <ul style="list-style-type: none"> i. each separately billed part of a Multiple Occupancy Property is to be counted as a separate Property; and [Note: For example, a complex of five townhouses where each townhouse receives a separate bill from Sydney Water is to be counted as five separate Properties. However a block of five flats that only receives one bill from Sydney Water is to be counted as a single Property.] ii. each Property that experiences one or more Water Pressure Failures in a financial year is to be counted once only in that financial year 	SC	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
4.2.2	<p>Water Continuity Standard</p> <p>a) Sydney Water must ensure that, in any financial year:</p> <ol style="list-style-type: none"> no more than 40,000 Properties experience an Unplanned Water Interruption that lasts for more than five continuous hours; and no more than 14,000 Properties experience three or more Unplanned Water Interruptions that each lasts for more than one hour (the Water Continuity Standard). <p>b) Sydney Water must use the best available data (taking account of water pressure data, where available) to determine whether a Property has experienced an Unplanned Water Interruption and the duration of the Unplanned Water Interruption.</p> <p>c) If a Property experiences an Unplanned Water Interruption that was caused by a Third Party or a power failure, the Property is taken not to have experienced an Unplanned Water Interruption for the purpose of clause 4.2.2(a).</p> <p>d) For the purpose of the Water Continuity Standard:</p> <ol style="list-style-type: none"> each separately billed part of a Multiple Occupancy Property is to be counted as a separate Property; for the purpose of clause 4.2.2(a)(i) each separate instance, in a financial year, of a single Property experiencing an Unplanned Water Interruption that lasts for more than five continuous hours is to be counted as a separate Property that has experienced, in that financial year, an Unplanned Water Interruption that lasts for more than five continuous hours; and for the purpose of clause 4.2.2(a)(ii), each Property that experiences, in a financial year, three or more Unplanned Water Interruptions that each lasts for more than one hour is to be counted once only in that financial year. 	SC	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
4.2.3	<p>Wastewater Overflow Standard</p> <p>a) Sydney Water must ensure that, in any financial year:</p> <ol style="list-style-type: none"> no more than 14,000 Properties (other than Public Properties) experience an Uncontrolled Wastewater Overflow in dry weather; and no more than 175 Properties (other than Public Properties) experience three or more Uncontrolled Wastewater Overflows in dry weather (the Wastewater Overflow Standard). <p>b) For the purpose of the Wastewater Overflow Standard:</p> <ol style="list-style-type: none"> each Multiple Occupancy Property is to be counted as a single Property; <i>[Note: For example, a complex of five townhouses where each townhouse receives a separate bill from Sydney Water is to be counted as a single Property.]</i> for the purpose of clause 4.2.3(a)(i), each separate instance, in a financial year, of a single Property experiencing an Uncontrolled Wastewater Overflow in dry weather is to be counted as a separate Property that has experienced, in that financial year, an Uncontrolled Wastewater Overflow in dry weather; and for the purpose of clause 4.2.3(a)(ii), each Property that experiences three or more Uncontrolled Wastewater Overflows in a financial year is to be counted once only in that financial year. 	SC	
4.2.4	<p>Interpretation of standards</p> <p>In the case of any ambiguity in the interpretation or application of any System Performance Standard, IPART's interpretation or assessment of the application of the System Performance Standard will prevail.</p>	NR	
4.3	Response time for water main breaks		
4.3.1	Sydney Water must report, in accordance with the Reporting Manual, on response times for water main breaks and leaks.	SC	
4.4	Priority Sewerage Program		
4.4.1	Sydney Water must co-operate with, and participate in, any Government review of the Priority Sewerage Program.	SC	Audit if triggered by a review.
4.4.2	If required by the Minister, Sydney Water must implement and comply with any outcomes (including timeframes) of a Government review of the Priority Sewerage Program.	SC	Audit if triggered by a Ministerial direction.

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
5	Customer and Consumers		
5.1	Customer Contract		
5.1.1	The Customer Contract sets out the rights and obligations of Customers and Sydney Water in relation to the Services provided in accordance with this Licence.	NR	
5.1.2	Sydney Water must make a copy of the Customer Contract available to any person, free of charge: <ul style="list-style-type: none"> a) on its website for downloading; and b) upon request made to the Contact Centre. 	SC	
5.2	Providing information		
5.2.1	Sydney Water must prepare a pamphlet that: <ul style="list-style-type: none"> a) provides a brief explanation of the Customer Contract; b) summarises the key rights and obligations of Customers under the Customer Contract; c) refers to the types of account relief available for Customers experiencing financial hardship; d) outlines the rights of Customers to claim a rebate and the conditions that apply to those rights; e) contains information regarding how to contact Sydney Water by telephone, email or post; and f) contains information regarding the ability for a Customer to enter into agreements with Sydney Water (separate to the Customer Contract) for the provision by Sydney Water of Services to the Customer. 	SC	
5.2.2	Sydney Water must update the pamphlet prepared under clause 5.2.1 to reflect any variations made to the Customer Contract.	SC	
5.2.3	Sydney Water must: <ul style="list-style-type: none"> a) provide the pamphlet prepared under clause 5.2.1 and pamphlet updates made under clause 5.2.2, free of charge to: <ul style="list-style-type: none"> i. Customers at least annually with their Bills; and ii. any person upon request made to the Contact Centre; and b) make the pamphlet prepared under clause 5.2.1 and pamphlet updates made under clause 5.2.2 available on its website for downloading by any person, free of charge, within 60 days of the commencement of the Customer Contract or pamphlet update as the case may be. 	SC	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
5.2.4	Sydney Water must advertise in a Sydney-based newspaper at least annually on: <ul style="list-style-type: none"> a) the types of account relief available for Customers experiencing financial hardship; and b) rights of Customers to claim rebates and the conditions that apply to those rights. 	Audit	
5.3	Consumers		
5.3.1	Sydney Water's obligations under the Customer Contract relating to Complaint handling and Complaint resolution procedures are extended to Consumers as if Consumers were parties to the Customer Contract.	Audit	
5.4	Assistance Options for Payment Difficulties and Actions for Non-Payment		
5.4.1	Sydney Water must maintain and fully implement: <ul style="list-style-type: none"> a) a financial hardship policy that assists residential Customers experiencing financial hardship b) procedures relating to a payment plan for residential Customers who are responsible for paying their Bills and who are, in Sydney Water's reasonable opinion, experiencing financial hardship; c) procedures for identifying the circumstances under which Sydney Water may disconnect or restrict the supply of water to a Customer's Property; and d) provisions for self-identification, identification by community welfare organisations and identification by Sydney Water of residential Customers experiencing financial hardship, (the <i>Assistance Options for Payment Difficulties and Actions for Non-Payment</i>). 	Audit	
5.4.2	Sydney Water must set out, in the Customer Contract: <ul style="list-style-type: none"> a) the Assistance Options for Payment Difficulties and Actions for Non-Payment; and b) the options under the Assistance Options for Payment Difficulties and Actions for Non-Payment that are available to Private Residential Tenants who pay usage charges to Sydney Water. 	SC	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
5.4.3	Sydney Water must provide, free of charge, an explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment to: c) residential Customers, at least annually with their Bills; d) residential Customers who Sydney Water identifies as experiencing financial hardship on the date that Sydney Water first identifies that the Customer is experiencing financial hardship; and e) any other person upon request made to the Contact Centre.	SC	
5.4.4	Sydney Water must make the explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment referred to in clause 5.4.3 available on its website for downloading by any person, free of charge.	Audit	
5.5	Customer Council and Customer Council Charter		
5.5.1	Sydney Water must maintain and regularly consult with organisations representing a broad cross section of its Customers and Consumers through the Customer Council.	Audit	The Operating Licence review resulted in expanded membership of the Customer Council, particularly business groups, regarding impacts of service continuity and reliability failures on operations.
5.5.2	Sydney Water must utilise the Customer Council to, among other things, obtain advice on the interests of Sydney Water's Customers and Consumers, the Customer Contract and such other key issues related to Sydney Water's planning and operations as Sydney Water may determine, consistent with the Customer Council Charter (referred to in clause 5.5.4).	Audit	The Operating Licence review resulted in expanded membership of the Customer Council, particularly business groups, regarding impacts of service continuity and reliability failures on operations.

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
5.5.3	<p>Sydney Water must:</p> <ul style="list-style-type: none"> a) ensure that, at all times, the membership of the Customer Council is appointed and determined by Sydney Water in accordance with the Customer Council Charter, and b) use its best endeavours to include, as members of the Customer Council, at least one person representing each of the following categories: <ul style="list-style-type: none"> i. business groups, including small, medium and large business and non-residential customers; ii. consumer groups; iii. organisations representing low income households; iv. people living in rural and urban fringe areas; v. residential consumers; vi. environmental groups; vii. local government; viii. older people; ix. people with disabilities; x. indigenous Australians; and xi. people from non-English speaking backgrounds. 	Audit	The Operating Licence review resulted in expanded membership of the Customer Council, particularly business groups, regarding impacts of service continuity and reliability failures on operations.

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
5.5.4	<p>Sydney Water and members of the Customer Council must, for the term of this Licence, maintain a charter (the Customer Council Charter) that addresses all of the following issues:</p> <ul style="list-style-type: none"> a) the role of the Customer Council; b) selection criteria on how members of the Customer Council will be drawn from the community and information on how vacancies for membership will be advertised; c) the processes for appointment of new members; d) the term for which members are appointed; e) information on how the Customer Council will operate; f) a description of the type of matters that will be referred to the Customer Council and how those matters will be referred; g) procedures for the conduct of Customer Council meetings, including the appointment of a chairperson and the requirement to invite, on an annual basis, a co-chair of the Customer Council from Customer representatives; h) procedures for communicating the outcomes of the Customer Council's work to the public; i) procedures for monitoring issues raised at meetings of the Customer Council and ensuring appropriate follow-up of those issues; and j) funding and resourcing of the Customer Council by Sydney Water. 	Audit	
5.5.5	Sydney Water must provide the Customer Council with information in Sydney Water's possession or under its control necessary to enable the Customer Council to discharge the tasks assigned to it, other than information or documents that are confidential (including documents that are subject to client legal privilege).	Audit	The Operating Licence review resulted in expanded membership of the Customer Council, particularly business groups, as well as older people, people with disabilities, and indigenous Australians.
5.5.6	<p>Sydney Water must make a copy of the Customer Council Charter and minutes from proceedings of the Customer Council, available to any person, free of charge:</p> <ul style="list-style-type: none"> a) on its website for downloading; and b) upon request made to the Contact Centre. 	Audit	
5.5.7	Sydney Water and the Customer Council may each propose any amendments to the Customer Council Charter. However, such amendments will not be effective until they have been approved by both Sydney Water and the Customer Council.	SC	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
5.6	Internal complaints handling		
5.6.1	Sydney Water must maintain a procedure for receiving, responding to and resolving Complaints, which is consistent with the Australian Standard AS/NZS 10002:2014 – Guidelines for complaint handling in organisations (AS/NZS 10002:2014) (the Internal Complaints Handling Procedure).	Audit	
5.6.2	Sydney Water must ensure that the Internal Complaints Handling Procedure is fully implemented and that all relevant activities are carried out in accordance with the Internal Complaints Handling Procedure	Audit	
5.6.3	Sydney Water must provide to Customers, at least annually with their Bills, information concerning internal complaints handling, which explains how to make a Complaint and how Sydney Water will receive, respond to and resolve Complaints.	Audit	
5.6.4	Sydney Water must make the information concerning internal complaints handling referred to in clause 5.6.3 available to any person, free of charge: <ul style="list-style-type: none"> a) on its website for downloading; and b) upon request made to the Contact Centre 	Audit	
5.7	External dispute resolution scheme		
5.7.1	Sydney Water must be a member of the Energy and Water Ombudsman NSW to facilitate the resolution, by a dispute resolution body, of disputes between Sydney Water and its Customers and Consumers.	Audit	
5.7.2	Sydney Water must: <ul style="list-style-type: none"> a) prepare a pamphlet that explains the operation of the dispute resolution service provided by the Energy and Water Ombudsman NSW, including any right to have a Complaint or dispute referred to the Energy and Water Ombudsman NSW and how such a Complaint or dispute can be assessed; b) provide a copy of the pamphlet prepared under clause 5.7.2(a), free of charge to Customers at least once a year with their Bills; and c) make a copy of the pamphlet prepared under clause 5.7.2(a) available to any person, free of charge: <ul style="list-style-type: none"> i. on its website for downloading; and ii. upon request made to the Contact Centre. 	Audit	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
5.8	Code of conduct		
	Sydney Water must use its best endeavours to co-operate with each Licensed Network Operator and Licensed Retail Supplier within the Area of Operations that seeks to establish with Sydney Water a code of conduct of the kind referred to in clause 25 of the WIC Regulation.	SC	
6	Environment		
6.1	Environment management		
6.1.1	Sydney Water must maintain a Management System certified to Australian Standard AS/NZS ISO 14001:2004: Environmental Management Systems – Requirements with guidance for use (the Environmental Management System).	Audit	
6.1.2	Sydney Water must fully implement, and carry out all relevant activities in accordance with, the Environmental Management System.	Audit	
6.1.3	Sydney Water must notify IPART, in accordance with the Reporting Manual, of any significant changes that it proposes to make to the Environmental Management System.	SC	
6.1.4	Sydney Water must provide IPART, in accordance with the Reporting Manual, with a report on the outputs of the Environmental Management System.	Audit	
6.2	Environmental indicators		
6.2.1	Sydney Water must: <ul style="list-style-type: none"> a) prepare indicators of the direct impact on the environment of Sydney Water's activities (the Environmental Performance Indicators); b) monitor and compile data on the Environmental Performance Indicators; and c) report on the Environmental Performance Indicators in accordance with the Reporting Manual. 	Audit	
7	Quality Management		
7.1	Quality Management System		
7.1.1	By 30 June 2017, Sydney Water must develop a Management System that is consistent with the <i>Australian Standard AS/NZS ISO 9001:2008: Quality Management Systems - Requirements</i> (the Quality Management System).	Review	<p>A verbal update of the progress will be reviewed at the audit and documented by the audit or until the system is developed.</p> <p>Any potential issues should be identified in this update.</p>

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
7.1.2	Sydney Water must ensure that: a) by 30 June 2018, the Quality Management System is certified by an appropriately qualified person to be consistent with the <i>Australian Standard AS/NZS ISO 9001:2008: Quality Management Systems – Requirements</i> ; and b) once the Quality Management System is certified under clause 7.1.2(a), the certification is maintained during the remaining term of this Licence.	NR	
7.1.3	By 30 June 2018, Sydney Water must ensure that the Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Quality Management System.	NR	
7.1.4	Sydney Water must notify IPART, in accordance with the Reporting Manual, of any significant changes that it proposes to make to the Quality Management System.	NR	Audit if required.
8	Performance monitoring		
8.1	Operational audits		
8.1.1	IPART may undertake, or may appoint an Auditor to undertake, an audit of Sydney Water's compliance with any of the following: a) this Licence; b) the Reporting Manual; and c) any matters required by the Minister; (the Operational Audit).	NR	
8.1.2	Sydney Water must, within a reasonable time period of a receiving a request from IPART or an Auditor to provide information, provide IPART or the Auditor with all the information in Sydney Water's possession, or under Sydney Water's custody or control, which is necessary to conduct the Operational Audit, including any information that is reasonably requested by IPART or an Auditor.	NR	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
8.1.3	<p>For the purpose of any Operational Audit or verifying a report on an Operational Audit, Sydney Water must, within a reasonable time period of receiving a request from IPART or an Auditor, permit IPART or the Auditor to:</p> <ul style="list-style-type: none"> a) access any works, premises or offices occupied by Sydney Water; b) carry out inspections, measurements and tests on, or in relation to, any such works, premises or offices; c) take on to any such premises or offices any person or equipment necessary for the purpose of performing the Operational Audit or verifying any report on the Operational Audit; d) inspect and make copies of, and take extracts from, any books and records of Sydney Water that are maintained in relation to the performance of Sydney Water's obligations under this Licence (including the Reporting Manual); and e) discuss matters relevant to the Operational Audit or any report on the Operational Audit with Sydney Water, including Sydney Water's officers and employees. 	NR	
8.2	Reporting		
8.2.1	<p>Sydney Water must comply with its reporting obligations set out in the Reporting Manual, which include:</p> <ul style="list-style-type: none"> a) reporting to IPART and NSW Health in accordance with the Reporting Manual; b) making reports and other information publicly available, in the manner set out in the Reporting Manual; and c) reporting to IPART on Sydney Water's performance against the National Water Initiative Performance Indicators. 	Audit	
8.2.2	Sydney Water must maintain sufficient record systems that enable it to report accurately in accordance with clause 8.2.1.	Audit	
8.3	Provision of information		
8.3.1	Sydney Water must provide IPART with information relating to the performance of any of Sydney Water's obligations under clause 8.2 (including providing IPART with physical and electronic access to the records required to be kept under clause 8.2) within a reasonable time period of Sydney Water's receiving a request from IPART for that information	NR	
8.3.2	Sydney Water must provide IPART with such information as is reasonably required to enable IPART to conduct any review or investigation of Sydney Water's obligations under this Licence within a reasonable time period of Sydney Water's receiving a request from IPART for that information.	NR	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
8.3.3	If Sydney Water contracts out any of its activities to any person (including a subsidiary) it must take all reasonable steps to ensure that, if required by IPART or an Auditor, any such persons provide information and do the things specified in clause 8.1 as if that person were Sydney Water.	NR	
8.3.4	If IPART or an Auditor requests information under clause 8 which is confidential, the information must be provided to IPART or the Auditor, subject to IPART or the Auditor entering into reasonable arrangements to ensure that the information remains confidential.	NR	
8.3.5	Sydney Water must provide NSW Health with information relating to water quality in the manner and form specified by NSW Health within a reasonable time period of receiving NSW Health's request. <i>[Note: Under section 19 of the Public Health Act 2010 (NSW), the Director General of the NSW Ministry of Health may require Sydney Water to produce certain information.]</i>	SC	NSW Health considers that this clause does not need to be audited in 2015-16.
8.4	Performance indicators and system performance standards		
8.4.1	Sydney Water must maintain record systems that are sufficient (to IPART's satisfaction) to enable Sydney Water to measure accurately its performance against the performance indicators and System Performance Standards specified in the Reporting Manual.	SC	
8.4.2	In the case of any ambiguity in the interpretation or application of any performance indicators specified in the Reporting Manual, IPART's interpretation or assessment of the application of the indicators will prevail.	NR	
9	Memorandum of understanding		
9.1	NSW Health		
9.1.1	Sydney Water must maintain the memorandum of understanding with NSW Health entered into under section 35 of the Act.	SC	NSW Health considers that this clause does not need to be audited in 2015-16.
9.1.2	The purpose of the memorandum of understanding referred to in clause 9.1.1 is to form the basis for co-operative relationships between the parties to the memorandum of understanding. In particular, the purpose of the memorandum of understanding referred to in clause 9.1.1 is to recognise the role of NSW Health in providing advice to the NSW Government in relation to Drinking Water quality standards and the supply of water which is safe to drink.	NR	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
9.1.3	The memorandum of understanding referred to in clause 9.1.1 must include arrangements for Sydney Water to report to NSW Health information on any events in relation to Sydney Water's systems or Services, which may pose a risk to public health.	SC	
9.2	Environment Protection Authority		
9.2.1	Sydney Water must maintain the memorandum of understanding with the Environment Protection Authority entered into under section 35 of the Act.	SC	
9.2.2	The purpose of the memorandum of understanding referred to in clause 9.2.1 is to form the basis for co-operative relationships between the parties to the memorandum of understanding. In particular, the purpose of the memorandum of understanding referred to in clause 9.2.1 is to recognise the role of the Environment Protection Authority as the environment regulator of New South Wales and to commit Sydney Water to environmental obligations.	NR	
9.3	Water Administration Ministerial Corporation		
9.3.1	Sydney Water must maintain the memorandum of understanding with the Water Administration Ministerial Corporation (WAMC) entered into under section 35 of the Act.	SC	
9.3.2	The purpose of the memorandum of understanding referred to in clause 9.3.1 is to form the basis for co-operative relationships between the parties to the memorandum of understanding. In particular, the purpose of the memorandum of understanding referred to in clause 9.3.1 is to recognise the role of WAMC in regulating water access, use and management and Sydney Water's right to use water vested in WAMC.	NR	
9.4	Fire and Rescue NSW		
9.4.1	Sydney Water must use its best endeavours to develop and enter into a memorandum of understanding with Fire and Rescue NSW (FRNSW) by 31 December 2015.	Audit	Audit with reference to Definition clause 9.4.4
9.4.2	Once the memorandum of understanding referred to in clause 9.4.1 is developed and entered into, Sydney Water must use its best endeavours to comply with the memorandum of understanding.	NR	

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
9.4.3	<p>The purpose of the memorandum of understanding referred to in clause 9.4.1 is to form the basis for co-operative relationships between the parties to the memorandum of understanding. In particular, the purpose of the memorandum of understanding referred to in clause 9.4.1 is to:</p> <ul style="list-style-type: none"> a) develop the roles and responsibilities of the parties to the memorandum of understanding as they relate to each other; b) identify the needs and constraints of the parties to the memorandum of understanding as they relate to each other; and c) identify and develop strategies for efficient and effective provision of firefighting water consistent with the goals of each party to the memorandum of understanding. 	NR	
9.4.4	<p>The memorandum of understanding referred to in clause 9.4.1 must require:</p> <ul style="list-style-type: none"> a) the establishment of a working group, comprised of representatives from Sydney Water and FRNSW; and b) the working group to consider the following matters (at a minimum): <ul style="list-style-type: none"> i. arrangements regarding information sharing between Sydney Water and FRNSW; ii. agreed timelines and a format for Sydney Water to provide a report to FRNSW detailing the network performance with regard to availability of water for firefighting (taking into account the minimum available flow and pressure in localised areas of the network); iii. arrangements for Sydney Water to consult with FRNSW in the design of new assets and planning of system maintenance, where planning indicates that minimum available flow and pressure may unduly impact firefighting in the network section under consideration; and iv. other matters as agreed by both parties to the memorandum of understanding. <p><i>[Note: Clauses 9.1.1, 9.2.1, 9.3.1 and 9.4.1 do not limit the persons with whom Sydney Water may be a party to a memorandum of understanding.]</i></p>	Audit	Auditor should consider the views of FRNSW in grading this clause.

Licence clause	Operating Licence obligation	2015-16 audit requirement	Comments
10	End of Term Review		
10.1	End of Term Review		
10.1.1	It is anticipated that a review of this Licence will commence in the first quarter of 2019 to investigate: a) whether this Licence is fulfilling its objectives; and b) any issues which have arisen during the term of this Licence, which may affect the effectiveness of this Licence; (the End of Term Review).	NR	
10.1.2	Sydney Water must provide the person undertaking the End of Term Review with such information as is reasonably required to enable the person to undertake the End of Term Review. Sydney Water must provide that person with such information as the person requests within a reasonable time period of receiving that request.	NR	

Source: Sydney Water Corporation five year audit program.

Table 2 Recommendations / outstanding items from previous audits

Recommendation number	Operational issue (licence reference where applicable)	IPART's recommendation to the Minister	2014-15 audit findings, and status as reported by utility on 31 March 2016 ^a	Guidance for 2015-16 audit
2013/14 - 1	Condition 2.2 – Recycled water	<p>Ongoing</p> <p>Sydney Water should maintain an ongoing commitment to the review and update of its Recycled Water Quality Management Plans via the four-year rolling program agreed with NSW Health.</p> <p>Complete</p> <p>Further, Sydney Water should be able to demonstrate progress with its program in both documentation development and scheme specific implementation by 30 June 2015. Formal endorsement of the Liverpool plan by NSW Health should also be achieved by 30 June 2015.</p>	Sydney Water's rolling review of the Scheme Recycled Water Quality Management Plans has been delayed from that advised in previous annual reports. Given the slippage in progress, IPART considers that this part of the recommendation remain open until the conclusion of one cycle of reviews for each of the schemes, in consultation with NSW Health. We are recommending a revised date for completion of 30 June 2017.	The recommendation made in 2014 was audited in 2015 and found to have been partly completed. As such the recommendation that is complete (greyed text) does not need to be re-audited but is retained here to provide context for the 2015-16 auditor.
2013/14 - 4	Condition 3.1.2(e) – Asset management framework)	<p>Ongoing</p> <p>Sydney Water should ensure that document control is implemented across the organisation for all key documents relating to its services and activities covered by the operating licence. Key knowledge processes and practices should be documented, controlled and endorsed with appropriate signoff.</p> <p>Complete</p> <p>Sydney Water should demonstrate that information in controlled documents retains currency by implementing regular reviews in accordance with its risk based document control review schedules. By 30 June 2015, Sydney Water should establish a review schedule to ensure that all controlled documents are brought up to date according to the risk level of the document.</p>	<p>Sydney Water has established a spreadsheet for tracking key documents relating to its Operating Licence Folio. The tracking spreadsheet has a separate tab for each licence area and each area of the business is responsible for providing details of key documents and the review cycle. The level of information provided and completeness varies between business areas.</p> <p>As a large number of documents are planned for review, this recommendation will remain open to be assessed in future audits until progress has been demonstrated that documents have been reviewed within planned review cycles or otherwise reviewed as for example part of quality management systems. We are recommending a revised date of 30 June 2017.</p>	The recommendation made in 2014 was audited in 2015 and found to have been partly completed. As such the recommendation that is complete (greyed text) does not need to be re-audited but is retained here to provide context for the 2015-16 auditor.

Recommendation number	Operational issue (licence reference where applicable)	IPART's recommendation to the Minister	2014-15 audit findings, and status as reported by utility on 31 March 2016 ^a	Guidance for 2015-16 audit
2014-15 – 1	Pricing	Sydney Water should complete, register and apply the Developer Service Plan for Hoxton Park. Sydney Water should ensure that it publically reports on its compliance with its Price determinations each year in its annual report (by 30 June 2016) (clause 1.9).	No progress yet reported – update following May 16 report	Auditor to consider progress to date, however completion date is out of audit scope. Clause references refer to the previous (2010-2015 licence)
2014-15 – 2	Water Quality – Recycled Water	Sydney Water should develop organisation wide controls for use in recycled water quality management (including linkages between controls and personnel responsibilities). Organisation wide controls should be implemented within individual Scheme Recycled Water Quality Management Plans (by 30 June 2017) (clause 2.2).	No progress yet reported – update following May 16 report	Auditor to consider progress to date, however completion date is out of audit scope. Clause references refer to the previous (2010-2015 licence)
2014-15 – 3	Water Quality – Recycled Water	Sydney Water should review recycled water management risk assessment procedures to ensure consistent application of HIDRA risk matrix and consequence key across the organisation (by 30 June 2017) (clause 2.2).	No progress yet reported – update following May 16 report	Auditor to consider progress to date, however completion date is out of audit scope. Clause references refer to the previous (2010-2015 licence)
2014-15 – 4	Water Quality – Recycled Water	Sydney Water should review recycled water monitoring requirements in consultation with NSW Health to confirm that all validated UV units are operating within their UVT validation envelope, appropriate to the dose monitoring strategy in place (by 30 June 2017) (clause 2.2).	No progress yet reported – update following May 16 report	Auditor to consider progress to date, however completion date is out of audit scope. Clause references refer to the previous (2010-2015 licence)
2014-15 – 5	Water Quality – Recycled Water	Sydney Water should establish and implement review frequencies for each action within the Australian Guidelines for Water Recycling Framework for both the Recycled Water Management Manual and Scheme Recycled Water Quality Management Plans (by 30 September 2016) (clause 2.2).	No progress yet reported – update following May 16 report	Auditor to consider progress to date, however completion date is out of audit scope. Clause references refer to the previous (2010-2015 licence)

Recommendation number	Operational issue (licence reference where applicable)	IPART's recommendation to the Minister	2014-15 audit findings, and status as reported by utility on 31 March 2016 ^a	Guidance for 2015-16 audit
2014-15 – 6	Infrastructure performance – Asset Management obligation	Sydney Water should review and implement measures relating to obtaining asset information to ensure that mechanical and electrical asset data quality and coverage for works completed by contractors provide sufficient detail to maintain robust asset inventories and support asset planning, replacement and other business needs (by 30 September 2016) (clauses 3.1.1 and 3.1.2).	No progress yet reported – update following May 16 report	Auditor to consider progress to date, however completion date is out of audit scope. Clause references refer to the previous (2010-2015 licence)
2014-15 – 7	Infrastructure performance – Asset Management obligation	<p>Sydney Water should review technical asset registers to identify:</p> <ul style="list-style-type: none"> ▼ whether existing asset hierarchy across all asset classes meets business needs ▼ the extent to which asset data conforms to the hierarchy (structure, coverage and quality) <p>and commence programs of work to improve asset registers to achieve business needs identified, which may include regulatory requirements) (30 September 2016) (clauses 3.1.1 and 3.1.2).</p>	No progress yet reported – update following May 16 report	Auditor to consider progress to date, however completion date is out of audit scope. Clause references refer to the previous (2010-2015 licence)

^a The March 2016 report is currently unavailable, due to a change in the 2014-15 audit program. There is no progress reporting at this time. The 2015-16 progress report will be available at the end of May 2016.

Table 3 Previous field verification locations for Sydney Water Corporation

Audit year	Location	Facility
2015-16	TBA	TBA
2014-15	Rouse Hill	Water Recycling Plant
	North Richmond	Water Filtration Plant
	Box Hill	Water Pumping Station
	Parklea	Reservoir
2013-14	West Camden	Water Recycling Plant
	Warragamba	Water Filtration Plant
	South West Growth Centre	Networks Alliance Managed Upgrade and Narellan Valley Reservoir
2012-13	Macarthur	Macarthur Water Filtration Plant
	Liverpool	Customer Service Centre
	Liverpool	Liverpool Recycling Plant
	West Hoxton	Priority Sewage Project
2011-12	Wollongong	Recycled Water Treatment Plant
	Woronora	Water Filtration Plant
	Heathcote	Reservoir
2010-11	N/A	3 treated water reservoirs
	Orchard Hills	Water filtration plant
	Drummoyne	Mains flushing

Note: Locations and facilities for the 2015-16 Sydney Water Corporation operational audit will be confirmed with the utility and successful auditor.

C | Operational audit report 2015-16 – Sydney Water



2015/16 Operational Audit of Sydney Water

Final Audit Report

#14041-10-001 Version 3.0

Independent Pricing and Regulatory Tribunal

November 2016

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2015/16 Operational Audit of Sydney Water

Final Audit Report

Independent Pricing and Regulatory Tribunal

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Glossary

Acronym/Term	Description
ADWG (2011)	<i>Australian Drinking Water Guidelines, 2011</i>
AGWR	<i>Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) 2006</i>
BI	Business Intelligence
BMIS	Business Management Information System
BOO	Build Own Operate
C2C	Catchment to Consumer risk assessment
CCP	Critical Control Point
CDP	Contribution and Development Plan
CM	Corrective Maintenance
CMS	Customer Management System
CPI	Consumer Price Index
Ct	Concentration time; a measure of disinfectant dosage, being the product of the disinfectant concentration (C) and the contact time (t)
DALY	Disability Adjusted Life Year
DSP	Development Servicing Plan
DPI Water	The regulatory and water policy branch within the NSW Department of Primary Industry (formerly the Office of Water)
DWMM	Drinking Water Management Manual
DWQ	Drinking Water Quality
DWQMS	Drinking Water Quality Management System
EMS	Environmental Management System
EPA	Environment Protection Authority (of NSW)
EWON	Energy & Water Ombudsman NSW
FFWG	Fire Fighting Working Group
FRM	Field Resource Management
FRNSW	Fire and Rescue NSW
HBT	Health-based Target
HIDRA	Hazard Identification and Risk Assessment
IAM	Institute of Asset Management
IERP	Incident and Emergency Response Protocol
IICATS	Integrated Instrumentation, Controls, Automation and Telemetry System
IPART	The Independent Pricing and Regulatory Tribunal (NSW)
IWA	International Water Association
JOG	Joint Operating Group

Acronym/Term	Description
KPI	Key Performance Indicator
LIMS	Laboratory Information Management System
LRV	Log Reduction Value
M&E	Mechanical and Electrical
MAXIMO	Enterprise Asset Management System
MOS	Management Operating System
MoU	Memorandum of Understanding
MS	Microsoft
MSE	Minor Service Extension
NATA	National Association of Testing Authorities
NOM	Natural organic matter
NWI	National Water Initiative
OCP	Operational Control Point
OCU	Odour Control Unit
OFI	Opportunity for Improvement
O&M	Operations and Maintenance
PAS	Payment Assistance Scheme
PCG	Portfolio Control Group
pH	A measure of acidity or alkalinity of water
PM	Planned Maintenance
PPG	Portfolio Performance Group
QMS	Quality Management System
RW	Recycled Water
RWMM	Recycled Water Management Manual
RWP	Recycled Water Plant
RWQMP	Recycled Water Quality Management Plan
SAM	Strategic Accounts Management
SAMP	Strategic Asset Management Framework
SCADA	Supervisory Control and Data Acquisition
SDIMS	Service Delivery Integrated Management System
SDP	Sydney Desalination Plant
SIP	Standard Incident Procedure
SLG	Strategic Liaison Group
SOC	System Operations Centre
SOP	Standard Operating procedure
SWC/Sydney Water	Sydney Water Corporation

Acronym/Term	Description
SWIM	Sydney Water Information Management (system)
SWIRL	Sydney Water Incident Reporting and Learnings
SWMS	Safe Work Method Statement
TAFE	Technical and Further Education
T&O	Taste and Odour
UV	Ultraviolet (radiation)
UVT	Ultraviolet transmittance
WFP	Water Filtration Plant
WSAA	Water Services Association of Australia

Executive Summary

Auditor Declaration

This report presents the findings of an Operational Audit of Sydney Water's compliance with the requirements of its Operating Licence during the period 1 July 2015 and 30 June 2016. The audit was undertaken by Cobbitty Consulting, in association with BBTech Consulting, for the Independent Pricing and Regulatory Tribunal (IPART).

The audit team confirms that:

- the auditors have seen sufficient evidence on which to base their conclusions;
- the audit findings accurately reflect the professional opinion of the auditors;
- the lead auditor and team members have conducted the audit, determined audit findings and prepared this report in accordance with the requirements of the *Audit Guideline – Public Water Utilities*¹ and IPART's *Request for Quote*.²
- the audit findings have not been unduly influenced by the utility and/or any of its associates.

Major Findings

The audit team found that Sydney Water had performed well against the audited obligations over the audit period, with full compliance awarded to all but three of the clauses audited. The shortcomings identified relate to Pricing, Recycled Water Quality and Providing Information, as follows:

- Non-compliance in respect of Pricing was self-reported by Sydney Water as it had collected capital contributions without a registered Development Servicing Plan being in place.
- Substantial improvement in the management of recycled water quality was evident; however, validation monitoring is yet to be completed.
- Sydney Water failed to advertise in a Sydney-based newspaper on the types of account relief available for customers experiencing financial hardship, and the rights of customers to claim rebates, during the audit period.

The findings of the audit of performance against the audited Licence obligations are summarised in **Table E.1**. The assessment of progress in respect of previous audit recommendations is summarised in **Table E.2**.

¹ IPART, *Audit Guideline – Public Water Utilities* (Revision 7), May 2016.

² IPART, *Request for Quote; 2015-16 Sydney Water Corporation Audits (RFQ 16/150)*, 27 May 2016.

Table E.1 Summary of Audit Findings against Audited Licence Obligations

Licence Part	Clause/Obligation	Compliance Grade/Comment ³
1. Licence and Licence Authorisation	1.9.1	Non-Compliant – Sydney Water has declared non-compliance as it has collected capital contributions without a registered Development Servicing Plan being in place, and without seeking Treasurer approval to charge a price that it anticipated to be less than the maximum price under the relevant pricing methodology.
2. Water Quality	2.1.1	Full Compliance
	2.1.2	Full Compliance
	2.2.1	Full Compliance
	2.2.2	High Compliance – although significant advancement has made in the implementation of the RWQMS, there remains further work to be done to fully address previous recommendations.
3. Water Quantity	3.2.1	Full Compliance
	3.2.5	Full Compliance
4. Assets	4.1.5	Full Compliance
5. Customers	5.2.4	Non-Compliant – Sydney Water failed to advertise in a Sydney-based newspaper at least annually on the types of account relief available for Customers experiencing financial hardship, and the rights of Customers to claim rebates and the conditions that apply to those rights.
	5.3.1	Full Compliance
	5.4.1	Full Compliance
	5.4.4	Full Compliance
	5.5.1	Full Compliance
	5.5.2	Full Compliance
	5.5.3	Full Compliance
	5.5.4	Full Compliance
	5.5.5	Full Compliance
	5.5.6	Full Compliance
	5.6.1	Full Compliance
	5.6.2	Full Compliance
	5.6.3	Full Compliance
	5.6.4	Full Compliance
	5.7.1	Full Compliance
	5.7.2	Full Compliance

³ Comment provided where less than full compliance assessed.

Licence Part	Clause/Obligation	Compliance Grade/Comment ³
6. Environment	6.1.1	Full Compliance
	6.1.2	Full Compliance
	6.1.4	Full Compliance
	6.2.1	Full Compliance
8. Performance Monitoring	8.2.1	Full Compliance
	8.2.2 (including Report and IPART Indicators Nos: C12 and C13)	Full Compliance
9. Memorandum of Understanding	9.1.1/9.1.2	Full Compliance
	9.4.1	Full Compliance
	9.4.4	Full Compliance

Table E.2 Summary of Assessed Progress in Respect of Previous Audit Recommendations

Recommendation	Operational Issue (Licence Reference) ⁴	Compliance Grade/Comment ⁵
2013/14-1	Water Quality – Recycled Water – maintain an ongoing commitment to the review and update of the RWQMP (Licence clause 2.2)	Addressed
2013/14-4	Asset Management Framework – ensure that document control is implemented across the organisation (Licence sub-clause 3.1.2(e))	Addressed
2014/15-1	Pricing – complete, register and apply the Development Servicing Plan for Hoxton Park (Licence clause 1.9)	Addressed
2014/15-2	Water Quality – Recycled Water – develop organisation wide controls for use in recycled water quality management (Licence clause 2.2)	Addressed
2014/15-3	Water Quality – Recycled Water – review recycled water risk assessment procedures to ensure consistent application of HIDRA risk matrix and consequence key across the organisation (Licence clause 2.2)	Addressed

⁴ Refer to the relevant section of this report and associated appendix for full details of previous recommendations.

⁵ Comment provided where less than full compliance assessed.

Recommendation	Operational Issue (Licence Reference) ⁴	Compliance Grade/Comment ⁵
2014/15-4	Water Quality – Recycled Water – review recycled water monitoring requirements in consultation with NSW Health to confirm that all validated UV units are operating within their UVT validation envelope (Licence clause 2.2)	Partially Addressed – the program to confirm that all validated UV units are operating within their UVT validation envelopes is advancing, but is not yet complete.
2014/15-5	Water Quality – Recycled Water – establish and implement review frequencies for each action within the AGWR framework for both the Recycled Water Management Manual and Recycled Water Quality Management Plans (Licence clause 2.2)	Addressed
2014/15-6	Infrastructure Performance – Asset Management Obligation – review and implement measures relating to obtaining asset information (Licence sub-clauses 3.1.1 and 3.1.2)	Addressed
2014/15-7	Infrastructure Performance – Asset Management Obligation – review technical asset registers and commence programs of work to improve them (Licence sub-clauses 3.1.1 and 3.1.2)	Addressed – has met the short-term objective, but warrants ongoing monitoring of progress.

Recommendations

Recommendations arising from the audit are presented in **Table E.3**.

Table E.3 **Audit Recommendations arising from the 2015/16 Audit**

Licence Part	Clause/Obligation	Recommendation
1. Licence and Licence Authorisation	1.9.1 (Pricing)	REC-2015/16-01: Sydney Water should complete, register and apply the Development Servicing Plan for the Oran Park/Turner Road development.
2. Water Quality	2.2.2	No new recommendations are made; previous recommendation 2014/15-4 needs to be fully addressed.
5. Customers and Consumers	5.2.4 (Providing Information)	REC-2015/16-02: Sydney Water should develop and implement a procedure (or process) to ensure that it advertises in a Sydney-based newspaper at least once each year on: a) the types of account relief available for Customers experiencing financial hardship; and b) rights of Customers to claim rebates and the conditions that apply to those rights.

1. Introduction

1.1 Objectives

The objective of this audit was to assess, for the period from 1 July 2015 to 30 June 2016, Sydney Water Corporation's (Sydney Water's) performance against the terms and conditions (obligations) of:

- the *Sydney Water Corporation Operating Licence 2015-2020* (Sydney Water Operating Licence); and
- any other Ministerially-imposed requirements.

1.2 Audit Method

1.2.1 Audit Scope

The scope of the 2015/16 Operational Audit of Sydney Water is specified in detail in the *Request for Quote – 2015-16 Sydney Water Corporation audits (RFQ 16/150)*; it comprised:

- audit of Sydney Water's compliance with the obligations and requirements set out in its Operating Licence;⁶ and
- assessment of Sydney Water's progress in addressing outstanding recommendations arising from previous audits.

As outlined in its *Audit Guideline – Public Water Utilities*,⁷ IPART adopts a risk-based approach in setting the scope of public water utility operational audits. The clauses/obligations against which Sydney Water's compliance has been assessed are identified in **Table 1.1**.

Table 1.1 Scope of 2015/16 Operational Audit of Sydney Water

Licence Part	Clause/Obligation
1. Licence and Licence Authorisation	1.9.1
2. Water Quality	2.1.1; 2.1.2; 2.2.1; 2.2.2
3. Water Quantity	3.2.1; 3.2.5
4. Assets	4.1.5
5. Customers and Consumers	5.2.4; 5.3.1; 5.4.1; 5.4.4; 5.5.1; 5.5.2; 5.5.3; 5.5.4; 5.5.5; 5.5.6; 5.6.1; 5.6.2; 5.6.3; 5.6.4; 5.7.1; 5.7.2
6. Environment	6.1.4
8. Performance Monitoring	8.2.1; 8.2.2 (including a sample of IPART Indicators)
9. Memorandum of Understanding	9.1.1/9.1.2; ⁸ 9.4.1; 9.4.4

⁶ Refer to **Section 1.3** for a discussion of the regulatory regime under which Sydney Water operates, including identification of its operating licences.

⁷ IPART, *Audit Guideline – Public Water Utilities* (Revision 6), June 2015, section 2.1, page 4.

⁸ Sub-clauses 9.1.1/9.1.2 were included in scope in response to concerns raised by NSW Health.

The outstanding recommendations against which Sydney Water's progress in addressing them was assessed are identified in **Table 1.2**.

Table 1.2 Recommendations/Outstanding Items from Previous Audits included in the Audit Scope

Recommendation	Operational Issue ⁹
2013/14-1	Water Quality – Recycled Water – maintain an ongoing commitment to the review and update of the RWQMP (Licence clause 2.2)
2013/14-4	Asset Management Framework – ensure that document control is implemented across the organisation (Licence sub-clause 3.1.2(e))
2014/15-1	Pricing – complete, register and apply the Development Servicing Plan for Hoxton Park (Licence clause 1.9)
2014/15-2	Water Quality – Recycled Water – develop organisation wide controls for use in recycled water quality management (Licence clause 2.2)
2014/15-3	Water Quality – Recycled Water – review recycled water risk assessment procedures to ensure consistent application of HIDRA risk matrix and consequence key across the organisation (Licence clause 2.2)
2014/15-4	Water Quality – Recycled Water – review recycled water monitoring requirements in consultation with NSW Health to confirm that all validated UV units are operating within their UVT validation envelope (Licence clause 2.2)
2014/15-5	Water Quality – Recycled Water – establish and implement review frequencies for each action within the AGWR framework for both the Recycled Water Management Manual and Recycled Water Quality Management Plans (Licence clause 2.2)
2014/15-6	Infrastructure Performance – Asset Management Obligation – review and implement measures relating to obtaining asset information (Licence sub-clauses 3.1.1 and 3.1.2)
2014/15-7	Infrastructure Performance – Asset Management Obligation – review technical asset registers and commence programs of work to improve them (Licence sub-clauses 3.1.1 and 3.1.2)

1.2.2 Audit Standard

The auditing principles/guidance presented in ISO 19011:2011 *Guidelines for auditing management systems* have been applied in conducting this audit. Guidance presented in the following standards was also considered where appropriate:

- ASAE 3100 (2008) *Compliance Engagements*;
- Auditing and Assurance Standard AUS 110 *Assurance Engagements other than Audits or Reviews of Historical Financial Information*; and
- International Standard on Quality Control ISQC 2009.

⁹ Refer to the relevant section of this report and associated appendix for full details of previous recommendations.

1.2.3 Audit Steps

The audit was undertaken in accordance with the methodology outlined in IPART's *Audit Guideline – Public Water Utilities*.¹⁰ The audit steps are identified in **Table 1.3**.

Audit interviews and field verification site visits were undertaken during the three (3) day period 26 September 2016 to 28 September 2016. Interviews were conducted with Sydney Water representatives at Sydney Water's Parramatta offices. Field verification site visits were made to:

- Preston Maintenance Depot;
- Orchard Hills Water Filtration Plant; and
- Cronulla Wastewater Treatment Plant.

Table 1.3 Audit Steps¹¹

Step	Description	Responsibility
Step 1	Audit scoping	IPART
Step 2	Appointment of the auditor	IPART
Step 3	Audit preparation	Auditor/Utility/IPART
Step 4	Audit interview	Auditor/Utility (IPART observer)
Step 5	Field verification site visits	Auditor/Utility (IPART observer)
Step 6	Wrap up and close out sessions	Auditor/Utility (IPART observer)
Step 7	Audit assessment and reporting	Auditor/Utility/IPART
Step 8	Report to the Minister	IPART
Step 9	Report on audit recommendations	Utility

1.2.4 Audit Team

The audit team comprised of the following:

- Jim Sly – team lead and Lead Auditor;
- Bob Burford – Lead Auditor;
- Asoka Wijeratne – Lead Auditor providing audit support; and
- Mark Favetta – Technical Specialist providing audit support.

The allocation of responsibility for the various components of the audit (clauses audited by each auditor) was as nominated in **Table 1.4**.

¹⁰ IPART, *Audit Guideline – Public Water Utilities* (Revision 7), May 2016.

¹¹ IPART, *Audit Guideline – Public Water Utilities* (Revision 7), May 2016, table 2.1, page 7.




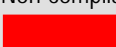
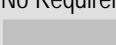
Table 1.4 Allocation of Audit Responsibilities

Licence Part	Clause/Obligation	Auditor/Support
1. Licence and Licence Authorisation	1.9.1	Jim Sly/Mark Favetta
2. Water Quality	2.1.1; 2.1.2; 2.2.1; 2.2.2	Bob Burford/Asoka Wijeratne
3. Water Quantity	3.2.1; 3.2.5	Jim Sly/Mark Favetta
4. Assets	4.1.5	Jim Sly/Mark Favetta
5. Customers and Consumers	5.2.4; 5.3.1; 5.4.1; 5.4.4; 5.5.1; 5.5.2; 5.5.3; 5.5.4; 5.5.5; 5.5.6; 5.6.1; 5.6.2; 5.6.3; 5.6.4; 5.7.1; 5.7.2	Jim Sly/Mark Favetta
6. Environment	6.1.4	Bob Burford/Asoka Wijeratne
8. Performance Monitoring	8.2.1; 8.2.2 (including a sample of IPART Indicators)	Jim Sly/Mark Favetta
9. Memorandum of Understanding	9.1.1/9.1.2; 9.4.1; 9.4.4	Jim Sly/Mark Favetta

1.2.5 Audit Grades

Audit grades have been awarded in accordance with the guidance presented in the *Audit Guideline – Public Water Utilities*. The compliance grades used in this report are as identified in **Table 1.5**.

Table 1.5 Compliance Grades for Public Utilities¹²

Grades of compliance	Description
Full Compliance 	Sufficient evidence to confirm that the requirements have been fully met.
High Compliance 	Sufficient evidence to confirm that the requirements have generally been met apart from very few minor shortcomings which do not compromise the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes.
Adequate Compliance 	Sufficient evidence to confirm that the requirements have generally been met apart from a number of minor shortcomings which do not compromise the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes.
Non-compliant 	Sufficient evidence has not been provided to confirm that all major requirements are being met and the deficiency adversely impacts 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 utility to meet this assessment criterion.

¹² IPART, *Audit Guideline – Public Water Utilities* (Revision 7), May 2016, table C.1, page 27.

1.3 Regulatory Regime

Sydney Water Corporation is constituted under the *Sydney Water Act 1994* and is a statutory State owned corporation pursuant to the *State Owned Corporations Act 1989*. It supplies water, wastewater, recycled water and some stormwater services to over 4.6 million people in Sydney, the Illawarra and the Blue Mountains.

Pursuant to Section 12 of the *Sydney Water Act 1994*, Sydney Water can be granted one or more operating licences to authorise it to carry out its specified and other functions. For the purposes of this audit (which addresses the audit period 1 July 2015 to 30 June 2016), Sydney Water has been granted and has been operating under the provisions of the *Sydney Water Corporation Operating Licence 2015-2020*.

1.4 Quality Assurance Process

The quality assurance processes implemented in undertaking this audit has included:

- Peer review of the audit questionnaires prior to submission to IPART;
- Processes to control all documents used in the audit;
- Accuracy checks of reported data and the completeness of audit trails;
- Peer review of preliminary findings and audit assessments included in the Draft Reports;
- Quality review of the Draft Reports (both independently and by the Audit Team Leader);
- Peer review of the Revised Draft Reports, specifically the treatment of comments received on the Draft Report and the feasibility of recommendations and opportunities for continuous improvement; and
- Quality review of the Final Report (both independently and by the Audit Team Leader).

An independent review has been undertaken to ensure that the accuracy of each section of the report is checked through quality control steps and all audit judgements, conclusions and recommendations are validated. As Audit Team Leader, Jim Sly has also reviewed the Audit Report prior to release.

2. Operating Licence Section 1 – Licence and Licence Authorisation

2.1 Summary of Findings

Clause 1.9.1 – Non-Compliant

This clause requires Sydney Water to set the level of fees, charges and other amounts payable for its Services subject to the terms of the Licence, the Act and the maximum prices and methodologies determined by IPART.

Sydney Water has declared non-compliance in respect of this sub-clause. It has collected capital contributions for the Oran Park/Turner Road scheme without a registered Development Servicing Plan being in place, and without seeking Treasurer approval to charge a price that (in its view) was very likely less than the maximum price under the relevant methodology. Although non-compliances that occurred in 2009 and 2010 have been previously reported, Sydney Water has now identified that further non-compliances have occurred in the subsequent period, including during 2015/16.

Sydney Water also advised that the previously identified non-compliance in respect of the Hoxton Park developer service charges had continued during the audit period. The previous recommendation (Recommendation 2014/15-1) has now been addressed, although the required actions were not finalised until after the audit period.

Apart from the declared non-compliances in respect of the Hoxton Park and Oran Park/Turner Road developments, the auditor confirmed (by sample calculation) that Sydney Water has set the level of fees, charges, and other amounts payable for its services in a manner consistent with the relevant IPART price determinations.

Detailed assessment in respect to this sub-clause is presented in **Table A.1.1** (refer **Appendix A**).

Recommendation 2014/15-1 – Addressed

This previous recommendation requires Sydney Water to complete, register and apply the Development Servicing Plan for Hoxton Park. Sydney Water is also required to ensure that it publicly reports on its compliance with its Price determinations each year in its annual report (by 30 June 2016).

This recommendation has been addressed. Sydney Water demonstrated that it has now completed and registered (on 23 August 2016) the Hoxton Park Development Servicing Plan, and obtained the Treasurer's approval to charge less than the maximum price. It has also demonstrated that the Plan is being applied by advising developers, to whom a Notice of Requirements (which sets out requirements with which a developer must comply, including the charges that must be paid) had previously been issued, of the resultant changes to capital contributions.

Sydney Water also demonstrated that non-compliance with its Price determinations was reported in its 2014/15 Annual Report and is again being reported in its 2015/16 Annual Report (which will be tabled in late-November 2016).

It is noted that there remain a number of outstanding Notice of Requirements issued with the non-compliant capital contributions. Sydney Water will continue to report these further non-compliances until those Notices of Requirements are finalised. Sydney Water is endeavouring to constrain any further impact to the 2016/17 financial year.

Detailed assessment in respect to this previous recommendation is presented in **Table A.1.2** (refer **Appendix A**).

2.2 Recommendations

The following recommendation is made in respect of this section of the *Operating Licence*:

- **REC-2015/16-01:** Sydney Water should complete, register and apply the Development Servicing Plan for the Oran Park/Turner Road development.

2.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of this section of the *Operating Licence*.

3. Operating Licence Section 2 – Water Quality

3.1 Summary of Findings

Clause 2.1.1 – Full Compliance

This clause requires Sydney Water to maintain a Management System that is consistent with the *Australian Drinking Water Guidelines* (ADWG), except to the extent that NSW Health specifies otherwise.

Sydney Water has developed the Drinking Water Management Manual (DWMM) as a comprehensive document that closely follows the structure and content of the twelve (12) elements of the ADWG. The result is a drinking water quality management system that, in all key respects, is tailor-made to comprehensively address every requirement of the ADWG that is relevant to Sydney Water's operations.

To be consistent with the ADWG, a drinking water management system not only requires a comprehensive, overarching document such as the DWMM, but also a range of high level supporting documentation. Sydney Water has recognised this need through the development or updating of a hierarchy of strategic documents that support the DWMM. These include:

- Compliance Accountability Framework;
- Risk Management framework;
- Drinking Water Product Specification;
- Annual Drinking Water Quality Monitoring Plan;
- Non-conformance, Corrective and Preventive Action procedures;
- Incident Response Plan;
- Document and Records Management Processes;
- Assurance and Monitoring (Audit and Inspections) Process; and
- Drinking Water Improvement Framework.

Through reference to these and other, more specific policies and procedures, Sydney Water was able to demonstrate that it has developed and maintained its Drinking Water Management System to be consistent with the ADWG.

Detailed assessment in respect to this sub-clause is presented in **Table A.2.1** (refer **Appendix A**).

Clause 2.1.2 – Full Compliance

This clause requires Sydney Water to ensure that the Drinking Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Drinking Water Quality Management System, and to the satisfaction of NSW Health.

From the observations made in undertaking this audit, the auditors found no grounds to suggest that the Drinking Water Quality Management System was not fully implemented and all relevant activities are carried out in accordance with the System.

Sydney Water has devoted considerable energy and resources to apply the principles of the ADWG both in spirit and in practice.

Detailed assessment in respect to this sub-clause is presented in **Table A.2.2** (refer **Appendix A**).

Clause 2.2.1 – Full Compliance

This clause requires Sydney Water to maintain a Management System that is consistent with the *Australian Guidelines for Water Recycling* (AGWR), except to the extent that NSW Health specifies otherwise.

Sydney Water has developed the Recycled Water Management Manual (RWMM) and scheme-specific Recycled Water Quality Management Plans (RWQMPs). Together, these documents constitute a comprehensive recycled water quality management system package that closely follows the structure and content of the twelve (12) elements of the AGWR. The result is a recycled water quality management system that, in all key respects, is tailor-made to comprehensively address every requirement of the AGWR that is relevant to Sydney Water's operations.

To be consistent with the AGWR, a recycled water management system not only requires a comprehensive, overarching package such as the RWMM and the separate RWQMPs, but also a range of high level supporting documentation. Sydney Water has recognised this need through the development or updating of a hierarchy of strategic documents that support the overarching package (RWMM and RWQMPs). These include:

- Compliance Accountability Framework;
- Risk Management framework;
- Recycled Water Product Specification;
- Annual Recycled Water Quality Monitoring Plan;
- Non-conformance, Corrective and Preventive Action procedures;
- Incident Management Plan;
- Document and Records Management Processes;
- Audit Plan; and
- Product Improvement Framework.

Through reference to these and other, more specific policies and procedures, Sydney Water was able to demonstrate that it has developed and maintained its Recycled Water Management System to be consistent with the AGWR.

Detailed assessment in respect to this sub-clause is presented in **Table A.2.4** (refer **Appendix A**).

Clause 2.2.2 – High Compliance

This clause requires Sydney Water to ensure that the Recycled Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Recycled Water Quality Management System, and to the satisfaction of NSW Health.

A number of implementation shortcomings were identified in the report on the 2014/15 Operational Audit. Sydney Water has risen to the challenge presented by this feed-back and embarked on a concerted effort to identify and analyse the short-comings and prepare strategies to address these appropriately.

Work was required to improve the risk assessment process by removing inconsistencies from the Hazard Identification and Risk Assessment (HIDRA) process, obtaining approval from NSW Health for these improvements and carrying them through the RWQMP revision program; this has been achieved. The documentation system was not being adequately implemented; this has been rectified. An audit program to assess operational effectiveness and compliance has been introduced.

The consistency of RWQMPs has also been improved by:

- formalisation of Critical Control Points (CCPs) in the Product Specification;
- development of a system-wide operational and verification monitoring plan; and
- implementation of system-wide operating, maintenance and calibration procedures.

A program to revise existing scheme specific Recycled Water Quality Management Plans (RWQMP) was developed and applied. A detailed LRV (log reduction value) verification monitoring program has been developed, agreed with NSW Health, and is being implemented as part of the program. While Sydney Water has made significant gains in reducing the backlog, some work is still outstanding.

The grade of High Compliance is not a reflection of poor performance; rather it is an acknowledgement that work remains to be done and the implementation of the Recycled Water Management System review program is not yet complete.

Detailed assessment in respect to this sub-clause is presented in **Table A.2.5** (refer **Appendix A**).

Recommendation 2013/14-1 – Addressed

This previous recommendation requires Sydney Water to maintain an ongoing commitment to the review and update of its Recycled Water Quality Management Plans via the four-year rolling program agreed with NSW Health.

To ensure that all RWQMPs were reviewed every four years, Sydney Water separated the program to conduct a major review of each plan from the ongoing program in place to conduct LRV verification monitoring for each scheme. Of the fourteen (14) schemes for which the RWQMP risk assessment needed to be reviewed and updated, nine (9) were completed within the audit period and the remaining five (5) were completed by the time of the audit interviews. These five updated RWQMPs have been reviewed and await submission to NSW Health.

Final RWQMP updates, including LRV verification monitoring, have been completed for five (5) schemes, three (3) of which were completed during the audit period. NSW Health has acknowledged satisfaction with the status of the review and update program for RWQMPs (this notification was received outside the audit period).

Both the review and update of RWQMP risk assessments and the detailed LRV verification monitoring program are now being conducted consistent with the four-year rolling plan agreed with NSW Health, with all RWQMPs having been updated in all respects except for the LRV verification monitoring at the time of the audit. Given that the LRV verification monitoring is now being addressed under a separate recommendation (Recommendation 2014/15-4), this recommendation (Recommendation 2013/14-1) is assessed as having been addressed.

Detailed assessment in respect to this previous recommendation is presented in **Table A.2.7** (refer **Appendix A**).

Recommendation 2014/15-2 – Addressed

This previous recommendation requires Sydney Water to develop organisation wide controls for use in recycled water quality management (including linkages between controls and personnel responsibilities). Organisation wide controls should be implemented within individual Scheme Recycled Water Quality Management Plans (by 30 June 2017).

The auditors confirmed that the Recycled Water Product Specification identifies the appropriate level of organisation-wide controls and identifies controls for individual schemes in the appendices. Controls are also defined in the RWQMPs. The auditors found evidence that these controls were being implemented. Accordingly, it is assessed that this recommendation has been addressed.

Detailed assessment in respect to this previous recommendation is presented in **Table A.2.8** (refer **Appendix A**).

Recommendation 2014/15-3 – Addressed

This previous recommendation requires Sydney Water to review recycled water management risk assessment procedures to ensure consistent application of HIDRA risk matrix and consequence key across the organisation (by 30 June 2017).

The auditor has been provided with material from the Wollongong RWQMP workshop. This material, which was initially developed for the Liverpool RWQMP, and includes an explanation of the application of the HIDRA risk matrix and consequence key, has been deemed as satisfactory by NSW Health. This material was applied at subsequent workshops to ensure consistent application of HIDRA risk matrix and consequence key across the organisation. Accordingly, it is assessed that this recommendation has been addressed.

Detailed assessment in respect to this previous recommendation is presented in **Table A.2.9** (refer **Appendix A**).

Recommendation 2014/15-4 – Ongoing

This previous recommendation requires Sydney Water to review recycled water monitoring requirements in consultation with NSW Health to confirm that all validated UV units are operating within their UVT validation envelope, appropriate to the dose monitoring strategy in place (by 30 June 2017).

Sydney Water has demonstrated that, at the Rouse Hill scheme, the validated UV units are operated within their UVT validation envelope, and that the LRV verification (including the LRV for UV components) has demonstrated that all pathogens are removed or inactivated. Similar verification monitoring has been completed at Liverpool, Wollongong Stage 1 and 2 and Castle Hill.

This work is progressing well and progress to date has been acknowledged as satisfactory by NSW Health; however, the program agreed with NSW Health will not be completed until March 2018. Accordingly, action in respect of this recommendation is assessed to be ongoing.

Detailed assessment in respect to this previous recommendation is presented in **Table A.2.10** (refer **Appendix A**).

Recommendation 2014/15-5 – Addressed

This previous recommendation requires Sydney Water to establish and implement review frequencies for each action within the Australian Guidelines for Water Recycling Framework for both the Recycled Water Management Manual and Scheme Recycled Water Quality Management Plans (by 30 September 2016).

The auditor noted that the Document Management Procedure has been amended and a notice has been included in the procedure to ensure that documents are correctly entered in the Document Management System to ensure that system-generated review dates are accurate. Accordingly, it is assessed that this recommendation has been addressed.

Detailed assessment in respect to this previous recommendation is presented in **Table A.2.11** (refer **Appendix A**).

3.2 Recommendations

There are no new recommendations in respect of this this section of the *Operating Licence*. Whilst a High Compliance grade is assessed in respect of sub-clause 2.2.2, the deficiencies are addressed by previous recommendation 2014/15-4, action in respect of which has been assessed to be Ongoing (refer **Section 3.1**).

3.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of this section of the *Operating Licence*.

4. Operating Licence Section 3 – Water Quantity

4.1 Summary of Findings

Clause 3.2.1 – Full Compliance

This Clause requires that, by 1 November 2015, Sydney Water must submit a report outlining its approach to, and principles for, developing a methodology for determining its economic level of water conservation to IPART for approval.

Notwithstanding that the report was subsequently revised prior to being approved, Sydney Water demonstrated that it had submitted a report addressing these requirements to IPART for approval prior to 1 November 2015.

Detailed assessment in respect to this sub-clause is presented in **Table A.3.1** (refer **Appendix A**).

Clause 3.2.5 – Full Compliance

This clause requires Sydney Water to maintain the Water Usage Level at less than 329 litres per person per day; ensure that the Water Leakage Level does not exceed 121 megalitres per day; and promote, foster and encourage the efficient use of water and the production and use of Recycled Water.

Sydney Water demonstrated that during 2015/16, it had:

- achieved a Water Usage Level of 293 litres per day (ie. less than the 329 litres per person per day limit);
- achieved a Water Leakage Level of 103 megalitres per day (ie. less than the 121 megalitres per day limit);
- continued to promote, foster and encourage the efficient use of water through programs such as PlumbAssist and WaterFix; and
- continued to promote the production and use of recycled water, subject to case-by-case assessment of feasibility.

Detailed assessment in respect to this sub-clause is presented in **Table A.3.2** (refer **Appendix A**).

4.2 Recommendations

No recommendations are made in respect of this section of the *Operating Licence*.

4.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of this section of the *Operating Licence*.

5. Operating Licence Section 4 – Assets

5.1 Summary of Findings

Clause 4.1.5 – Full Compliance

This clause requires Sydney Water to continue to maintain and implement the *Asset Management Framework* whilst transitioning to an ISO 55001:2014 compliant *Asset Management System*. IPART must be notified of any significant change to the *Asset Management Framework* that does not assist the transition to the *Asset Management System*.

Sydney Water demonstrated that it had continued to maintain and implement its *Asset Management Framework* whilst developing and transitioning its asset management practices into an Asset Management System consistent with ISO 55001:2014. The *Asset Management Improvement Plan* being implemented by Sydney Water is aimed at addressing five principal areas: Customer Focussed Asset Solutions; Asset Knowledge Management; Risk Management; Service and Cost; and Standardisation.

Assessment of the field implementation of asset management practices at Prestons Maintenance depot revealed that field personnel have a clear, well-founded understanding of their roles and responsibilities and effectively fulfil their asset management role. This was reinforced by inspection of the Orchard Hills Water Treatment Plant and Cronulla Wastewater Treatment Plant.

Although there was considerable activity in improving Sydney Water's approach to asset management during the audit period, there was no requirement to report any changes to the *Asset Management Framework* to IPART. All changes contributed to the development of an ISO 55001:2014 compliant *Asset Management System*.

Detailed assessment in respect to this sub-clause is presented in **Table A.4.1** (refer **Appendix A**).

Recommendation 2013/14-4 – Addressed

This previous recommendation requires Sydney Water to ensure that document control is implemented across the organisation for all key documents relating to its services and activities covered by the Operating Licence.

This recommendation is assessed as having been addressed. Sydney Water demonstrated that it has improved the management and control of its key documents, and continues to do so. Sydney Water's BMIS (*Business Management Information System*) is the principal document management system for its ISO-based management system documents (which include Procedures, Policies, Work Instructions, Templates, Forms Audits and Action Request related documents). Records indicate that the currency of documents managed within the BMIS had increased to more than 90 percent by June 2016, consistent with Sydney Water's adopted target. The *Sydney Water Information Management System* (SWIM) remains the overarching document management system employed by Sydney Water, of which the BMIS is a specific component.

Whilst there remains some opportunity for improvement, it is apparent that Sydney Water is implementing document control in respect of key management system documents across the organisation. Furthermore, knowledge processes and practices are being documented, reviewed and approved with appropriate signoff.

Detailed assessment in respect to this previous recommendation is presented in **Table A.4.2** (refer **Appendix A**).

Recommendation 2014/15-6 – Addressed

This previous recommendation requires Sydney Water to implement measures relating to obtaining asset information to ensure that mechanical and electrical asset data quality and coverage for works completed by contractors provides sufficient detail to maintain robust asset inventories and support asset planning, replacement and other business needs.

Sydney Water has introduced new arrangements for the capture of data in relation to mechanical and electrical asset renewals. These arrangements include the use of mobile devices for data capture and the introduction of key performance indicators (KPIs) as a means of monitoring performance. A data recovery program was implemented during 2015/16 to capture missing historical data.

On the basis of the action taken, and Sydney Water's longer term plans for the management of asset information, this recommendation is deemed to have been addressed.

Detailed assessment in respect to this previous recommendation is presented in **Table A.4.3** (refer **Appendix A**).

Recommendation 2014/15-7 – Addressed

This previous recommendation requires Sydney Water to review its asset knowledge requirements and commence programs of work to improve the integrity of its data.

On the basis that a program of work has commenced (as required by the recommendation), this recommendation is deemed to have been addressed; however, given the forecast timeline for the project it would be prudent to continue monitoring progress.

Detailed assessment in respect to this previous recommendation is presented in **Table A.4.4** (refer **Appendix A**).

5.2 Recommendations

No recommendations are made in respect of this section of the *Operating Licence*.

5.3 Opportunities for Improvement

The following opportunities for improvement have been identified in respect of this section of the *Operating Licence*:

- **OFI-2015/15-01:** Sydney Water should consider the capture of asset condition as part of work order completion.

- **OFI-2015/16-02:** It is suggested that, as part of the document review process, action is taken to ensure consistency between review dates recorded in the BMIS and those recorded in the individual documents.

6. Operating Licence Section 5 – Customers and Consumers

6.1 Summary of Findings

Clause 5.2.4 – Non-Compliant

This clause requires Sydney Water to advertise in a Sydney-based newspaper at least annually on the types of account relief available for Customers experiencing financial hardship, and the rights of Customers to claim rebates and the conditions that apply to those rights.

Sydney Water has declared non-compliance in respect of this sub-clause. Whilst the requisite newspaper advertisements were placed on 27 July 2016, this lies outside of the audit period, and more specifically means that they were not placed “at least annually” as required under this obligation. A recommendation in respect of this issue is presented in **Section 6.2**.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.1** (refer **Appendix A**).

Clause 5.3.1 – Full Compliance

This clause requires Sydney Water to extend its obligations under the *Customer Contract* relating to complaint handling and complaint resolution to Consumers as if Consumers were parties to the *Customer Contract*.

Definitions/terminology presented in Sydney Water’s *Complaints Policy* and *Customer Complaint Procedure* provide documentary evidence that Sydney Water extends its obligations in respect of complaint handling and complaint resolution to consumers as if they were parties to the *Customer Contract*. An explanation of the approach adopted by Sydney Water’s Contact Centre (ie. no discrimination is exercised in relation to the source of any complaint) aligns with the documented position.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.2** (refer **Appendix A**).

Clause 5.4.1 – Full Compliance

This clause requires Sydney Water to maintain and fully implement arrangements for assisting residential customers who are experiencing financial hardship to better manage their current and future bills.

Sydney Water provided evidence to demonstrate that it has maintained and fully implemented arrangements for assisting residential customers who are experiencing financial hardship to better manage their current and future bills. These arrangements, which are summarised in the *Payment Assistance Policy*, include both Government funded and Sydney Water sponsored programs. They include, but are not limited to, payment assistance plans.

There is a policy and procedures are in place for identifying the circumstances under which Sydney Water may disconnect or restrict the supply of water; these documents emphasise the need to exhaust all debt recovery approaches that must be exhausted before action is taken to disconnect or restrict a service.

Sydney Water is proactive in ensuring the robustness of its payment assistance team (case managers), thereby ensuring a high standard of service in implementing its *Payment Assistance Policy*.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.3** (refer **Appendix A**).

Clause 5.4.4 – Full Compliance

This clause requires Sydney Water to make an explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment available on its website.

The auditors confirmed that an explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment is available on Sydney Water's website and that copies of the *Payment Assistance Policy* and a *Payment Assistance Program Summary* are available for downloading.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.4** (refer **Appendix A**).

Clause 5.5.1 – Full Compliance

This clause requires Sydney Water to regularly consult with organisations representing a broad cross-section of its Customers and Consumers through the Customer Council.

Sydney Water demonstrated that, during the audit period, it regularly consulted with its Customer Council, which represents a broad cross-section of its customers and consumers. Consultation is achieved through quarterly meetings as well as out of session involvement in relevant workshops, forums and meetings, and through a secure on-line discussion forum.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.5** (refer **Appendix A**).

Clause 5.5.2 – Full Compliance

This clause requires Sydney Water to use the Customer Council to obtain advice on the interests of Sydney Water's customers and consumers, the *Customer Contract* and such other key issues related to Sydney Water's planning and operations as Sydney Water may determine.

Sydney Water demonstrated that, during the audit period, it had consulted with the Customer Council in respect of a range of issues including (for example) a review of the *Customer Council Charter*, the Economic Level of Water Conservation, and the disposal of surplus property.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.6** (refer **Appendix A**).

Clause 5.5.3 – Full Compliance

This clause requires Sydney Water to ensure that membership of the Customer Council is appointed in accordance with the *Customer Council Charter*, and that Sydney Water has used its best endeavours to include representatives of the nominated categories.

Current membership of the Customer Council is such that all nominated interest groups are represented with the exception of indigenous Australians. Sydney Water demonstrated that it had used its best endeavours to include a suitable representative, having approached a number of relevant interest groups. Furthermore, it demonstrated that its action in seeking new members and replacing retiring members of the Customer Council had been consistent to the provisions of the *Customer Council Charter* in respect of membership vacancies.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.7** (refer **Appendix A**).

Clause 5.5.4 – Full Compliance

This clause requires Sydney Water and the Customer Council to maintain a *Customer Council Charter* that addresses a number of specific issues.

Sydney Water advised that it had revised its *Customer Council Charter* during the audit period, with the revised version being endorsed at the September 2015 meeting of the Customer Council. Review of the *Charter* confirms that it addresses all of the required issues. The Customer Council continued to operate in accordance with the revised provisions of the *Customer Council Charter*.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.8** (refer **Appendix A**).

Clause 5.5.5 – Full Compliance

This clause requires Sydney Water to provide the Customer Council with information in its possession or under its control necessary to enable the Customer Council to discharge the tasks assigned to it.

Sydney Water demonstrated that it had provided the Customer Council with information necessary to enable the Customer Council to discharge the tasks assigned to it. Information is provided as meeting papers, in presentations to Customer Council meetings, via the Sydney Water talk on-line closed discussion forum for Customer Council members or via email. Sydney Water is guided by the provisions of the *Government Information (Public Access) Act* in relation to the disclosure of information that may be deemed confidential.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.9** (refer **Appendix A**).

Clause 5.5.6 – Full Compliance

This clause requires Sydney Water to make copies of the *Customer Council Charter* and minutes from proceedings of the Customer Council available on its website and from the Contact Centre upon request.

The auditors confirmed that a copy of the *Customer Council Charter* and minutes of Customer Council meetings are available for downloading on the Sydney Water website. Sydney Water explained the mechanisms now in place to enable customers to request copies of these documents via the Contact Centre, which are considered appropriate.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.10** (refer **Appendix A**).

Clause 5.6.1 – Full Compliance

This clause requires Sydney Water to maintain a Complaints Handling Procedure for receiving, responding to and resolving Complaints, which is consistent with *AS/NZS 10002:2014 Customer satisfaction – Guidelines for complaints handling in organizations*.

Sydney Water demonstrated that the complaint handling procedure is consistent with AS/NZS 10002:2014. The *Customer Complaint Procedure* has been certified as compliant with the requirements of ISO/AS 10002:2006, and Sydney Water demonstrated that there were no

significant differences between the requirements of ISO/AS 10002:2006 and AS/NZS 10002:2014 that would necessitate revision of the procedure.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.11** (refer **Appendix A**).

Clause 5.6.2 – Full Compliance

This clause requires Sydney Water to ensure that the Internal Complaints Handling Procedure is fully implemented and that all relevant activities are carried out in accordance with the procedure.

Sydney Water demonstrated that it continued to implement its *Customer Complaint Procedure* throughout the audit period. Review of a sample of complaint records revealed that they had been effectively managed, whilst an extract from the Customer Management System (CMS) indicated that 195 complaints were open as at 1 September 2015.

Performance statistics indicate that a total of 4,299 water and sewerage related complaints were received during 2015/16, with 88.9 percent closed within 10 working days. This indicates that the *Customer Complaint Procedure* is being implemented.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.12** (refer **Appendix A**).

Clause 5.6.3 – Full Compliance

This clause requires Sydney Water to provide information concerning the Internal Complaints Handling Procedure to customers at least annually with their bills.

Sydney Water demonstrated that, during the audit period, it had provided information concerning the internal complaints handling procedure to customers with their bills during the August-October 2015 billing cycles. Information was provided both in the Waterwrap newsletter (residential customers), Business Update (non-residential customers) and the “Our contract with you” brochure.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.13** (refer **Appendix A**).

Clause 5.6.4 – Full Compliance

This clause requires Sydney Water to make information concerning the Internal Complaints Handling Procedure available on its website and from the Contact Centre upon request.

The auditors confirmed that a copy of the “Our contract with you”, which provides information regarding internal complaints handling, is available for downloading on the Sydney Water website. Sydney Water explained the mechanisms now in place to enable customers to request copies of these documents via the Contact Centre, which are considered appropriate.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.14** (refer **Appendix A**).

Clause 5.7.1 – Full Compliance

This clause requires Sydney Water to be a member of the Energy & Water Ombudsman NSW (EWON) to facilitate the resolution, by a dispute resolution body, of disputes between Sydney Water and its Customers and Consumers.

Review of the “Water providers” webpage on the Energy & Water Ombudsman NSW website confirms that Sydney Water subscribes to the complaint management services provided by the Ombudsman.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.15** (refer **Appendix A**).

Clause 5.7.2 – Full Compliance

This clause requires Sydney Water to prepare a pamphlet that explains the operation of the dispute resolution service provided by the Energy & Water Ombudsman NSW; to provide a copy to customers at least annually with their bills; and to make the pamphlet available on its website and from the Contact Centre upon request.

Sydney Water demonstrated that, during the audit period, it had provided information concerning the dispute resolution service provided by the Energy & Water Ombudsman NSW to customers with their bills during the August-October 2015 billing cycles. Information was provided both in the Waterwrap newsletter (Business update for non-residential customers) and the “Our contract with you” brochure.

The auditors confirmed that a copy of the “Our contract with you” is available for downloading on the Sydney Water website. Sydney Water explained the mechanisms now in place to enable customers to request copies of these documents via the Contact Centre, which are considered appropriate.

Detailed assessment in respect to this sub-clause is presented in **Table A.5.16** (refer **Appendix A**).

6.2 Recommendations

The following recommendation is made in respect of this section of the *Operating Licence*:

- **REC-2015/16-02:** Sydney Water should develop and implement a procedure (or process) to ensure that it advertises in a Sydney-based newspaper at least once each year on:
 - a) the types of account relief available for Customers experiencing financial hardship; and
 - b) rights of Customers to claim rebates and the conditions that apply to those rights.

6.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of this section of the *Operating Licence*.

7. Operating Licence Section 6 – Environment

7.1 Summary of Findings

Clause 6.1.1 – Full Compliance

This clause requires Sydney Water to maintain a Management System certified to *Australian Standard AS/NZS ISO 14001:2004: Environmental Management Systems – Requirements with guidance for use*.

The auditors reviewed Sydney Water's current certificate of accreditation to AS/NZS ISO 14001:2004 and an extract from the Post Certification (Surveillance) Audit conducted during March 2016. Sydney Water is progressing towards certification to the current standard, ISO 14001:2015, and expects that certification will be obtained by March 2017.

Detailed assessment in respect to this sub-clause is presented in **Table A.6.1** (refer **Appendix A**).

Clause 6.1.2 – Full Compliance

This clause requires Sydney Water to fully implement, and carry out all relevant activities in accordance with, the Environmental Management System.

Sydney Water successfully completed an Environmental Management System (EMS) surveillance audit against AS/NZS ISO 14001:2004 in March 2016. This surveillance audit found that the Sydney Water EMS was well implemented throughout the organisation.

Detailed assessment in respect to this sub-clause is presented in **Table A.6.2** (refer **Appendix A**).

Clause 6.1.4 – Full Compliance

This clause requires Sydney Water to provide IPART with a report on the outputs of the Environmental Management System.

The auditors confirmed that a report was provided to IPART on 1 October 2015, the date required by the Reporting Manual.

Detailed assessment in respect to this sub-clause is presented in **Table A.6.3** (refer **Appendix A**).

Clause 6.2.1 – Full Compliance

This clause requires Sydney Water to prepare indicators of the direct impact on the environment of its activities, monitor and compile data on these indicators, and report on the indicators.

Sydney Water demonstrated that it has prepared indicators of the impact of its activities on the environment, monitored and compiled data on these indicators, and reported on the indicators by 1 October 2015, in accordance with the Reporting Manual.

Detailed assessment in respect to this sub-clause is presented in **Table A.6.4** (refer **Appendix A**).

7.2 Recommendations

No recommendations are made in respect of this section of the *Operating Licence*.

7.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of this section of the *Operating Licence*.

8. Operating Licence Section 8 – Performance Monitoring

8.1 Summary of Findings

Clause 8.2.1 – Full Compliance

This clause requires Sydney Water to comply with its reporting obligations as set out in the *Reporting Manual*.

Sydney Water demonstrated that it had fulfilled its reporting obligations in respect of annual, periodic and intermittent reporting during the audit period. More specifically, it had submitted the required reports in accordance with the required timelines and had made the necessary reports available via its website.

Detailed assessment in respect to this sub-clause is presented in **Table A.7.1** (refer **Appendix A**).

Clause 8.2.2 – Full Compliance

This clause requires Sydney Water to maintain sufficient records to enable it to report accurately in accordance with its reporting obligations as set out in the *Reporting Manual*.

Sydney Water was able to demonstrate, based on a sample of reporting obligations (specifically the *Quarterly Drinking Water Quality Monitoring Report* and IPART Indicators C12 and C13), that it has sufficient record systems and processes in place to enable it to report accurately on its performance against the requirements specified in the *Reporting Manual*. Whilst Indicator C12 was incorrectly reported, this was due to the incorrect interpretation of the indicator definition, not a failure of the records systems.

Detailed assessment in respect to this sub-clause is presented in **Table A.7.2** (refer **Appendix A**).

8.2 Recommendations

No recommendations are made in respect of this section of the *Operating Licence*.

8.3 Opportunities for Improvement

The following opportunity for improvement has been identified in respect of this section of the *Operating Licence*:

- **OFI-2015/16-03:** It is suggested that Sydney Water should ensure that it reviews and fully understands the definitions of its IPART performance indicators and seeks clarification from IPART in the event of any ambiguity.

9. Operating Licence Section 9 – Memorandum of Understanding

9.1 Summary of Findings

Clause 9.1.1 and 9.1.2 – Full Compliance

These clauses require Sydney Water to maintain the memorandum of understanding with NSW Health.

Sydney Water demonstrated that it had maintained a Memorandum of Understanding (MoU) with NSW Health during the audit period. Concerns raised by NSW Health in respect of public messaging in relation to water quality were effectively resolved under the provisions of the MoU, thereby demonstrating the provisions were working effectively.

Notwithstanding, two (2) opportunities for improvement in relation to internal communications and training have been identified for consideration by Sydney Water.

Detailed assessment in respect to this sub-clause is presented in **Table A.8.1** (refer **Appendix A**).

Clause 9.4.1 – Full Compliance

This clause requires Sydney Water to use its best endeavours to develop and enter into a memorandum of understanding with Fire and Rescue NSW (FRNSW) by 31 December 2015.

Sydney Water demonstrated that it had developed and entered into a Memorandum of Understanding (MoU) with Fire and Rescue NSW prior to 31 December 2015. The MoU, dated October 2015, was formally signed by both parties on 1 December 2015.

Detailed assessment in respect to this sub-clause is presented in **Table A.8.2** (refer **Appendix A**).

Clause 9.4.2 – Full Compliance

This clause requires that the Memorandum of Understanding between Fire and Rescue NSW and Sydney Water includes a number of specific requirements.

Sydney Water demonstrated that the Memorandum of Understanding (MoU) requires the establishment of a working group, comprised of representatives from Sydney Water and FRNSW, and identifies the matters that must be considered by the working group. Furthermore, it was demonstrated that a Fire Fighting Working Group (FFWG) has been established and is operating effectively; and that it has developed a program of work, which includes addressing the matters identified in the *Operating Licence*. Feedback indicates that implementation of the MoU and the establishment and operations of the FFWG has been of mutual benefit to both parties.

Detailed assessment in respect to this sub-clause is presented in **Table A.8.3** (refer **Appendix A**).

9.2 Recommendations

No recommendations are made in respect of this section of the *Operating Licence*.

9.3 Opportunities for Improvement

The following opportunities for improvement have been identified in respect of this section of the *Operating Licence*:

- **OFI-2015.16-04:** Sydney Water may wish to consider implementing internal training to ensure that its communications team is aware of its obligations under the provisions of the MoU with NSW Health.
- **OFI-2015/16-05:** Sydney Water may wish to consider implementing training in respect of the Framework for Managing Water Quality, consistent with the *Australian Drinking Water Guidelines* for some members of the communications team.

Appendix A Detailed Audit Findings

Detailed audit findings are presented in this Appendix.

A.1 Section 1 – Licence and Licence Authorisation

Table A.1.1 Pricing (Sub-clause 1.9.1)

Sub-clause	Requirement	Compliance Grade
1.9.1	Sydney Water must set the level of fees, charges, and other amounts payable for its Services subject to the terms of the Licence, the Act and the maximum prices and methodologies determined from time to time by IPART under the IPART Act.	<div style="background-color: red; height: 20px; width: 100%;"></div> Non-Compliant
Risk		Target for Full Compliance
Non-compliance with the requirements of this sub-clause poses a risk that Sydney Water is either overcharging its customers or failing to recover the costs of providing the service.		Evidence that Sydney Water had set the level of fees, charges and other amounts payable for its Services subject to the terms of the Licence, the Act and the maximum prices and methodologies determined by IPART
Evidence sighted		
<ul style="list-style-type: none"> ▪ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016. ▪ Email dated 23 September 2016 from Sydney Water to IPART regarding recycled water developer charges at Oran Park/Turner Road. ▪ Letter dated 27 October 2016 from Sydney Water to IPART regarding Recycled Water Developer Charges – Oran Park/Turner Road. ▪ Sydney Water, Fact Sheets: Prices for your home, Prices for your business, Commercial customers - Trade wastewater fees and charges, Industrial customers - Trade wastewater fees and charges, and Prices for other services ▪ IPART, <i>Prices for Sydney Water Corporation's water, sewerage, stormwater drainage and other services; From 1 July 2012 to 30 June 2016</i>, June 2012 [IPART 2012 Determination]. ▪ ABS website: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6401.0Sep%202012?OpenDocument, table 640102. ▪ Document: Pricing adjustments 2015-16. ▪ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016. ▪ IPART, <i>Pricing arrangements for recycled water and sewer mining Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council</i>, September 2006 [IPART 2006 Determination]. ▪ Letter dated 25 June 2014 from the Treasurer to Sydney Water approving Castlebrook stormwater charges. ▪ Letter dated 8 August 2013 from the Treasurer to Sydney Water approving reduction of the Rouse Hill Land Charge. ▪ Interviews with Sydney Water staff, 26-28 September 2016. 		

Summary of reasons for grade

Sydney Water has declared non-compliance in respect of the sub-clause. It has collected capital contributions for the Oran Park/Turner Road scheme without a registered Development Servicing Plan being in place, and without seeking Treasurer approval to charge a price that (in its view) was very likely less than the maximum price under the relevant methodology. Although non-compliances that occurred in 2009 and 2010 have been previously reported, Sydney Water has now identified that further non-compliances have occurred in the subsequent period, including during 2015/16.

Sydney Water also advised that the previously identified non-compliance in respect of the Hoxton Park developer service charges had continued during the audit period. The previous recommendation (Recommendation 2014/15-1) has now been addressed, although the required actions were not finalised until after the audit period (refer Table A.1.2).

Apart from the declared non-compliances in respect of Hoxton Park and Oran Park/Turner Road developments, the auditor confirmed (by sample calculation) that Sydney Water has set the level of fees, charges, and other amounts payable for its services in a manner consistent with the relevant IPART price determinations.

Discussion and notes

Sydney Water informed the auditors that it had recently notified IPART of an identified non-compliance in respect of this obligation. In an email dated 23 September 2016, Sydney Water advised (in respect of the Oran Park/Turner Road development):¹³

“Sydney Water is now aware that we have had a further non-compliance for the scheme relating to the levying of capital contributions in 2015-16. The non-compliance happened as a result of Sydney Water collecting capital contributions for the scheme without a registered DSP in place, and without seeking Treasurer approval to charge a price that was very likely less than the maximum price under the methodology. We understand that the noncompliance was limited to three notices issued under s74 of the Sydney Water Act 1994 and relate to 30 lots.”

Sydney Water subsequently advised IPART¹⁴ that, upon further investigation, it had found that eleven additional notices relating to approximately 90 allotments had been non-compliant in the period between 2009 and 2016 (non-compliances occurred in 2011, 2013, 2014, 2015 and 2016); it had previously reported non-compliances that occurred in 2009 and 2010. Sydney Water also noted that it has taken action to prevent any further non-compliance (internal system has been “flagged” to prevent additional Notices of Requirements being raised) and is seeking to prepare and register a Development Servicing Plan (DSP) for the Oran Park/Turner Road scheme in accordance with the 2006 IPART Determination.

Sydney Water also advised that the previously identified non-compliance in respect of the Hoxton Park Developer Service charges had continued during the audit period. The previous recommendation (Recommendation 2014/15-1) has now been addressed, although the required actions were not finalised until after the audit period (refer Table A.1.2 for further discussion).

Putting aside these declared non-compliances, Sydney Water referred to the relevant IPART pricing determinations and advised that:

“We set our 2015-16 prices according to the IPART determined methodology or maximum price, except for the Rouse Hill land charge, stormwater charges for Castlebrook cemetery and some developer charges as noted below. Sydney Water may charge a price below that determined by IPART, with Treasurer approval.

The 2012 Price Determination includes one methodology for setting charges for Minor Service Extensions (MSE). Sydney Water’s MSE policy is attached. Charges are calculated as required, in accordance with IPART’s methodology, using an in-house model. Access to this model can be provided, if desired.

¹³ Email dated 23 September 2016 from Sydney Water to IPART regarding recycled water developer charges at Oran Park/Turner Road.

¹⁴ Letter dated 27 October 2016 from Sydney Water to IPART regarding Recycled Water Developer Charges – Oran Park/Turner Road.

Sydney Water amends its prices each year to adjust for desalination costs and CPI. The Regulatory Modelling team in Customer, Strategy & Regulation calculates the increase and then provides the new prices to Customer Delivery. These charges are then published on Sydney Water's website."

Sydney Water noted that its prices are published on its website and provided copies of fact sheets that set out Prices for your home; Prices for your business; Commercial customers - Trade wastewater fees and charges; Industrial customers - Trade wastewater fees and charges; and Prices for other services.¹⁵

To assess application of the pricing arrangements set out in the IPART Determination,¹⁶ the auditors checked a sample of 2015/16 prices as published on the "Prices for your home" and "Prices for other services" fact sheet. In each case, the adjustment is made by applying a carbon-adjusted consumer price index (CPI) and an adjustment to reflect the actual cost of water supplied by the Sydney Desalination Plant, determined in accordance with the IPART Determination.¹⁷ Reference to the Australian Bureau of Statistics reveals the relevant CPI indices for March 2012 and March 2015 (as required); as the carbon tax was not introduced until 1 July 2012 and was repealed as of 1 July 2014, it will have had no impact on either the March 2012 or March 2015 indices.

The March 2012 and March 2015 consumer price indices were 99.9 and 106.8 respectively, leading to an effective price multiplier of 1.0691.¹⁸

The analysis summarised in the table below, which shows prices published by Sydney Water and the derivation of the price as determined using the methodology described in the IPART 2012 Determination, reveals that the prices have been correctly calculated.

Charge	Sydney Water Published ¹ (\$)	CPI Adjustment ²	IPART Base Price ³ (\$)	SDP Adjustment ⁴ (\$)	IPART Adjusted Price ⁵ (\$)	Ratio Sydney Water /IPART
Water Service Charge - metered	102.53	1.0691	96.40	-0.52	102.54	1.000
Water Service Charge - un-metered	512.38	1.0691	479.80	-0.52	512.42	1.000
Wastewater Service Charge	609.13	1.0691	569.82	-	609.18	1.000
Other - supply system diagram	125.28	1.0691	117.20	-	125.29	1.000
Other - Sydney Water hourly rate	139.05	1.0691	118.26	-	126.43	1.100 ⁶

Note:

- 1 Sydney Water published prices are the 2015/16 prices as published in fact sheets.
- 2 CPI adjustment is from March 2012 to March 2015, pursuant to the IPART 2012 Determination.
- 3 IPART Base Price is as published in the IPART 2012 Determination.
- 4 The Sydney Desalination Plant (SDP) adjustment is as computed by Sydney Water and has not been verified.
- 5 The IPART Adjusted Price is calculated as [(IPART Base Price x CPI Adjustment) + SDP Adjustment].
- 6 The ratio for the Sydney Water hourly rate is assumed to be due to the impact of GST on labour costs.

Sydney Water provided evidence (sign-off) that the 2015/16 prices had been checked internally and approved for use.¹⁹

In respect of developer charges, Sydney Water advised that:²⁰ "In 2015-16 our prices were set in accordance with the pricing determinations made by IPART." A comparison of the formula used to

¹⁵ Sydney Water, Fact Sheets: Prices for your home, Prices for your business, Commercial customers - Trade wastewater fees and charges, Industrial customers - Trade wastewater fees and charges, and Prices for other services

¹⁶ IPART, *Prices for Sydney Water Corporation's water, sewerage, stormwater drainage and other services; From 1 July 2012 to 30 June 2016*, June 2012 [IPART 2012 Determination].

¹⁷ IPART 2012 Determination, page 73.

¹⁸ ABS website: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6401.0Sep%202012?OpenDocument>, table 640102.

¹⁹ Document: Pricing adjustments 2015-16.

²⁰ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

determine the Hoxton Park Development Servicing Plan confirms that it is consistent with the relevant IPART determination.²¹

Sydney Water advised that:

- It had obtained approval from the Treasurer²² to reduce land charges in Rouse Hill land charges from \$969.21 to \$237 in 2013; 2015-16 Rouse Hill land use charges were charged in accordance with the reduced charge accordingly.
- In 2015-16, the Castlebrook cemetery development was charged a low impact stormwater drainage charge instead of the Rouse Hill stormwater drainage charge, as approved by the Treasurer in 2014.²³
- Recycled water usage charges for schemes other than Rouse Hill are charged in accordance with the relevant IPART determination,²⁴ ie. at 80 percent of the drinking water usage charge.

Based on the above assessment, it appears that apart from the declared non-compliances in respect of Hoxton Park and Oran Park/Turner Road developments, Sydney Water has set the level of fees, charges, and other amounts payable for its services in a manner consistent with the relevant IPART price determinations.

Recommendations

The following recommendation is made in respect of this sub-clause:

- **REC-2015/16-01:** Sydney Water should complete, register and apply the Development Servicing Plan for the Oran Park/Turner Road development.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.


²¹ IPART, *Pricing arrangements for recycled water and sewer mining Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council*, September 2006 [IPART 2006 Determination].

²² Letter dated 25 June 2014 from the Treasurer to Sydney Water approving Castlebrook stormwater charges.

²³ Letter dated 8 August 2013 from the Treasurer to Sydney Water approving reduction of the Rouse Hill Land Charge.

²⁴ IPART 2006 Determination, page 58.

Table A.1.2 Recommendation 2014/15-1 (Pricing – Sub-clause 1.9.1)

Reference	Requirement	Compliance Grade
2014/15-1	Sydney Water should complete, register and apply the Development Servicing Plan for Hoxton Park. Sydney Water should ensure that it publicly reports on its compliance with its Price determinations each year in its annual report (by 30 June 2016).	 Addressed

Risk	Target for Full Compliance
Failure to complete and register the Development Servicing Plan may result in Sydney Water incorrectly charging developers for contributions to the cost of providing infrastructure.	Evidence that the Development Servicing Plan for Hoxton Park has been completed, registered and applied, and that Sydney Water has publicly reported on it pricing compliance in its annual reports.

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Sydney Water, *Development Servicing Plan 2016, Hoxton Park Recycled Water System*, undated.
- Letter (undated) from NSW Treasurer to Sydney Water advising approval of the developer charge.
- IPART, *Pricing arrangements for recycled water and sewer mining: Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council*, September 2006.
- List of approved Development Servicing Plans at:
<https://www.ipart.nsw.gov.au/Home/Industries/Water/Legislation-registers/Government-Utility-Licensing-Development-Servicing-Plans/Sydney-Water-Corporation-Register-of-Development-Servicing-Plans>
- Letter (draft) to be sent to developers regarding Hoxton Park developer charges.
- Email dated 21 September 2016 from Sydney Water Competition and Licensing to Urban Growth team regarding Hoxton Park developer charges.
- Details regarding Notice of Requirements, available at:
<https://www.sydneywater.com.au/SW/plumbing-building-developing/developing/steps-for-first-time-developers/index.htm>
- Document: Copies of letters to developers re change of capital contributions to DSP charges.
- Email dated 7 November 2016 from Sydney Water to Cobbitty Consulting regarding SWC Operating Licence Audit - clause 1.9 Pricing - letters to developers.
- Document: Pricing excerpt_2016 Annual Report.docx.
- Sydney Water, Annual Report 2014-15, page 103.
- Interviews with Sydney Water staff, 26-28 September 2016.

Summary of reasons for grade

This recommendation has been addressed. Sydney Water demonstrated that it has now completed and registered (on 23 August 2016) the Hoxton Park Development Servicing Plan, and obtained the Treasurer's approval to charge less than the maximum price. It has also demonstrated that the Plan is being applied by advising developers, to whom a Notice of Requirements (which sets out requirements with which a developer must comply, including the charges that must be paid) had previously been issued,

of the resultant changes to capital contributions.

Sydney Water also demonstrated that non-compliance with its Price determinations was reported in its 2014/15 Annual Report and is again being reported in its 2015/16 Annual Report (which will be tabled in late-November 2016).

It is noted that there remain a number of outstanding Notice of Requirements issued with the non-compliant capital contributions. Sydney Water will continue to report these further non-compliances until those Notices of Requirements are finalised. Sydney Water is endeavouring to constrain any further impact to the 2016/17 financial year.

Discussion and notes

Sydney Water provided a detailed explanation of the action that has been taken in respect of this recommendation, as follows:²⁵

“Sydney Water has prepared a Development Servicing Plan for the Hoxton Park recycled water scheme in accordance with IPART’s Recycled Water Developer Charges, Determination No, 8 2006 (the 2006 Determination). In doing so we obtained approval from the NSW Treasurer under S18(2) of the Independent Pricing and Regulatory Tribunal Act 1992 to levy a charge that was below that calculated in accordance with the 2006 Determination.

IPART registered the charge, in accordance with the 2006 Determination, on 23 August 2016 with a date for Sydney Water to commence the new charge on 29 August 2016.

Sydney Water reported its non-compliance in the 2014-15 Annual Report. We will again report the non-compliance in the 2015-16 Annual Report as in that financial year Sydney Water raised a number of non-compliant capital contributions for the scheme. Those charges were levied during the process of Sydney Water seeking to determine the correct charge for the Hoxton Park scheme. These non-compliant charges were below that calculated in accordance with the 2006 Determination, so developers were no worse off by Sydney Water levying the non-compliant charge.

Even after the DSP is registered, there may be some instances of future non-compliances for Hoxton Park. This is due to the timing between the issue of the Notice of Requirements (issued under s74 of the Sydney Water Act 1994), which outlines the required payment of the capital contribution, the raising and payment of that invoice, and the issue of the Certificate of Compliance (issued under s73 of the Sydney Water Act). There are currently a number of outstanding Notice of Requirements issued with the non-compliant capital contribution. Sydney Water is working towards potentially limiting our non-compliance to 2016–17 by reissuing outstanding Notice of Requirements with a new compliant charge where possible.”

Sydney Water provided evidence to demonstrate that the actions described above had been taken, as follows:

- The Hoxton Park Development Servicing Plan²⁶ has been prepared and is available on the Sydney Water website, which provides information regarding the purpose of the developer contributions levied thereunder.
- The Treasurer approved the proposed developer charge,²⁷ which is less than the maximum determined in accordance with IPART’s 2006 Determination.²⁸
- Hoxton Park is included on the list of approved Development Servicing Plans on the IPART website.²⁹ This list shows that the Plan was implemented on 29 August 2016 (it was registered on 23 August 2016), as noted by Sydney Water.

²⁵ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

²⁶ Sydney Water, *Development Servicing Plan 2016, Hoxton Park Recycled Water System*, undated.

²⁷ Letter (undated) from NSW Treasurer to Sydney Water advising approval of the developer charge.

²⁸ IPART, *Pricing arrangements for recycled water and sewer mining; Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Woyong Shire Council*, September 2006.

²⁹ List of approved Development Servicing Plans at:

<https://www.ipart.nsw.gov.au/Home/Industries/Water/Legislation-registers/Government-Utility-Licensing-Development-Servicing-Plans/Sydney-Water-Corporation-Register-of-Development-Servicing-Plans>

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- A draft letter³⁰ to be issued to developers to correct the outstanding non-compliant capital contributions at Hoxton Park has been prepared and an internal request submitted to Sydney Water's Urban Growth team to issue the letters by 31 October 2016.³¹
 - Copies of letters to developers, to whom a Notice of Requirements³² had previously been issued, that had been sent on 24 October 2016.³³ It was noted that "... *due to the nature of three of the outstanding non-compliances we could not correct those by issuing the attached letter. We are now working to limit those non-compliances to the 2016-17 financial year through other means.*"³⁴

Sydney Water provided a draft excerpt,³⁵ which shows that the non-compliance during the 2015/16 financial year will be published, together with the pricing table, in the 2015/16 Annual Report when tabled at the end of November 2016. As noted above, the non-compliance was reported in the 2014/15 Annual Report.³⁶

Based on the evidence provided, this recommendation is considered to have been addressed. The Development Servicing Plan for Hoxton Park has been completed and registered, and Sydney Water has demonstrated that it is being applied by advising developers, to whom a Notice of Requirements had previously been issued, of the resultant changes to capital contributions. Sydney Water also demonstrated that it is publicly reporting on its non-compliance with its Price determinations in its 2015/16 Annual Report.

As noted by Sydney Water, there remain a number of outstanding Notice of Requirements issued with the non-compliant capital contributions. These will continue to be reported until those Notices of Requirements are finalised. Sydney Water is endeavouring to constrain any further impact to the 2016/17 financial year.

Recommendations

There are no further recommendations arising in respect of this previous recommendation.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this previous recommendation.

³⁰ Letter (draft) to be sent to developers regarding Hoxton Park developer charges.

³¹ Email dated 21 September 2016 from Sydney Water Competition and Licensing to Urban Growth team regarding Hoxton Park developer charges.

³² A "Notice of Requirements", which is issued under Section 74 of the *Sydney Water Act*, is a letter detailing the action that needs to be taken by a developer and the charges that must be paid before a Certificate of compliance will be issued pursuant to Section 73 of the *Sydney Water Act*. Further details can be obtained at: <https://www.sydneywater.com.au/SW/plumbing-building-developing/developing/steps-for-first-time-developers/index.htm>

³³ Document: Copies of letters to developers re change of capital contributions to DSP charges.

³⁴ Email dated 7 November 2016 from Sydney Water to Cobbitty Consulting regarding SWC Operating Licence Audit - clause 1.9 Pricing - letters to developers.

³⁵ Document: Pricing excerpt_2016 Annual Report.docx.

³⁶ Sydney Water, Annual Report 2014-15, page 103.

A.2 Section 2 – Water Quality

Table A.2.1 Drinking Water (Sub-clause 2.1.1)

Sub-clause	Requirement	Compliance Grade
2.1.1	<p>Sydney Water must maintain a Management System that is consistent with the <i>Australian Drinking Water Guidelines</i>, except to the extent that NSW Health specifies otherwise (the Drinking Water Quality Management System).</p> <p><i>[Note: Sydney Water is to implement the Drinking Water Quality Management System to the Drinking Water system under its control in light of its knowledge of the entire drinking water supply system (from the water catchment to the Consumer).</i></p> <p><i>It is expected that the Drinking Water Quality Management System will be consistent with the Framework for Management of Drinking Water Quality. However, where NSW Health considers it appropriate, the application of the Australian Drinking Water Guidelines may be amended or added to, to take account of Sydney Water's circumstances and/or Drinking Water quality policy and practices within New South Wales.]</i></p>	<div></div> <p>Full Compliance</p>
<hr/>		
Risk	Target for Full Compliance	
Without a comprehensive and effectively implemented Drinking Water Quality Management System, there is a high risk that Sydney Water may not be able to effectively manage risks to drinking water quality and protect public health.	Evidence that a Drinking Water Quality Management System is established, maintained and kept up to date, and that it is consistent with the ADWG, and any additional requirements of NSW Health.	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">Refer to Table A.2.3 for details of evidence sighted.		
<hr/>		
Summary of reasons for grade		
<p>Sydney Water has developed the Drinking Water Management Manual (DWMM) as a comprehensive document that closely follows the structure and content of the 12 elements of the <i>Australian Drinking Water Guidelines</i> (ADWG). The result is a drinking water quality management system that, in all key respects, is tailor-made to comprehensively address every requirement of the ADWG that is relevant to Sydney Water's operations.</p> <p>To be consistent with the ADWG, a drinking water management system not only requires a comprehensive, overarching document such as the DWMM, but also a range of high level supporting documentation. Sydney Water has recognised this need through the development or updating of a hierarchy of strategic documents that support the DWMM. These include:</p> <ul style="list-style-type: none">Compliance Accountability Framework;Risk Management framework;Drinking Water Product Specification;Annual Drinking Water Quality Monitoring Plan;Non-conformance, Corrective and Preventive Action procedures;Incident Response Plan;		

-
- Document and Records Management Processes;
 - Assurance and Monitoring (Audit and Inspections) Process; and
 - Drinking Water Improvement Framework.

Through reference to these and other, more specific policies and procedures, Sydney Water was able to demonstrate that it has developed and maintained its Drinking Water Management System to be consistent with the ADWG.

Discussion and notes

This clause requires Sydney Water to maintain a Drinking Water Quality Management System that is consistent with ADWG (consistency). Sub-clause 2.1.2 requires that that this Drinking Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the System, and to the satisfaction of NSW Health (implementation).

To assist the reader, a combined discussion of the 12 elements of the ADWG is presented in Table A.2.3, which discusses both consistency with the ADWG and the implementation of the Drinking Water Quality Management System.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.2.2 Drinking Water (Sub-clause 2.1.2)

Sub-clause	Requirement	Compliance Grade
2.1.2	Sydney Water must ensure that the Drinking Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Drinking Water Quality Management System, and to the satisfaction of NSW Health.	<div></div> <div>Full Compliance</div>
Risk		Target for Full Compliance
If the Drinking Water Quality Management System is not fully implemented, there is a high risk that Sydney Water may not be able to effectively manage risks to drinking water quality and protect public health.		Evidence that the Drinking Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the System, and to the satisfaction of NSW Health.
Evidence sighted		
▪ Refer to Table A.2.3 for details of evidence sighted.		
Summary of reasons for grade		
From the observations made in undertaking this audit, the auditors found no grounds to suggest that the Drinking Water Quality Management System was not fully implemented and all relevant activities are carried out in accordance with the System.		
Sydney Water has devoted considerable energy and resources to apply the principles of the ADWG both in spirit and in practice.		
Discussion and notes		
Refer to Table A.2.3 for detailed Element-by-Element discussion.		
Recommendations		
There are no recommendations in respect of this sub-clause.		
Opportunities for improvement		
No opportunities for improvement have been identified in respect of this sub-clause.		

Table A.2.3 Drinking Water (Sub-clauses 2.1.1 and 2.1.2) – Detailed Assessment

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Interviews with Sydney Water staff, 26-28 September 2016.
- Annual Drinking Water Quality Monitoring Plan 2015-16 Approved, July 2015.
- BMIS document review of Water Specifications (Reference IMSO 152.01 Document review comments and audit trail).
- Catchment to Customer Risk Register_150316_summary.xlsm, filtered for Orchard Hills.
- Chlorination Process Operation at Orchard Hills WFP (Reference WTOH5002).
- Compliance Accountability Register.
- Cryptosporidium and Giardia Reporting (Reference MP0013).
- Customer Complaint screen shot (Reference 1-D03GGG – CMS).
- Document Management Procedure (Reference SDIMS008).
- Document Review Comments and Audit Trail (Reference IMS0152.01).
- Drinking Water Management Manual (Reference BMIS0213).
- Drinking Water Operational Monitoring Plan 2016-17 Final signed.
- Drinking Water Policy (Reference BMIS0213.13).
- Drinking Water Product Specification (Reference IMS 0152.01).
- DWQ Event Management Incident Management Contacts (Reference WPIMS5228.01).
- DWQ Event Management Plan Training 2016.
- DWQ Incident Management Contacts (Reference (WPIS5228.01).
- iConnect – SW Records Management Policy.
- Incident Prevention and Preparedness Procedure (Reference SDIMS0013).
- JOG Agenda 25 May 2016.
- Management Review Procedure (Reference SDIMS0012).
- Monthly checklist for monitoring 2015-16 and actual counts.
- Non Conformance, Corrective and Preventive Action (Reference SDIMS0011).
- North Western and Blue Mountains Data Report, June 2016.
- Orchard Hills Product Specification *Reference WTOH5006.01
- Orchard Hills WFP – Plant Performance Report 230616.
- Position Description – Manager Product and Asset management.
- Position Description – Service Delivery Officer 6.
- Preparation of Drinking Water Quality Report (Reference MP0023).
- Procedure for Performance Monitoring (Audit/Inspections), (Reference SDIMS0010).
- Procedure for Triggers, Notifications and Actions for Adverse WQ Results (Reference WPIMS5274).
- Process and Equipment Monitoring (Reference WTOH5006).

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- Process Decision and Abnormal Water Quality – Orchard Hills WFP (Reference WTOH5015).
 - Product Improvement Framework (Reference BMIS0214).
 - Product Management Strategy Register (Reference 548309).
 - Producing Quarterly DWQ Monitoring Reports to NSW Health (Reference MP0017).
 - Quarterly Drinking Water Quality Monitoring Report for NSW Health, Fourth Quarter 2015-16.
 - Raw Water Supply Protocols (Reference SDIMS0054).
 - Risk and Opportunity Management Policy (Reference QMAF0003).
 - Service Delivery Report, June 2016.
 - SDIMS Service Delivery Integrated Management System.
 - SDIMS Work Instruction for managing WQ customer complaints (Reference WOQ5162).
 - SLG paper Public Communications Guidelines, March 2015.
 - Stakeholder Management (Reference SDIMS0006).
 - Strategic Accounts Management Meeting Agenda 18 May 2016.
 - Sydney Water and WaterNSW Risk Review: catchment to consumer – Water Quality and Quantity.
 - Sydney Water and WaterNSW Risk Review: catchment to consumer – Water Quality and Quantity (Reference BMIS0249), 4 January 2015.
 - Sydney Water Corporation Operational Audit 2014-15, March 2016, page 10.
 - Sydney Water EMS External Requirements Register (Reference SWEMS0003.01).
 - Sydney Water Incident Management Procedure (Reference EMSIMS0016).
 - Sydney Water response to the Audit Questionnaire, 1 September 2016.
 - TO0011SDP Operational Protocol, issued 12 April 2013.
 - Water Filtration Plant Water Quality Performance Report Final V3, June 2016.
 - Work Instruction - Bulk Chemical Data Capture and Assessment (Reference OS0015).
 - Work Instruction for Disinfection of Water Mains (Reference WPIMS5027.03).
 - Work Instruction Receiving Bulk Chemicals (Reference WTOH5010).
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Discussion and notes

Overarching Drinking Water Management System

Sydney Water notes:

“The Drinking Water Management Manual, Drinking Water Policy, Drinking Water Improvement Plan and Drinking Water Product Specifications are some of the key documents that define the overarching drinking water management system.”³⁷

The Drinking Water Management Manual (DWMM)³⁸ is a comprehensive document that closely follows the structure and content of the 12 elements of the ADWG. In developing the DWMM, Sydney Water appears to have methodically analysed each element, component and action within the ADWG and considered how each of these requirements apply to the operations of Sydney Water. The result is a drinking water quality management system that, in most key respects, is tailor-made to comprehensively

³⁷ Sydney Water response to the Audit Questionnaire, 1 September 2016.

³⁸ Drinking Water Management Manual (Reference BMIS0213).

address every requirement of the ADWG that is relevant to Sydney Water's operations.

The overarching nature of the Drinking Water Policy is enhanced because it is endorsed by the A/Manager Product and Asset Management, Manager Product and Servicing Strategy and the General Manager Service Delivery. Such multiple endorsements across various business units is significant because it counteracts the tendency of large organisations to form 'silos' which sometimes operate quasi-independently of each other. Furthermore, Appendix C of the DWMM provides an indicative guide to the specific business areas that are involved in actioning each component of each element of the ADWG Framework.³⁹ This demonstrates that the organisation as a whole is focussed on ADWG requirements.

Continuous improvement is a core element of the ADWG. Sydney Water's Drinking Water Improvement Plan is comprised of:

- The Product Improvement Framework⁴⁰ (overarching framework for all products): The Framework describes the approach used to identify initiatives that Sydney Water will undertake to ensure its supply and collection products are delivered efficiently, to specification, and that customer expectations are met. It aims:

*"to document the processes for evidence-based improvements to be made in the delivery of Sydney Water's products and services, to define the process used to identify improvement initiatives and to define the governance processes to deliver the improvement initiatives."*⁴¹

The framework relates to drinking water, recycled water, wastewater, stormwater, biosolids and energy. Section 5 specifically maps the ADWG requirements for product improvement planning to elements of the Framework.

- The Product Management Strategy Register⁴² (specific drinking water actions listed): This Excel spreadsheet document is a register of component initiatives for Specific Improvement Programs. Drinking water programs include NOM (Natural Organic Material) management, certification to ISO 22000, disinfection, improving the monitoring and reporting of drinking water safety, and network management review. While project status is shown, specific timelines do not appear to be included.

The Drinking Water Product Specification⁴³ is a detailed description of all the factors that Sydney Water needs to take into account in the management of water quality. The Specification translates customer, business and regulatory drivers into explicit treatment and network Key Performance Indicators, including Critical Control Points (CCP) and Operational Control Points (OCP).⁴⁴ ADWG requirements are a key consideration in this specification.

Element-by-element discussion

A detailed element-by-element discussion of the consistency of Sydney Water's Drinking Water Management System with the ADWG and the implementation of Sydney Water's Drinking Water Management System is set out in the following sections.

Much of the material describing the consistency of Sydney Water's Drinking Water Management System with the ADWG has been compiled from information within the DWMM.

Element 1 – Commitment to Water Quality Management

1.1. Water quality policy

Consistency with ADWG

³⁹ Drinking Water Management Manual (Reference BMIS0213), Appendix C, page 83.

⁴⁰ Product Improvement Framework (Reference BMIS0214).

⁴¹ Product Improvement Framework (Reference BMIS0214), page 2.

⁴² Product Management Strategy Register (Reference 548309).

⁴³ Drinking Water Product Specification (Reference IMS 0152.01).

⁴⁴ Drinking Water Product Specification (Reference IMS 0152.01), Table 1, page 16.

Consistency with the ADWG requires that Sydney Water: formulates a drinking water quality policy that is visible, endorsed by senior executive; and is communicated to employees throughout the business.

Sydney Water was able to demonstrate these elements of conformity to the ADWG. The policy exists and was approved by the Managing Director on 6 April 2016.⁴⁵ In its response to the audit questionnaire, Sydney Water advised that the policy is on physical display at relevant locations (eg. head office, depots and treatment plants), and is available on the Business Information Management System (BMIS), the Intranet (iConnect), the Sydney Water website (as an annexure to the Drinking Water Management Manual),⁴⁶ and was sent to all Operations staff when it was initially created.

Full Compliance

Implementation

Implementation requires that the policy is understood and implemented throughout the organisation. As mentioned above, Sydney Water cites a number of strategies employed to ensure that the policy is communicated internally and externally. Possibly the most important aspect of this ADWG component is the degree to which water quality is integrated into corporate planning and corporate project decision-making to provide a corporation-wide understanding of, and focus on drinking water quality.

The DWMM is a document that applies across divisions and states:

“The commitments expressed within the Drinking Water Policy and its supporting policies form the drinking water management context under which Sydney Water and its contractors must operate.”⁴⁷

This demonstrates a most important aspect, in that the Drinking Water Policy serves to define Sydney Water’s commitments and priorities relating to drinking water quality across the entire organisation.

Full Compliance

■ **1.2. Regulatory and formal requirements**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: identifies and documents all regulatory and formal requirements; ensures that responsibilities are understood and communicated to employees; and reviews requirements periodically to reflect any changes.

The DWMM includes the framework currently used by Sydney Water to identify regulatory and formal requirements.⁴⁸ Sydney Water also maintains a subscription with SAI Global. Any alerts are set up with the “StandardsWatch” function to inform business areas of changes to the relevant standards.

Sydney Water maintains the Compliance Accountability Register and the External Requirements Register which are reviewed periodically.^{49,50} The Compliance Accountability Register prioritises legislative requirements between Acts with a high significance for Sydney Water (Primary Acts) and Acts with a lower level significance for Sydney Water (Secondary Acts). For high significance Acts, it details: the legislative requirement; scope of accountability (where specific legislation may impact different divisions of Sydney Water); Accountable GM and Division; Key Contact; Compliance measures; mechanisms to evaluate (this lists review measures, such as formal or informal audits, performance or incident reporting); and Compliance Results (which lists compliance breaches,

⁴⁵ Drinking Water Policy (Reference BMIS0213.13).

⁴⁶ http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdc1/~edisp/dd_075673.pdf.

⁴⁷ Drinking Water Management Manual (Reference BMIS0213), page 6.

⁴⁸ Drinking Water Management Manual (Reference BMIS0213), section 1.2, page 9.

⁴⁹ Compliance Accountability Register.

⁵⁰ Sydney Water EMS External Requirements Register (Reference SWEMS0003.01).

penalty notices, fines, and areas of non-conformance). An appendix to the Compliance Accountability Register provides a comprehensive listing of legislation relevant to Sydney Water's operations and the related statutory instruments.

The EMS External Requirements Register identifies non-statutory environmental requirements observed by Sydney Water. These include instruments such as Standards, Codes of Practice, Agreements, Guidelines, Memoranda of Understanding, Stakeholder Engagement Plans and Policies.

Roles and responsibilities with respect to drinking water quality management are defined in position descriptions and in staff Contribution and Development Plans (CDPs).

Full Compliance

Implementation

The Compliance Accountability Register and the External Requirements Register are monitored, kept up to date, and are available to staff on the intranet. Folios of Progress are also maintained for key regulatory requirements. The Folio for the Drinking Water Management System was examined. It showed primary and secondary contacts; context and background (mentions Operating Licence (OL) requirements; quarterly consumer confidence report; and MoU with NSW Health); SWC interpretation of requirements; Actions and progress to 30 June 2016 (in particular for each OL clause); Reporting Manual requirements (including due date and completion date); Audit findings; Minister's requirements; and relevant documents that validate the information within the folio. The folios are reviewed on a six-monthly basis.

Roles and responsibilities with respect to drinking water are defined in position descriptions and in staff annual performance appraisals (Contribution and Development Plans or CDPs).^{51,52} All formal policies and procedural documents are kept in the BMIS, where they are accessible to employees.

Full Compliance

■ **1.3. Engaging stakeholders**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: identifies all stakeholders who could affect, or be affected by, decisions or activities of the drinking water supplier; develops appropriate mechanisms and documentation for stakeholder commitment and involvement; and regularly updates the list of relevant agencies.

In the response to the Audit Questionnaire, Sydney Water noted:

*"Sydney Water's key stakeholders for drinking water quality are WaterNSW, Sydney Desalination Plant, NSW Health and IPART. Sydney Water communicates and engages with these key stakeholders on a regular basis."*⁵³

Stakeholders are identified within the DWMM.⁵⁴ Key relationships and communications protocols are captured in relevant operational documents, for example, the Stakeholder Management procedure document which provides details about how interactions with stakeholders should be managed.⁵⁵ Internal stakeholders are identified in the Drinking Water Event Management Plan, which lists the identity, role and contact details of internal stakeholders, especially those responsible for Drinking Water Incident Management including those for drinking water quality.⁵⁶

Full Compliance

⁵¹ Position Description – Service Delivery Officer 6.

⁵² Position Description – Manager Product and Asset management.

⁵³ Sydney Water response the Audit Questionnaire, 1 September 2016.

⁵⁴ Drinking Water Management Manual (Reference BMIS0213), section 1,3, page 14.

⁵⁵ Stakeholder Management (Reference SDIMS0006).

⁵⁶ DWQ Event Management Incident Management Contacts (Reference WPIMS5228.01).

Implementation

The following documents provide evidence in relation to on-going engagement of key external stakeholders (NSW Health and WaterNSW):

- Public Health Strategic Liaison Group (SLG) – tripartite engagement at executive level for WaterNSW, NSW Health and Sydney Water (quarterly meetings).
It is understood that SLG minutes are confidential, however, an agenda item dealing with communications protocols relevant to incident management, although outside the audit period, provided an insight into the implementation of stakeholder engagement within the SLG;⁵⁷
- Public Health Joint Operational Group (JOG) – tripartite engagement at a senior technical level with NSW Health, WaterNSW and Sydney Water (quarterly meetings).
The agenda for JOG meeting of 25 May 2016 was reviewed. This document includes an agenda item to discuss the previous SLG meeting and consider agenda items for the next SLG meeting;⁵⁸ and
- Strategic Accounts Management (SAM) – operational matters important to both WaterNSW and Sydney Water (that do not have a Public Health consequence).
Agenda for Strategic Accounts Meeting of 18 May 2016 was reviewed.⁵⁹

Furthermore, Sydney Water maintains a Raw Water Supply Agreement with WaterNSW,⁶⁰ an operational agreement with Sydney Desalination Plant (SDP),⁶¹ and contracts with a number of Built Owned Operated Water Filtration Plants (WFPs),⁶² for the treatment of drinking water.

Community consultation and communication is addressed under Element 8 below.

Full Compliance

Element 2 – Assessment of the Water Supply System

Consistency with ADWG

Consistency with the ADWG requires Sydney Water to:

- **2.1. Water supply system analysis:** assemble a team with appropriate knowledge and expertise; construct a flow diagram of the water supply system from catchment to consumer; assemble pertinent information and document key characteristics of the water supply system to be considered; and periodically review the water supply system analysis;
- **2.2. Assessment of water quality data:** assemble historical data from source waters, treatment plants and finished water supplied to consumers (over time and following specific events); list and examine exceedances; and assess data using tools such as control charts and trends analysis to identify trends and potential problems; and
- **2.3. Hazard identification and risk assessment:** define the approach and methodology to be used for hazard identification and risk assessment; identify and document hazards, sources and hazardous events for each component of the water supply system; estimate the level of risk for each identified hazard or hazardous event; evaluate the major sources of uncertainty associated with each hazard and hazardous event and consider actions to reduce uncertainty; determine significant risks and document priorities for risk management; and periodically review and update the hazard identification and risk assessment to incorporate any changes.

Sydney Water maintains a range of ‘flow diagrams’. An interactive flow diagram of the water supply

⁵⁷ SLG paper Public Communications Guidelines, March 2015.

⁵⁸ JOG Agenda 25 May 2016.

⁵⁹ Strategic Accounts Management Meeting Agenda 18 May 2016.

⁶⁰ Drinking Water Management Manual (Reference BMIS0213), section 1.3, page 17.

⁶¹ Drinking Water Management Manual (Reference BMIS0213), section 1.3, page 17.

⁶² Drinking Water Management Manual (Reference BMIS0213), page 76.

system from catchment to consumer is available on the Sydney Water web site.⁶³ A static version of this diagram is presented in the Drinking Water Management Manual.⁶⁴ Flow diagrams for each water filtration plant are retained in the SCADA system at treatment plants as live graphics. Each water delivery system is mapped in detail in the network's SCADA system (IICATS).

In its response to the audit questionnaire, Sydney Water noted:⁶⁵

“System analysis is undertaken on a continuous basis as part of normal operations of water filtration plants and networks. Inputs to the analysis is based on online monitoring through SCADA and IICATS. Compliance and operational monitoring programs are used to indicate if changes are needed. Data from the monitoring, both online and routine, are stored and accessed through various Business Information systems or directly through SCADA in the case of treatment plant operation and IICATS in terms of networks operations. Historical data is accessed via the Business Intelligence system in the following universes:

- *Monitoring BI - drinking water quality data.*
- *Supervisory Control and Data Acquisition (SCADA) BI.*
- *Integrated Instrumentation Control Automation and Telemetry System (IICATS) BI.”*

At the audit interview, Sydney Water reported that data analysis was conducted quarterly and a general review was conducted annually.

Sydney Water has a Risk and Opportunity Management Policy that is consistent with ISO 31000.⁶⁶ In relation to data assessment, hazard identification and risk assessment, Sydney Water has developed a comprehensive, over-arching procedure: *Sydney Water and WaterNSW Risk Review: catchment to consumer – Water Quality and Quantity*.⁶⁷

The last data assessment, hazard identification and risk assessment, consistent with this procedure, was undertaken and finalised on 4 January 2015, which is outside the review period. This risk assessment was audited during the 2014/15 Operational Audit and was assessed as Full Compliance.⁶⁸

The *Sydney Water and WaterNSW Risk Review: catchment to consumer – Water Quality and Quantity* procedure states:

*“Sydney Water and WaterNSW proactively keep their drinking water quality and quantity risk assessment current. This is achieved by regular reviews. It is anticipated that in future years the risk assessment will be reviewed and updated at a nominal frequency of every 2.5 years. Specifically, the review takes place twice during every five-year pricing pathway and strategic planning cycle. The intent is to complete a comprehensive analysis every five years, linked to the IPART price determination. It is intended to conduct a more succinct mid-term analysis approximately half-way into each price pathway period.”*⁶⁹

Sydney Water therefore has a corporate policy to undertake a full risk assessment every five years and to conduct an interim risk assessment halfway between full risk assessments. Such a policy is consistent with the ADWG.

Full Compliance

Implementation

Sydney Water and WaterNSW regularly conduct combined Catchment to Customer (C2C) risk assessments in order to identify strategic areas for continuous improvement. These reviews, which

⁶³ <http://www.sydneywater.com.au/SW/water-the-environment/how-we-manage-sydney-s-water/water-network/index.htm>

⁶⁴ Drinking Water Management Manual (Reference BMIS0213), section 1.3, page 20.

⁶⁵ Sydney Water Response to audit questionnaire, 1 September 2016.

⁶⁶ Risk and Opportunity Management Policy (Reference QMAF0003).

⁶⁷ Sydney Water and WaterNSW Risk Review: catchment to consumer – Water Quality and Quantity (Reference BMIS0249), 4 January 2015.

⁶⁸ Sydney Water Corporation Operational Audit 2014-15, March 2016, page 10.

⁶⁹ Sydney Water and WaterNSW Risk Review: catchment to consumer – Water Quality and Quantity, page 2.

incorporate hazard identification and risk assessment, are done on a 5-year cycle and the most recent review was finalised on 4 January 2015, which is outside the audit period. This review was audited as part of the 2014/15 Operational Audit and assessed as Full Compliance. The next risk assessment will be an interim review, which is scheduled for completion by mid-2018.

The Risk Register for Orchard Hills was provided as evidence that a comprehensive analysis of the risks had been conducted. It illustrated that risks were identified and prioritised.⁷⁰

Full Compliance

Element 3 – Preventive Measures for Drinking Water Quality Management

■ ***3.1. Preventive measures and multiple barriers***

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: identifies existing preventive measures from catchment to consumer for each significant hazard or hazardous event and estimate the residual risk; evaluates alternative or additional preventive measures where improvement is required; and documents the preventive measures and strategies into a plan addressing each significant risk.

The Sydney Water procedure is to employ a background/review/workshop based Catchment to Consumer (C2C) Hazard Identification and Risk Assessment process to identify hazards to drinking water quality and assess related preventive measures. During this process, the type of hazard or hazardous event, the maximum risk, the preventive measures currently in use and the residual risk were identified. This process is consistent with the ADWG; it highlights hazards associated with the highest risks and generates an improvement action plan.

Full Compliance

Implementation

Sydney Water and WaterNSW regularly conduct combined Catchment to Customer (C2C) risk assessment in order to identify strategic areas for continuous improvement. These reviews, which identify preventative measures, are done on a 5-year cycle and the most recent review was finalised on 4 January 2015, which is outside the audit period. This review was audited as part of the 2014/15 Operational Audit and assessed as Full Compliance. The next risk assessment will be an interim review, which is scheduled for completion by mid-2018.

Networks and individual Treatment Plant risk assessments are conducted annually. Risks at the individual asset level are assessed in these assessments, with common themes or high-level risks being escalated during annual internal reviews of the Catchment-to-Consumer Risk Assessment.⁷¹ As an example of a risk assessment at a Treatment Plant, the Risk Register for Orchard Hills was provided which illustrated the identification of preventive measures that control risks, the assessment of risks, and the identification of any further controls required to reduce risks to an acceptable level.⁷²

Full Compliance

■ ***3.2. Critical control points***

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: assesses preventive measures from catchment to consumer to identify critical control points (CCPs); establishes mechanisms for operational control; and documents the critical control points, critical limits and target criteria.

The Drinking Water Product Specification documents CCPs (and indicators) as Supply (supply),

⁷⁰ Catchment to Customer Risk Register_150316_summary.xlsm, filtered for Orchard Hills.

⁷¹ Drinking Water Management Manual (Reference BMIS0213), section 3.1, page 27.

⁷² Catchment to Customer Risk Register_150316_summary.xlsm, filtered for Orchard Hills.

Filtration (turbidity), Primary Disinfection (Free Chlorine at the reservoir outlet before the first customer or prior to the first chloramination point), and fluoridation (fluoride concentration).⁷³ The ADWG process is that CCPs should be identified from an assessment of the range of preventive measures. The Specification acknowledges the genesis of CCPs from the various preventive measures represented by the various barriers that provide drinking water quality protection within the catchment to consumer supply chain. It discusses the derivation of CCPs from ADWG guideline values, Operating Licence values and internal operating targets.

Full Compliance

Implementation

As an example of the identification and documentation of CCPs and the establishment of mechanisms for operational control, all of the CCPs identified in the Drinking Water Product Specification are high priority control points that require close monitoring, alarming and immediate action if critical limits are exceeded.⁷⁴ The processes for control are outlined in the specification.

A further example, which illustrates the establishment of mechanisms for operational control and the documentation of CCPs, critical limits and target criteria, is in the discussion of exception reports in the Quarterly Monitoring Report to NSW Health 2015-16.⁷⁵ Although prepared outside of the audit period, this document refers to activities within the audit period.

The Orchard Hills Product Specification provides an example of details of water quality targets and a corrective action schedule applicable to this plant.⁷⁶

Full Compliance

Element 4 – Operational Procedures and Process Control

■ 4.1. Operational procedures

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: identifies procedures required for processes and activities from catchment to consumer; documents all procedures; and compiles them into an operations manual.

The DWMM indicates that Sydney Water operational procedures are documented within the Service Delivery Integrated Management System (SDIMS).⁷⁷ Procedures included in this system include Standard Operating Procedures and Work Instructions for drinking water treatment, distribution, and delivery.⁷⁸

The DWMM notes that, in practice, these processes are largely automated, using SCADA systems and IICATS, which have standardised alarm protocols and associated operational procedures.⁷⁹

Full Compliance

Implementation

Since most of the water supplied by Sydney Water is sourced from WaterNSW, operational procedures for catchment management and source control are managed by WaterNSW. Protocols have been developed whereby Sydney Water can have reasonable oversight of these activities.⁸⁰ Procedures relevant to the ADWG within these protocols include water source selection and supply under differing conditions, monitoring requirements in normal and abnormal circumstances, and

⁷³ Drinking Water Product Specification (Reference IMS0152.01), page 4.

⁷⁴ Drinking Water Product Specification (Reference IMS0152.01), page 4.

⁷⁵ Quarterly Drinking Water Quality Monitoring Report for NSW Health, Fourth Quarter 2015-16.

⁷⁶ Orchard Hills Product Specification *Reference WTOH5006.01

⁷⁷ SDIMS Service Delivery Integrated Management System.

⁷⁸ Drinking Water Management Manual (Reference BMIS0213), section 4.1, page 31.

⁷⁹ Drinking Water Management Manual (Reference BMIS0213), section 4.1, page 31.

⁸⁰ Raw Water Supply Protocols (Reference SDIMS0054).

emergency procedures.

A number of examples of operating procedure were provided to the auditors. These include:

- The Standard Operating Procedure for Process and Equipment Monitoring at Orchard Hills WFP.⁸¹
- The work instruction for the operation of the chlorination process at Orchard Hills WFP.⁸²
- Process Decision and Abnormal Water Quality – Orchard Hills WFP.⁸³ This work instruction relates to review of data, data evaluation against water quality specifications, identification of potential process failures and their cause, or loss of control of treatment processes and response to abnormal water quality events at the Orchard Hills plant.
- The procedure for operation of the supply to the Sydney Water network from the Sydney Desalination Plant.⁸⁴

Full Compliance

- **4.2. Operational monitoring**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: develops monitoring protocols for operational performance of the water supply system, including the selection of operational parameters and criteria, and the routine analysis of results; and documents monitoring protocols into an operational monitoring plan.

The Annual Drinking Water Quality Operational Monitoring Plan details Sydney Water's operational water quality monitoring program. This plan comprises: water treatment process monitoring; research and development monitoring; event monitoring; validation of treatment processes; and screening of analytes to determine verification monitoring regime.⁸⁵

Full Compliance

Implementation

The auditors were provided with the Operating Monitoring Plan for 2016-17, which was prepared during the audit period. This plan proposed to consider a range of fixed and project based routine monitoring tasks as well as some non-routine monitoring tasks.⁸⁶

It was of interest to the auditors how Sydney Water assured itself that water quality at BOO (Build Own Operate) plants was being adequately managed. Sydney Water provided the auditors with the Water Quality Performance Report for June 2016.⁸⁷ This report presents data for all Water Filtration Plants, including BOO plants. While there are some exceptions noted in the report, operations appear to be in control.

A further example of operational monitoring provided was the report of the North West and Blue Mountains Team for the period 1 June – 30 June 2016. This report provides operational monitoring data for Water Filtration Plants and some reservoirs in this region. It reports data for both raw and finished water quality. There were no results reported that were outside target ranges.⁸⁸

Full Compliance

⁸¹ Process and Equipment Monitoring (Reference WTOH5006).

⁸² Chlorination Process Operation at Orchard Hills WFP (Reference WTOH5002).

⁸³ Process Decision and Abnormal Water Quality – Orchard Hills WFP (Reference WTOH5015).

⁸⁴ TO0011SDP Operational Protocol, issued 12 April 2013.

⁸⁵ Annual Drinking Water Quality Monitoring Plan 2015-16 Approved, July 2015.

⁸⁶ Drinking Water Operational Monitoring Plan 2016-17 Final signed.

⁸⁷ Water Filtration Plant Water Quality Performance Report Final V3, June 2016.

⁸⁸ North Western and Blue Mountains Data Report, June 2016.

■ **4.3. Corrective actions**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: establishes and documents procedures for corrective action to control excursions in operational parameters; and establishes rapid communication systems to deal with unexpected events.

The Non-conformance, Corrective and Preventive Action procedure sets out a consistent approach to identifying non-conforming products and services, identifying root causes, and taking actions to correct, prevent, or improve.⁸⁹

The following key Standard Operating Procedures (SOPs) support the Non-conformance, Corrective and Preventive Action procedure in relation to water quality:

- Drinking Water Quality Event Management SOP – This provides guidance in identifying and responding to water quality events, notifiable events, and incidents as defined in the SOP. The SOP sets out the procedures to be adopted to identify and respond to events that are outside those normally expected, and to escalate the event to an incident where necessary in accordance with the Sydney Water Incident Response Plan requirements.
- Triggers, Notifications and Actions for Adverse Water Quality Results SOP – This outlines the process and responsibilities involved in identifying and reporting exceptions based on analytical results for drinking water.

The actions in these SOPs are supported by:

- real-time telemetry of water quality and quantity measurements and alarms (IICATS and SCADA), monitored continuously by the System Operations Centre (SOC);
- automated exception processing system for laboratory results (through the Limnos system);
- real-time monitoring of customer complaint trends; and
- an online notification system to WaterNSW and NSW Health (through the Sydney Water Incident Reporting and Learnings (SWIRL) system).⁹⁰

Full Compliance

Implementation

As an example of the approach to a non-conformance, a Performance Report for the Orchard Hills WTP covering the period 21 – 23 June 2016 was provided. This report considered a positive *Cryptosporidium* & *Giardia* result in the treated water and sought to explore plant operational conditions over the relevant period. It shows that all plant operations were checked; the performance of individual filters, the return supernatant turbidity, and reservoir chlorine residuals were reported. A screen shot of turbidity trends on individual filters and chlorine residuals was included.⁹¹

An example of the application of corrective action is the SDIMS work instruction for Process Decision and abnormal water quality for the Orchard Hills WFP. This procedure covers review of data, data evaluation against water quality specifications, identification of potential process failures and their cause, or loss of control of treatment processes and response to abnormal water quality events.⁹²

Full Compliance

⁸⁹ Non Conformance, Corrective and Preventive Action (Reference SDIMS0011).

⁹⁰ Drinking Water Management Manual (Reference BMIS0213), section 4.3, page 34.

⁹¹ Orchard Hills WFP – Plant Performance Report 230616.

⁹² Process Decision and Abnormal Water Quality Orchard Hills (Reference WTOH5015).

■ **4.4. Equipment capability and maintenance**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: ensures that equipment performs adequately and provides sufficient flexibility and process control; and establishes a program for regular inspection and maintenance of all equipment, including monitoring equipment.

In relation to a maintenance program, Sydney Water has developed SOPs and schedules for maintenance covering all operational equipment and maintenance documentation including SOPs and schedules for equipment calibration. Maintenance documentation aims to maintain assets so that they may deliver the required drinking water quality over the life of the asset.⁹³

Full Compliance

Implementation

In relation to equipment performance, flexibility and process control, Sydney Water maintains various systems for monitoring and assessing asset availability and reliability. Sydney Water uses a MAXIMO enterprise asset management system for:

- works management – work orders to manage planned and unplanned maintenance of assets;
- long-term strategic asset management and planning; and
- decision making for replacement and acquisition of critical assets.

MAXIMO is used to generate monthly maintenance work orders for implementation.

An example of a working document for equipment capability and maintenance is the procedure for process and equipment monitoring at Orchard Hills, which includes process review, equipment checks and calibration steps.⁹⁴

Many examples that illustrate the implementation of equipment capability and maintenance, such as a work instruction for mains disinfection,⁹⁵ were made available to the auditors.

Full Compliance

■ **4.5. Materials and chemicals**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: ensures that only approved materials and chemicals are used; and establishes documented procedures for evaluating chemicals, materials and suppliers.

Sydney Water has adopted the Water Supply Code of Australia (Sydney Water 2012 Edition), and the Manual for Selection and Application of Protective Coatings (WSA 201–2013–1.1), authored by the Water Services Association of Australia (WSAA), together with a Sydney Water-authored supplement.

Sydney Water has developed a comprehensive series of other technical specifications and standards for materials and chemicals that it follows.

The use of water treatment chemicals follows the relevant ADWG risk management process. Sydney Water uses long-term contracts for the supply of water treatment chemicals, which include testing requirements and other controls. All drinking water treatment and reservoir-dosing chemicals have a quality specification, which includes maximum levels for contaminants. Sydney Water ensures that

⁹³ Drinking Water Management Manual (Reference BMIS0213), section 4.4, page 35.

⁹⁴ Process and Equipment Monitoring Orchard Hills WFP (Reference WTOH 5006 R13).

⁹⁵ Work Instruction for Disinfection of Water Mains (Reference WPIMS5027.03).

suppliers provide certificates of assurance demonstrating that treatment and reservoir dosing chemicals meet the specifications.⁹⁶

Full Compliance

Implementation

An example of the controls on the receipt of chemicals was reviewed.⁹⁷ A work instruction relating to bulk chemical delivery was also reviewed.⁹⁸

Full Compliance

Element 5 – Verification of Water Quality

■ **5.1. Monitoring**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: determines the characteristics to be monitored in the distribution system and in water as supplied to the consumer; establishes and documents a sampling plan for each characteristic, including the location and frequency of sampling; and ensures that monitoring data are representative and reliable.

The Annual Drinking Water Quality Monitoring Plan documents Sydney Water's approach for the verification of drinking water quality. It details the planned water quality monitoring activities required to assure compliance with the ADWG long-term compliance measures for microbial, physical, chemical, and radiological analytes.⁹⁹ The plan also includes sample locations and frequencies, and specific monitoring activities such as radiological, disinfection by-products, taste and odour (T&O) and cyanobacteria monitoring.

Full Compliance

Implementation

An example of the implementation of monitoring is the checklist of expected sample per month at Orchard Hills.¹⁰⁰

Full Compliance

■ **5.2. Customer satisfaction**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water establishes a consumer complaint and response program, including appropriate training of employees.

Sydney Water uses three main processes to assess customer satisfaction: customer contacts and complaints handling, customer surveys, and the Energy & Water Ombudsman NSW (EWON) process.¹⁰¹ The processes relevant to complaints handling and referrals to EWON have been considered in Clause 5.6.2 (refer Table A.5.12) and Clause 5.7.1 (refer Table A.5.15) respectively.

Full Compliance

Implementation

An example of dealing with a customer complaint was provided as a screen shot of a complaint received on 27 June 2016 from a customer complaining of odour problems. The screen shot provides evidence that a complaint and response program has been established and, by presenting

⁹⁶ Drinking Water Management Manual (Reference BMIS0213), section 4.5, page 36.

⁹⁷ Work Instruction Receiving Bulk Chemicals (Reference WTOH5010).

⁹⁸ Work Instruction - Bulk Chemical Data Capture and Assessment (Reference OS0015).

⁹⁹ Annual Drinking Water Quality Monitoring Plan Final 2015-16.

¹⁰⁰ Monthly checklist for monitoring 2015-16 and actual counts.

¹⁰¹ Drinking Water Management Manual (Reference BMIS0213), section 5.2, page 40.

the details of interim interactions with the customer up to the point of resolution, shows that meaningful data has been extracted from this interaction. The style and presentation in the resolution summary indicates that the operator has been adequately trained in customer interaction.¹⁰²

A work instruction for managing water quality related customer complaints provides some insight into this preparedness.¹⁰³

Full Compliance

■ **5.3 Short-term evaluation of results**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: establishes procedures for the daily review of drinking water quality monitoring data and consumer satisfaction; and develops reporting mechanisms internally, and externally, where required.

Sydney Water uses electronic systems to assess drinking water data and generate exception reports to key staff. These systems include Business Intelligence (BI), IICATS, MAXIMO, Limnos (Operational tool for water quality exception reporting), SCADA, and the Customer Management System.¹⁰⁴

Staff routinely assess operating trends and performances. The Limnos system automatically reviews water quality results on a daily basis. Triggers for each analyte are set in the system, and emails are sent by the system to internal contacts.

Sydney Water has internal and external notification protocols, such as those listed in the Drinking Water Quality Event Management SOP and the on-line notification system with NSW Health.

Full Compliance

Implementation

An example of reporting monitoring data was sighted as the work instruction for routine Cryptosporidium and Giardia reporting. This work instruction sets out a procedure for reporting daily results, and the procedure and responsibilities for positive results.¹⁰⁵

Analysis and evaluation of data is illustrated in the Service Delivery Report. As an example, the report for June 2016 was reviewed.¹⁰⁶

Full Compliance

■ **5.4 Corrective actions**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: establishes and documents procedures for corrective action in response to non-conformance or consumer feedback; and establishes rapid communication systems to deal with unexpected events.

The procedure for corrective action was described at Element 4.3. The basis for corrective action is the Non-conformance, Corrective and Preventive Action Procedure and related event management and notifications SOPs.¹⁰⁷

Full Compliance

¹⁰² Customer Complaint screen shot (Reference 1-D03GGG – CMS).

¹⁰³ SDIMS Work Instruction for managing WQ customer complaints (Reference WOQ5162).

¹⁰⁴ Drinking Water Management Manual (Reference BMIS0213), section 5.3, page 41.

¹⁰⁵ Cryptosporidium and Giardia Reporting (Reference MP0013).

¹⁰⁶ Service Delivery Report, June 2016.

¹⁰⁷ Non Conformance, Corrective and Preventive Action (Reference SDIMS0011).

Implementation

A guideline for communicating adverse water quality results defined by the trigger tables is the Triggers, Notifications and Actions for Adverse WQ results.¹⁰⁸

Full Compliance

Element 6 – Management of Incidents and Emergencies

■ **6.1. Communication protocols**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: defines communication protocols with the involvement of relevant agencies and prepares a contact list of key people, agencies and businesses; and develops a public and media communications strategy.

The DWMM notes:

“A considered and controlled response to drinking water incidents is needed for the protection of public health, to maintain consumer confidence, as well as to protect the reputation of the organisation.”¹⁰⁹

Sydney Water has developed an Incident Response Plan, which is the organisation’s overarching incident management plan. It details responsibilities for the notification of internal and external stakeholders in the event of incidents.

The NSW Health - Sydney Water MoU prescribes specific communication activities between the two agencies, including communications relating to events of public health significance.

The SWIRL (Sydney Water Incident Reporting and Learning) system is Sydney Water’s single repository for all Sydney Water incidents. The SWIRL system is accessible to certain stakeholders. NSW Health has access to review water quality-related incidents recorded in the SWIRL system.¹¹⁰

NSW Health is responsible for declaring the need for a public notification relating to health. Sydney Water is responsible for carrying out public notifications. Notifications are made in accordance with advice provided by NSW Health.

Full Compliance

Implementation

A guideline for communicating adverse water quality results defined by the trigger tables is the Triggers, Notifications and Actions for Adverse WQ results.¹¹¹ An emergency contact list was reviewed.¹¹²

Full Compliance

■ **6.2. Incident and emergency response protocol (IERP)**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: defines potential incidents and emergencies and document procedures and response plans with the involvement of relevant agencies; trains employees and regularly tests emergency response plans; and investigates any incidents or emergencies and revises protocols as necessary.

The Incident Prevention and Preparedness management process is described in the Incident Prevention and Preparedness Procedure.¹¹³ This provides details for the implementation of incident

¹⁰⁸ Procedure for Triggers, Notifications and Actions for Adverse WQ Results (Reference WPIMS5274).

¹⁰⁹ Drinking Water Management Manual (Reference BMIS0213), section 6, page 44.

¹¹⁰ Drinking Water Management Manual (Reference BMIS0213), section 6, page 44.

¹¹¹ Procedure for Triggers, Notifications and Actions for Adverse WQ Results (Reference WPIMS5274).

¹¹² DWQ Incident Management Contacts (Reference WPIS5228.01).

¹¹³ Incident Prevention and Preparedness Procedure (Reference SDIMS0013).

prevention and preparedness, and learning from incidents. The Incident Prevention and Preparedness management process is supported by a range of supplementary procedures and SOPs.

Sydney Water has a program of regular training and joint incident response exercises with key stakeholders.¹¹⁴

Full Compliance

Implementation

The Sydney Water Incident Management procedure was reviewed.¹¹⁵ A Powerpoint presentation prepared by the Networks group concerning training for the implementation of the DWQ (Drinking Water Quality) event management plan was examined.¹¹⁶

Full Compliance

Element 7 – Employee Awareness and Training

■ **7.1. Employee awareness**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water develops mechanisms and communication procedures to increase employees' awareness of and participation in drinking water quality management.

Sydney Water ensures that all employees are aware of drinking water quality management programs and that relevant staff are appropriately trained and aware of their responsibilities in drinking water quality management.

Sydney Water achieves awareness through various means including, induction programs, newsletters, noticeboards, seminars, team briefings, divisional updates, meetings, internal forums (including the Drinking Water Leadership Group, and Water Forum), forums with key stakeholders (including the WaterNSW, WFP operators including BOO plant operators), Sydney Water's intranet, internal social media, email, and road shows.¹¹⁷

Full Compliance

Implementation

Evidence on implementation of this element of the Drinking Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

■ **7.2. Employee training**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: ensures that employees, including contractors, maintain the appropriate experience and qualifications; identifies training needs and ensures resources are available to support training programs; and documents training and maintains records of all employee training.

Sydney Water has many formal and informal programs and initiatives to help staff grow their knowledge and experience, and to promote a culture of sharing these. Mandatory individual training requirements are listed on staff position descriptions, which are held by human resources.

Sydney Water has a partnership with the South-Western Sydney Institute of TAFE where specific aspects of Sydney Water's operational and technical requirements add context to the National Water

¹¹⁴ Drinking Water Management Manual (Reference BMIS0213), section 6.2, page 45.

¹¹⁵ Sydney Water Incident Management Procedure (Reference EMSIMS0016).

¹¹⁶ DWQ Event Management Plan Training 2016.

¹¹⁷ Drinking Water Management Manual (Reference BMIS0213), section 7.1, page 50.

Package qualifications. Qualifications include a Certificate IV and Diploma in Water Operations. Many of Sydney Water's operators and other staff are graduates of these programs.

Staff directly involved in managing water quality are trained in relevant procedures contained in SDIMS.

There is a formal corporate induction given to all new Sydney Water staff. The induction includes tours of Sydney Water sites, including water filtration plants. There are also local level inductions for particular functional areas within Sydney Water.¹¹⁸

Full Compliance

Implementation

Evidence on implementation of this element of the Drinking Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

Element 8 – Community Involvement and Awareness

■ ***8.1. Community consultation***

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: assesses requirements for effective community involvement; and develops a comprehensive strategy for community consultation.

Community consultation is undertaken via public discussion documents, public forums, and through other groups. Since they were established, the Customer Council and the Business Customer Forum have reviewed and provided feedback on a wide range of strategies and programs. Short-term advisory groups are also established as required. Sydney Water may undertake customer consultation sessions 'as required', as projects arise.¹¹⁹

Full Compliance

Implementation

Numerous examples of community consultation may be seen on the Sydney Water website. For example, Contact Us, Customer Council Charter, Customer Forum, Community Outreach Program.

Full Compliance

■ ***8.2. Communication***

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water develops an active two-way communication program to inform consumers and promote awareness of drinking water quality issues.

Sydney Water actively communicates with customers and consumers, and listens and acts when they have problems or concerns. Customers are also informed of drinking water issues and performance.

Sydney Water's Annual Report includes a summary of drinking water quality performance, including tracking against previous years' results.

A copy of the Waterwrap newsletter is included with customers' bills. This provides basic information relating to water quality and refers customers to view the further data published on the

¹¹⁸ Drinking Water Management Manual (Reference BMIS0213), section 7.2, page 53.

¹¹⁹ Drinking Water Management Manual (Reference BMIS0213), section 8.1, page 55.

Sydney Water website, which includes a range of information.

The Public Communications Guidelines provides guidance for Sydney Water to fulfil its public communication function. This facilitates consistency in messaging across WaterNSW, NSW Health, and Sydney Water.¹²⁰

Full Compliance

Implementation

Evidence on implementation of this element of the Drinking Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

Element 9 – Research and Development

■ ***9.1. Investigative studies and research monitoring***

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: establishes programs to increase understanding of the water supply system; and uses information to improve management of the water supply system.

Sydney Water has a dedicated research function within the Corporate Strategy group. The Research and Development Program sets out Sydney Water's current research portfolio.

Sydney Water also has a collaborative program with the private sector partners for BOO WFPs, which includes research and development, technology transfer, and fellowships available to staff to foster an exchange of knowledge and skills.

The JOG (Sydney Water, WaterNSW, and NSW Health) has an annually-recurring agenda item to scan for emerging risks to water quality. Each year a joint paper is presented to the JOG by Sydney Water and WaterNSW on emerging risks and approaches to their management. This is combined with the annual review of research and development related to water quality.¹²¹

Full Compliance

Implementation

Evidence on implementation of this element of the Drinking Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

■ ***9.2. Validation of processes***

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: validates processes and procedures to ensure that they are effective in controlling hazards; and revalidates processes periodically or when variations in conditions occur.

Sydney Water performs ongoing validation on important public health-related analytes, specifically including filter performance and primary disinfection.

Catchments are assessed against *Drinking Water Source Assessment and Treatment Requirements: Manual for the Application of Health-based Treatment Targets (HBT)* (WSAA Manual). Sydney Water uses both tiers described in the WSAA Manual. To implement this HBT approach, Sydney Water has selected a tier of filter effluent turbidity criteria from the WSAA Manual, and has replicated these criteria within the Drinking Water Product Specification. In this way, any deficiencies in achieving HBTs are addressed

¹²⁰ Drinking Water Management Manual (Reference BMIS0213), section 8.2, page 59.

¹²¹ Drinking Water Management Manual (Reference BMIS0213), section 8.2, page 59.

through the Drinking Water Management System.

Sydney Water performs ongoing validation of primary disinfection through analysis of Ct (Concentration time) performance. This information is reported annually to NSW Health in the Compliance and Performance Report. Ct is typically calculated at the last reservoir prior to the first customer. The Drinking Water Product Specification sets criteria for primary disinfection performance.¹²²

Full Compliance

Implementation

Evidence on implementation of this element of the Drinking Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

- **9.3. Design of equipment**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water validates the selection and design of new equipment and infrastructure to ensure continuing reliability.

Sydney Water notes that piloting and options analyses are used for evidence-based design of equipment and infrastructure. Equipment is selected based on its ability to meet a Functional Design Specification, with operators involved in acceptance testing. New equipment must meet intended requirements and provide necessary process flexibility and controllability as required.¹²³

Full Compliance

Implementation

Evidence on implementation of this element of the Drinking Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

Element 10 – Documentation and Reporting

- **10.1. Management of documentation and records**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: documents information pertinent to all aspects of drinking water quality management; develops a document control system to ensure current versions are in use; establishes a records management system and ensures that employees are trained to fill out records; and periodically reviews documentation and revises as necessary.

The Business Management Information System (BMIS) contains Sydney Water's quality systems documentation, including those for the Service Delivery Integrated Management System (SDIMS). The BMIS ensures that only current versions of documents are used. Documents are flagged as either 'draft', 'active', 'archived', or 'expired'. Archived and expired documents are only accessible to system administrators.¹²⁴

For each document, there is a 'controlled hard copy register', which can be used to track and manage controlled hard copies. Other printed documents are marked within the document footer as not being controlled and therefore not necessarily current. Typically, documents have an expiry date marked in the footer and revision control chart, which is at most three years after the last review. The revision control chart also deals with the history of revisions as well as document dates and

¹²² Drinking Water Management Manual (Reference BMIS0213), section 9.2, page 62.

¹²³ Drinking Water Management Manual (Reference BMIS0213), section 9.3, page 63.

¹²⁴ Drinking Water Management Manual (Reference BMIS0213), section 10.1, page 65.

review periods. The same information is given in the document details page in the BMIS.

An e-learning package for the BMIS is available to staff. All Service Delivery staff take part in SDIMS training.

There is a reminder and reporting system within BMIS. Monthly reminders are sent to document authors, owners, and controllers for documents due for review, and an internal report is prepared listing documents not updated prior to 90 days before their scheduled review.

BOO contractors are required to implement a similar quality management system, including document management.¹²⁵

The Document Management process sets out direction and supporting information to ensure all documentation that forms part of the SDIMS is managed in accordance with requirements. The Records Management procedure documents how records are created, registered, stored and disposed within Service Delivery Division.¹²⁶ The Sydney Water Information Management (SWIM) system is Sydney Water's principal records management system. It contains business records other than management system documentation. SWIM is accessible to staff through the Sydney Water intranet.¹²⁷

Full Compliance

Implementation

An example of a document management procedure was examined.¹²⁸ A document review, which revealed review comments and a workflow action list, was also investigated.¹²⁹

A screen shot which illustrates the process of logging a document into the document management system was reviewed.¹³⁰

Full Compliance

▪ **10.2. Reporting**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: establishes procedures for effective internal and external reporting; and produces an annual report to be made available to consumers, regulatory authorities and stakeholders.

Sydney Water requires that reports associated with drinking water are to be prepared in accordance with formal and regulatory requirements (Component 1.2). Other reports may be prepared based on business drivers.

The Compliance Reporting Procedure sets out a systematic approach to comply with legal and other reporting requirements and to ascertain accountabilities. Full reporting requirements for Sydney Water are captured in the Corporate Compliance Program.¹³¹

Full Compliance

Implementation

A procedure that outlines the method for compiling information about key stakeholders involved in the preparation of the Quarterly Drinking Water Quality Report was reviewed.¹³² A further example

¹²⁵ Drinking Water Management Manual (Reference BMIS0213), section 10.1, page 65.

¹²⁶ iConnect – SW Records Management Policy.

¹²⁷ Drinking Water Management Manual (Reference BMIS0213), section 10.1, page 65.

¹²⁸ Document Management Procedure (Reference SDIMS008).

¹²⁹ BMIS document review of Water Specifications (Reference IMSO 152.01 Document review comments and audit trail).

¹³⁰ Document Review Comments and Audit Trail (Reference IMS0152.01).

¹³¹ Drinking Water Management Manual (Reference BMIS0213), section 10.2, page 66.

is the work instruction for producing the quarterly DWQ Monitoring Report to NSW Health.¹³³

Full Compliance

Element 11 – Evaluation and Audit

■ ***11.1. Long-term evaluation of data***

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: collects and evaluates long-term data to assess performance and identify problems; and documents and reports results.

Sydney Water conducts long-term evaluations of results to assess performance and to identify trends and anomalies. Examples of these evaluations are:

- Management reviews (Component 12.1), including the Annual Service Delivery Division Management Review and periodic performance reviews;
- System Analysis Report, produced by Networks on a monthly basis with a rolling three-year window;
- Components of the annual Water Conservation Report relevant to drinking water;
- Routine public reporting of drinking water quality;
- Catchment-to-Consumer Risk Assessment, informing the Drinking Water Improvement Plan;
- Product and Asset Management's review of performance against the Drinking Water Product Specification; and
- Compliance and Performance Report.

Results are examined against relevant guideline and regulatory requirements, the Drinking Water Product Specification, and other relevant criteria.¹³⁴

Full Compliance

Implementation

An example of the implementation of this component is the procedure to conduct a risk review as part of the catchment to consumer DW Quality and Quantity.¹³⁵

Full Compliance

■ ***11.2. Audit***

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: establishes processes for internal and external audits; and documents and communicates audit results.

Sydney Water states that the purpose of auditing is to confirm processes and procedures are effective, and to identify areas for improvement.¹³⁶ Sydney Water audits include:

- Quality system audit
The Assurance and Monitoring (Audit and Inspections) process outlines the process for an effective audit and inspection program for process performance monitoring and risk management in Service Delivery Division. Audit programs are devised on a three-yearly basis. Staff with relevant auditing competencies are used to lead the internal audits. External quality

¹³² Preparation of Drinking Water Quality Report (Reference MP0023).

¹³³ Producing Quarterly DWQ Monitoring Reports to NSW Health (Reference MP0017).

¹³⁴ Drinking Water Management Manual (Reference BMIS0213), section 11.1, page 70.

¹³⁵ Sydney Water and WaterNSW Risk Review (Reference BMIS0249).

¹³⁶ Drinking Water Management Manual (Reference BMIS0213), section 11.2, page 71.

audits are carried out regularly by accredited auditors. Findings and opportunities for improvement identified in quality audits are documented in a compliance database and results are communicated to staff.

- **Audit under the Operating Licence**

Under the Operating Licence, IPART undertakes an audit of Sydney Water's compliance with the Operating Licence, the Reporting Manual, or any matters required by the Minister.

- **Internal audit**

Sydney Water's Internal Audit team conducts audits, investigates corrupt conduct, and provides advice on controls and probity

Full Compliance

Implementation

An example of the implementation of this component is the procedure for Performance Monitoring (Audit/Inspections).¹³⁷

Full Compliance

Element 12 – Review and Continuous Improvement

- **12.1. Review by senior executives**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: undertakes senior executive reviews of the effectiveness of the management system; and evaluates the need for change.

Sydney Water's Management Review process sets out the method and accountabilities for:

- The annual Service Delivery Division management review, which includes a review of the SDIMS for adequacy, suitability, and effectiveness; and an integrated review on drinking water performance (water quality, quantity, risk, cost, and customer satisfaction). It specifically analyses audit findings, BMIS data, training requirements, incident prevention and preparedness, complaints, user feedback, risk reviews, and compliance with performance monitoring requirements of SDIMS management processes.
- Periodic performance reviews, which report performance against key compliance measures, progress against key divisional initiatives, findings from audits and inspections, incidents and significant complaints, and safety performance, amongst other things.
- The half-yearly water quality updates provided to the Board E&H Committee.

Further internal mechanisms for top management review of drinking water and the effectiveness of Sydney Water's Drinking Water Management System are also in place.

Full Compliance

Implementation

An example of the implementation of management review is the procedure for Management Review.¹³⁸

Full Compliance

- **12.2. Improvement plan**

Consistency with ADWG

Consistency with the ADWG requires that Sydney Water: develops a drinking water quality

¹³⁷ Procedure for Performance Monitoring (Audit/Inspections), (Reference SDIMS0010).

¹³⁸ Management Review Procedure (Reference SDIMS0012).

management improvement plan; and ensures that the plan is communicated and implemented, and that improvements are monitored for effectiveness.

The Drinking Water Improvement Plan contains drinking water management improvement actions identified:

- as an outcome of the Catchment-to-Consumer Risk Assessment;
- through business strategic planning;
- as necessary to meet the Drinking Water Product Specification;
- through audit and benchmarking; and
- as relevant incident and exercise debrief actions.

Progress in the implementation of the Drinking Water Improvement Plan's improvement actions is reported in the Compliance and Performance Report.

Full Compliance

Implementation

The Product Management Improvement Strategy Register is an example of the how this component is implemented.¹³⁹

Full Compliance

¹³⁹ Product Management Strategy Register (Reference 548309).

Table A.2.4 Recycled Water (Sub-clause 2.2.1)

Sub-clause	Requirement	Compliance Grade
2.2.1	<p>Sydney Water must maintain a Management System that is consistent with the <i>Australian Guidelines for Water Recycling</i>, except to the extent that NSW Health specifies otherwise (the Recycled Water Quality Management System).</p> <p><i>[Note: It is expected that the Recycled Water Quality Management System will be consistent with the Australian Guidelines for Water Recycling, including the Framework for Management of Recycled Water Quality and Use. However, where NSW Health considers it appropriate, the application of the Australian Guidelines for Water Recycling may be amended or added to, to take account of Sydney Water's circumstances and/or Recycled Water quality policy and practices within New South Wales.]</i></p>	<div></div> <p>Full Compliance</p>
<hr/>		
Risk	Target for Full Compliance	
Without a comprehensive Recycled Water Quality Management System, there is a high risk that Sydney Water may not be able to effectively manage risks to recycled water quality, thereby posing risks to both public health and the environment.	Evidence that a Recycled Water Quality Management System is established, maintained and kept up to date, and that it is consistent with the AGWR, and any additional requirements of NSW Health.	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">Refer to Table A.2.6 for details of evidence sighted.		
<hr/>		
Summary of reasons for grade		
<p>Sydney Water has developed the Recycled Water Management Manual (RWMM) and scheme-specific Recycled Water Quality Management Plans (RWQMPs). Together, these documents constitute a comprehensive recycled water quality management system package that closely follows the structure and content of the 12 elements of the <i>Australian Guidelines for Water Recycling</i> (AGWR). The result is a recycled water quality management system that, in all key respects, is tailor-made to comprehensively address every requirement of the AGWR that is relevant to Sydney Water's operations.</p> <p>To be consistent with the AGWR, a recycled water management system not only requires a comprehensive, overarching package such as the RWMM and the separate RWQMPs, but also a range of high level supporting documentation. Sydney Water has recognised this need through the development or updating of a hierarchy of strategic documents that support the overarching package (RWMM and RWQMPs). These include:</p> <ul style="list-style-type: none">Compliance Accountability Framework;Risk Management framework;Recycled Water Product Specification;Annual Recycled Water Quality Monitoring Plan;Non-conformance, Corrective and Preventive Action procedures;Incident Management Plan;Document and Records Management Processes;		

-
- Audit Plan; and
 - Product Improvement Framework

Through reference to these and other, more specific policies and procedures, Sydney Water was able to demonstrate that it has developed and maintained its Recycled Water Management System to be consistent with the AGWR.

Discussion and notes

Refer to Table A.2.6 for detailed Element-by-Element discussion.


Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.2.5 Recycled Water (Sub-clause 2.2.2)

Sub-clause	Requirement	Compliance Grade
2.2.2	Sydney Water must ensure that the Recycled Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Recycled Water Quality Management System, and to the satisfaction of NSW Health.	 High Compliance
Risk		Target for Full Compliance
If the Recycled Water Quality Management System is not fully implemented, there is a high risk that Sydney Water may not be able to effectively manage risks to recycled water quality, thereby posing risks to both public health and the environment.		Evidence that the Recycled Water Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the System, and to the satisfaction of NSW Health.
Evidence sighted		
<ul style="list-style-type: none"> Refer to Table A.2.6 for details of evidence sighted. 		
Summary of reasons for grade		
<p>A number of implementation shortcomings were identified in the report on the 2014/15 Operational Audit. Sydney Water has risen to the challenge presented by this feed-back and embarked on a concerted effort to identify and analyse the short-comings and prepare strategies to address these appropriately.</p> <p>Work was required to improve the risk assessment process by removing inconsistencies from the Hazard Identification and Risk Assessment (HIDRA) process, obtaining approval from NSW Health for these improvements and carrying them through the RWQMP revision program; this has been achieved. The documentation system was not being adequately implemented; this has been rectified. An audit program to assess operational effectiveness and compliance has been introduced.</p> <p>The consistency of RWQMPs has also been improved by:</p> <ul style="list-style-type: none"> formalisation of CCPs in the Product Specification; development of a system-wide operational and verification monitoring plan; and implementation of system-wide operating, maintenance and calibration procedures. <p>A program to revise existing scheme specific Recycled Water Quality Management Plans (RWQMP) was developed and applied. A detailed verification monitoring program has been developed, agreed with NSW Health, and is being implemented as part of the program. While Sydney Water has made significant gains in reducing the backlog, some work is still outstanding.</p> <p>The grade of High Compliance is not a reflection of poor performance; rather it is an acknowledgement that work remains to be done and the implementation of the Recycled Water Management System is not yet complete.</p>		
Discussion and notes		
Refer to Table A.2.6 for detailed Element-by-Element discussion.		

Recommendations

There are no recommendations in respect of this sub-clause. Whilst a High Compliance grade is assessed, the deficiencies are addressed by previous recommendation 2014/15-4, action in respect of which has been assessed as Ongoing (refer Table A.2.10).

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.2.6 Recycled Water (Sub-clauses 2.2.1 and 2.2.2) – Detailed Assessment

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Interviews with Sydney Water staff, 26-28 September 2016.
- Calibration response check of laboratory equipment (Reference D0000171).
- Compilation of Regulatory Reports for Service Delivery (Reference SDIMS0015).
- Compliance Accountability Register.
- Corporate Risk Management Framework (Reference QMAF0080).
- Corporate Risk Management procedure (Reference QMAF0081).
- Document Management procedure (Reference SDIMS0008).
- Email – example of regular legislative update, 23 August 2016.
- Email to NSW Health on RW quality and 4 year RWQMP schedule, 17 May 2016.
- Maximo Wol WRP PM schedule.
- Minutes of JOG Meeting 25 May 2016.
- MoU between NSW Ministry of Health and Sydney Water, July 2016.
- Performance Monitoring (Audits and Inspections) procedure (Reference SDIMS0010).
- Product Improvement Framework (Reference BMIS0214).
- Quarterly Recycled Water Quality Monitoring Report for NSW Health 2015-16, Fourth Quarter 2015-16 (Reference 546383).
- Records Management Procedure (Reference SDIMS0017).
- Recycled Water Management Manual (Reference BMIS0260).
- Recycled Water Policy (Reference BMIS0260.01).
- Recycled Water Quality Event Management Plan (Reference WR5271).
- Recycled Water Quality Event Management Procedure (Reference WR5271).
- Recycled Water Quality Management System Folio 2015-16.
- Recycled Water Risk Assessment for Wollongong Stage 1 (Reference RW0002.01).
- Recycled Water Risk Assessment for Wollongong Stage 2 (Reference WRHQ5052.01).
- Recycled Water Notification Process (Reference BMIS0207).
- Recycled Water Treatment Detailed Verification Monitoring for Pathogen Reduction (Reference PAMWP001).
- Risk Technical Requirements Operational Risks (Reference QMAF0021).
- RW Monitoring Plan 2015-16 Approved (reference BMIS0045.01).
- RW Product Specification (Reference D0000096).
- SDIMS Audit Plan 15-16 completed.
- Spreadsheet mapping documentation to AGWR (Reference BMIS0260.02).
- Sydney Water EMS External Requirements Register (Reference SWEMS0003.01).

-
- Sydney Water Incident Response Plan (Reference EM0010).
 - Sydney Water program and progress – RW HIDRA RWQMPLRV UV performance.
 - Update four quarter schedule RWQMP – NSW Health Q4 2015-16.
 - Wollongong Council Recycled Water Agreement, dated February 2012.
 - Wollongong Stage 1 and 2 WRP HIDRA Workshop (Reference 549237).
 - Wollongong Stage 1 RWQMP (Reference RW0002).
 - Wollongong Stage 2 RWQMP (Reference WRHQ5052).
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Discussion and notes

Element-by-element discussion

A detailed element-by-element discussion of the consistency of Sydney Water's Recycled Water Management System with the AGWR and the implementation of Sydney Water's Recycled Water Management System is set out in the following sections.

Element 1 – Commitment to responsible use and management of recycled water quality

- *Responsible use of recycled water*
- *Regulatory and formal requirements*
- *Partnerships and engagement of stakeholders (including the public)*
- *Recycled water policy*

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 1 of the RWMM.¹⁴⁰

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Management of regulatory and formal requirements;
- Engagement with stakeholders; and
- Recycled Water Policy.

The Compliance Accountability Register prioritises legislative requirements between Acts with a high significance for Sydney Water (Primary Acts) and Acts with a lower level significance for Sydney Water (Secondary Acts).¹⁴¹ For high significance Acts, it details: the legislative requirement; Accountability; Accountable GM and Division; Key Contact; Compliance measures; Evaluation; and Compliance Results. An appendix to the Compliance Accountability Register provides a comprehensive listing of legislation relevant to Sydney Water's operations and the related statutory instruments.

The EMS External Requirements Register identifies non-statutory environmental requirements observed by Sydney Water.¹⁴² These include instruments such as Standards, Codes of Practice, Agreements, Guidelines, Memoranda of Understanding, Stakeholder Engagement Plans and Policies.

Sydney Water maintains MoUs with a range of regulators and key stakeholders: NSW Health¹⁴³, the NSW EPA, NSW Office of Fair Trading and FRNSW. It also maintains customer agreements with all non-residential customers.

¹⁴⁰ Recycled Water Management Manual (Reference BMIS0260), page 9.

¹⁴¹ Compliance Accountability Register.

¹⁴² Sydney Water EMS External Requirements Register (Reference SWEMS0003.01).

The Recycled Water Policy was approved by the Managing Director on 6 April 2016.¹⁴⁴ In its response to the audit questionnaire, Sydney Water advised that the policy is on physical display at relevant locations (eg. head office and WRP sites), and is available on the Business Information Management System (BMIS), the Intranet (iConnect), and is included in the AGWR training for all Recycled Water Staff.

Full Compliance

Implementation

The Folio of Progress for the Recycled Water Management System was sighted.¹⁴⁵ This document is maintained to track the progress of compliance with Operating Licence and Reporting Manual requirements. An email “Legislative Update 6-9 August 2016” was sighted which, while outside of the audit period, provided an example of a regular update on regulatory requirements.¹⁴⁶

The MoU with NSW Health outlines roles and responsibilities relating to public health and recycled water. It has recently been renegotiated, which confirms that Sydney Water is actively engaged with its key Recycled Water regulator. Routine interactions with NSW Health are carried on through:

- Joint Operational Group meetings – which coordinate MoU implementation; establish information exchange; coordinate investigations and studies; and make recommendations to the Strategic Liaison Group. The agenda for the JOG meeting of 25 May 2016 includes a range of RW issues.
- Strategic Liaison Group meetings – which consider long-term issues and policy and monitor the implementation of the MoU. SLG meetings are confidential; therefore, no details are available.
- Email communications – including email correspondence concerning NSW Health review of the Recycled Water Quality Management Plans program.¹⁴⁷
- Periodical reports and updates – including Quarterly Recycled Water Quality Reports and Quarterly updates on rolling 4-year review of Scheme Recycled Water Quality Management Plans. For example, the Fourth Quarter update on the Recycled Water Quality Management Plan Review was sighted.¹⁴⁸

Customer agreements are a means to inform customers of their responsibilities. The current agreement with Wollongong City Council was found to include an explanation of the nature of supply; use management and notifications concerning use of the supply; details of fees and costs; and a discussion of liability, risk and insurance.¹⁴⁹

Sydney Water engages with residential customers through a customer contract and a variety of information and awareness activities. Various fact sheets and information is provided to recycled water residential customers. The fact sheet “Using recycled water around your home in the Rouse Hill area” was sighted.¹⁵⁰

In discussing the Recycled Water Policy, the AGWR mentions that the policy should include commitment to the responsible use of recycled water, an intention to adopt best practice management and continuous improvement.

Sydney Water has demonstrated these characteristics in response to a number of shortcomings identified in the 2014/15 Operational Audit Report. It is clear that significant effort and resources have been focussed on the recycled water program to achieve the significant improvement

¹⁴³ MoU between NSW Ministry of Health and Sydney Water, July 2016.

¹⁴⁴ Recycled Water Policy (Reference BMIS0260.01).

¹⁴⁵ Recycled Water Quality Management System Folio 2015-16.

¹⁴⁶ Email – example of regular legislative update,

¹⁴⁷ Email to NSW Health on RW quality and 4 year RWQMP schedule.

¹⁴⁸ Update four quarter schedule RWQMP – NSW Health Q4 2015-16.

¹⁴⁹ Wollongong Council Recycled Water Agreement, dated February 2012.

¹⁵⁰ http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdgw/~edisp/dd_080939.pdf

demonstrated during this audit. The auditors believe this to be evidence that the Recycled Water Policy is implemented at Sydney Water.

Full Compliance

Element 2 – Assessment of the recycled water system

- *Intended uses and sources of recycled water*
- *Recycled water system analysis*
- *Assessment of water quality data*
- *Hazard identification and risk assessment*

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 2 of the RWMM.¹⁵¹

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Recycled water system analysis;
- Assessment of water quality data; and
- Hazard identification and risk assessment.

The RWMM explains that components and actions for this element of the AGWR are included in the Scheme Plans. The RWMM also notes that NSW Health reviews and acknowledges satisfaction with the Scheme Plans. Review of the plans for the Wollongong Stage 1 RW Scheme revealed that the details for these components of Element 2 were included. These are discussed below.

As a general comment, Sydney Water, as the sewerage system operator, has a good understanding of wastewater characteristics in its area of operations. In particular, Sydney Water has current and historical data as well as details of notable incidents concerning inflows to, and finished water characteristics from, its sewage treatment facilities.

An analysis of this data, together with site-specific features of the scheme provide input into a hazard identification and risk assessment process. The Risk Technical Requirements document provides an overview of the risk assessment process as well as a set of generalised criteria for likelihood and consequence.¹⁵²

The risk assessment is typically done in a workshop environment. Sydney Water has developed a specific template with consistent application of consequence scores to address previous issues of inconsistencies. Sydney Water has issued an invitation to NSW Health (both the Water Unit and the local Public Health Unit) to participate in these assessment sessions.¹⁵³ Customers are also invited to these sessions.

A Framework Document¹⁵⁴ and a Corporate Risk Management Procedure¹⁵⁵ provide further details. The RWMM states that the corporate risk management framework conforms to ISO 31000.

The risk assessment process is on-going, with the development and maintenance of a recycled water improvement plan (covered in more detail in element 12) and a major review of the risk assessment every five years, in which NSW Health participates. This review and update of the recycled water improvement plan is described within the Scheme Plan.

¹⁵¹ Recycled Water Management Manual (Reference BMIS0260), page 24.

¹⁵² Risk Technical Requirements Operational Risks (Reference QMAF0021).

¹⁵³ Minutes of JOG Meeting 25 May 2016.

¹⁵⁴ Corporate Risk Management Framework (Reference QMAF0080).

¹⁵⁵ Corporate Risk Management procedure (Reference QMAF0081).

Full Compliance

Implementation

As the RWMM notes, the implementation of this element of the AGWR is described in the Scheme Plans.

The Scheme Plans for the Wollongong Stage 2 Scheme were reviewed.¹⁵⁶ The risk assessment for Stage 2¹⁵⁷ was compared with that for Stage 1.¹⁵⁸ Both risk assessments considered a realistic range of hazardous events, were appropriately labelled, and adequately referenced. While some different hazards were considered (the Stage 2 scheme included some hazards that were specific to Golf Club, Wollongong Council and the Port Kembla Coal Loader), the treatment of common hazards was consistent. Furthermore, the description of consequence was found to be consistent with the assessed consequence rating.

The report on the 2014/15 Operational Audit commented on some inconsistencies in risk assessments and this matter was raised during audit interviews. The development of a specific template with consistent application of consequence scores aims to address these matters.

It is noted that Sydney Water developed the RWMM and the RW Product Specification during the current audit period.

Commentary on this matter is presented in the discussion of Recommendation 2014/15-3 (refer Table A.2.9).

The report on the 2014/15 Operational Audit also commented on the progress of the program to review the risk assessments in RWQMPs.

During the audit interviews, Sydney Water explained that the original intention was that the program to review and update RWQMP risk assessments should include results from a detailed verification log reduction value (LRV) monitoring exercise. This point was acknowledged in the 2014/15 audit report.¹⁵⁹

However, the time required to conduct the LRV work can be extensive. Realising that reviewing schemes one-by-one would not achieve a reasonable interval between reviews, Sydney Water decided to separate the substantive review and update of the scheme plans from the LRV verification monitoring program.

By 30 June 2016, Sydney Water had reviewed, updated and submitted to NSW Health nine (9) of the fourteen (14) scheme plans.¹⁶⁰ Sydney Water advised that the remaining five (5) scheme plans were currently being reviewed and updated. This work was scheduled for completion in October-November 2016. The RWQMPs will be further updated with LRV verification monitoring data as the LRV monitoring program is completed for each scheme. This matter is discussed further in respect of Element 9 and Recommendation 2013/14-1 (refer Table A.2.7).

The auditors understand that the risk assessment reviews for the remaining five (5) plans have been completed in the period since the end of the audit period. However, from the evidence presented above in respect of the LRV verification monitoring program, it is considered that element 2 of the current Recycled Water Quality Management System was not fully implemented during the audit period.

High Compliance

¹⁵⁶ Wollongong Stage 2 RWQMP (Reference WRHQ5052).

¹⁵⁷ Recycled Water Risk Assessment for Wollongong Stage 2 (Reference WRHQ5052.01).

¹⁵⁸ Recycled Water Risk Assessment for Wollongong Stage 1 (Reference RW0002.01).

¹⁵⁹ Sydney Water Corporation 2014/15 Operational Licence Audit, Risk Edge, 19 February 2016, page 75.

¹⁶⁰ Sydney Water program and progress – RW HIDRA RWQMPLRV UV performance.

Element 3 – Preventive measures for recycled water management

- ***Preventive measures and multiple barriers***
- ***Critical Control Points***

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 3 of the RWMM.¹⁶¹

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Identify preventive measures for significant hazard or hazardous event, and estimate the residual risk;
- Identify alternative or additional preventive measures that are required to ensure risks are reduced to an acceptable level; and
- Establish mechanisms for operational control.

The RWMM explains that, apart from critical control points (CCPs) that are discussed in the RW Product Specification, components and actions for this element of the AGWR are included in the Scheme Plans.

Preventive measures, the corresponding residual risks, and alternative or additional preventive measures are identified within the risk assessment process.

Since recycled water provided by Sydney Water is derived from sewage treatment, the selection of CCPs is able to be generalised across the schemes to some extent. The Recycled Water Product Specification states:¹⁶²

“Depending on the treatment processes used, the CCPs (and indicators) are:

- *secondary treatment outlet (total suspended solids)*
- *tertiary filtration outlet (turbidity)*
- *by-pass points (flow)*
- *chlorine contact tank (free chlorine, pH, temperature at the offtake point for recycled water; flow)*
- *ozone outlet (turbidity, pH)*
- *UV unit (UV dosage, UVT)*
- *membrane filtration (turbidity, pressure decay or conductivity).”*

The RW Product Specification sets out the objective that critical control points should collectively ensure the protection of public health. The AGWR defines tolerable public health risk as 1 μ DALY¹⁶³ per person per year,¹⁶⁴ which is the target adopted in the Recycled Water Product Specification.¹⁶⁵

Each of the above treatment processes will remove or inactivate the four pathogen groups (protozoa, bacteria, viruses, and helminths) to some extent, indicated by a \log_{10} removal value (LRV). To achieve 1 μ DALY per person per year, the total LRV for each pathogen group of the treatment train in total should be equal or greater than the population of that group (expressed as a \log_{10} number) in the influent.

Full Compliance

¹⁶¹ Recycled Water Management Manual (Reference BMIS0260), page 29.

¹⁶² RW Product Specification (Reference D0000096), page 4.

¹⁶³ DALY is an acronym for Disability-adjusted life year.

¹⁶⁴ AGWR, 2006, page 85.

¹⁶⁵ RW Product Specification (Reference D0000096), page 5.

Implementation

Preventive measures are identified in the RWQMPs for Wollongong stage 1 and stage 2. In both cases, these are: ^{166,167}

- wastewater source control;
- wastewater treatment (Primary treatment, secondary treatment, tertiary filtration, plus CMF, RO and disinfection (chlorine) for stage 1, or UV disinfection and chlorination for stage 2);
- plumbing control and operational inspection programs; and
- quality management (such as a certified quality management system and education programs and calibration of monitoring and control instrumentation).

Furthermore, customers are required to maintain the recycled water supplied to an adequate quality (in the case of Stage 1), and to maintain exposures within intended ranges through appropriate controls. Customers are also required to control inadvertent use of the recycled water and to ensure that cross connections to the potable supply do not occur and that workers or site visitors do not ingest the recycled water as though it were potable water. These requirements and controls are specified in more detail in the customer's respective Recycled Water Quality Management Plans (RWQMPs).

In its response to the Audit Questionnaire, Sydney Water stated:

“As part of every risk assessment, effective preventative measures were identified and documented, where those measures help to reduce the risk. The risk assessment framework allowed Sydney Water to determine if the risk was reduced to an acceptable level (or as low as reasonably practicable).”

The risk registers for these two schemes are presented as Appendix B of the Scheme RWQMP. These contain a summary of all preventive measures identified during the risk assessment process for each hazardous event identified together with the hazard identification and risk assessment worksheets.

In its response to the audit questionnaire, Sydney Water also stated:

“Critical controls points (CCPs) have been established to manage significant risks (Wollongong Stage 1 RWQMP and Wollongong Stage 2 RWQMP, Section 3.2) in recycled water production. CCPs are also reviewed in risk assessment workshops (see agenda and briefing paper for workshops). The Recycled Water Product Specifications collates together CCPs for all recycled water schemes.”

Full Compliance

Element 4 – Operational procedures and process control

- ***Operational procedures***
- ***Operational monitoring***
- ***Operational corrections***
- ***Equipment capability and maintenance***
- ***Materials and chemicals***

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 4 of the RWMM.¹⁶⁸

The significant points that demonstrate consistency of the Sydney Water Recycled Water

¹⁶⁶ Wollongong Stage 1 RWQMP (Reference RW0002).

¹⁶⁷ Wollongong Stage 2 RWQMP (Reference WRHQ5052).

¹⁶⁸ Recycled Water Management Manual (Reference BMIS0260), page 32.

Management System with this element of the AGWR are:

- Operational procedures;
- Operational monitoring; and
- Operational corrections.

Treatment plant processes are largely automated and controlled by the SCADA and IICATS systems, which for the most part have standardised operating, monitoring and alarming protocols. Sydney Water has developed operational procedures for these systems, which are documented and housed in authorised content management systems. Sydney Water has mapped relevant documentation to actions in the AGWR indicating which documents are general and which apply to specific schemes.¹⁶⁹

Sydney Water has developed a comprehensive monitoring plan applicable to all recycling schemes, which describes the compliance and grab sampling regime for each scheme.¹⁷⁰ Monitoring of the SCADA system, associated alarms, critical limits, and automated interlocks on all CCPs provide the capacity for effective corrective actions.

Non-conforming water grab samples are reported daily and the Recycled Water Quality Event Management Plan outlines related communication processes.¹⁷¹

A systematic schedule of internal and external reports (monthly, quarterly, and annually) is carried out. As an example, the quarterly report to NSW Health details monitoring results, exceptions and evaluation.¹⁷²

Procedures and schedules for equipment calibration have been developed and maintained in the BMIS. An example procedure for calibration/response check of Laboratory Equipment was provided.¹⁷³ Online and laboratory instruments are inspected, cleaned and calibrated on a routine basis. Records of these activities are maintained according to site-specific procedures.

Planned maintenance and inspection for plant assets is scheduled through the Maximo asset management system in which records are maintained. An example relating to the Wollongong Recycled Water Plant (RWP) was provided, together with an example completed work order.¹⁷⁴

Sydney Water has robust, long-standing requirements and processes relating to the sourcing, purchase, acceptance and use of materials and chemicals.

Full Compliance

Implementation

Evidence on implementation of this element of the Recycled Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

Element 5 – Verification of recycled water quality and environmental performance

- ***Recycled water quality monitoring***
 - ***Application site and receiving environment monitoring***
 - ***Documentation and reliability***
-

¹⁶⁹ Spreadsheet mapping documentation to AGWR (Reference BMIS0260.02).

¹⁷⁰ RW Monitoring Plan 2015-16 Approved (reference BMIS0045.01).

¹⁷¹ Recycled Water Quality Event Management Procedure (Reference WR5271).

¹⁷² Quarterly Recycled Water Quality Monitoring Report for NSW Health 2015-16, Fourth Quarter 2015-16 (Reference 546383).

¹⁷³ Calibration response check of laboratory equipment (Reference (D0000171)).

¹⁷⁴ Maximo Wollongong RWP PM schedule.

-
- ***Satisfaction of users of recycled water***
 - ***Short-term evaluation of results***
 - ***Corrective responses***

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 5 of the RWMM.¹⁷⁵

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Verification monitoring;
- Documentation and reliability;
- Short-term evaluation of results; and
- Corrective responses.

The RWMM states:

“The Annual Recycled Water Quality Monitoring Plan (Component 5.1) identifies Sydney Water’s verification of recycled water quality. The Plan collates and contextualises schemes’ monitoring plans. It identifies Sydney Water’s verification grab-sample monitoring requirements.”¹⁷⁶

As mentioned in the discussion of the previous element, the Annual Recycled Water Quality Monitoring Plan was reviewed.¹⁷⁷ It includes all content required by the AGWR, namely: sample sites, frequency of sampling, analytes to be tested and method codes. The monitoring plan also identifies critical control points within Water Recycling Plants where biological characteristics are monitored for pathogen log reduction investigations. The Annual Recycled Water Quality Monitoring Plan is updated annually and is available in the Sydney Water Information Management system (SWIM).

The analysis of monitoring samples is conducted at NATA (National Association of Testing Authorities) approved laboratories and the results are warehoused in the Laboratory Information Management System (LIMS). As mentioned in respect of the previous element, monitoring results are reported to NSW Health.

Exception reports are generated by an electronic assessment of recycled water quality data and provided to relevant staff for analysis. Corrective responses have been included in the discussion of previous elements.

Full Compliance

Implementation

Evidence on implementation of this element of the Recycled Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

Element 6 – Management of incidents and emergencies

- ***Communication***
 - ***Incident and emergency response protocols***
-

¹⁷⁵ Recycled Water Management Manual (Reference BMIS0260), page 39.

¹⁷⁶ Recycled Water Management Manual (Reference BMIS0260), page 39.

¹⁷⁷ RW Monitoring Plan 2015-16 approved (Reference BMIS0045.01)

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 6 of the RWMM.¹⁷⁸

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Communication; and
- Incident and emergency response protocols.

The RWMM indicates that Sydney Water has an overarching incident management plan, the Sydney Water Incident Response Plan.¹⁷⁹ This plan follows the standard incident management format, namely: identify and assess incident severity; implement notifications; establish control; manage the incident; manage the recovery; and improvement actions.

The Recycled Water Quality Event Management procedure was reviewed. This document includes discussion of regulatory requirements, responsibilities, preparedness, identification of incidents, responding to RW events and incidents; together with sections on communications, including communications with customers.¹⁸⁰

For effective response during an emergency, an abbreviated contact list with some relevant specification data is required. Sydney Water has prepared such a document as a spreadsheet, the Recycled Water Notification Process, which provides contact phone numbers for each Recycled Water plant, together with operational specifications that would be relevant to an emergency situation.¹⁸¹ From some random checks, it appears that this document is current. Sydney Water advised that this table is updated as part of the update of the Recycled Water Quality Plans.

Full Compliance

Implementation

Evidence was sighted relating to a scenario training drill at Wollongong Recycled Water Plant. The training involved a simulated detection of Giardia in stage 2 of the WRP. The debriefing notes indicated that the Standard Incident Procedure (SIP) required updating. The updated SIP was included in this evidence.

Full Compliance

Element 7 – Operator, contractor and end user awareness and training

- ***Operator, contractor and end user awareness and involvement***
- ***Operator, contractor and end user training***

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 7 of the RWMM.¹⁸²

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Operator, contractor and end user awareness; and
 - Training.
-

¹⁷⁸ Recycled Water Management Manual (Reference BMIS0260), page 45.

¹⁷⁹ Sydney Water Incident Response Plan (Reference EM0010).

¹⁸⁰ Recycled water quality event management plan (Reference WR5271).

¹⁸¹ Recycled Water Notification Process (Reference BMIS0207).

¹⁸² Recycled Water Management Manual (Reference BMIS0260), page 49.

In its response to the Audit Questionnaire, Sydney Water advised that:

“Sydney Water achieves awareness through various means including training, site induction programs, newsletters, noticeboards, meetings, internal forums (including Recycled Water Forum), forums with key stakeholders, Sydney Water’s intranet, internal social media and emails. The Business Management Information System contains relevant procedures.”

The minutes of a Water Forum meeting, held on 26 April 2016 were reviewed. This agenda included a range of specialist topics that would improve the awareness of general water recycling issues. The RWMM provides a diagram that illustrates the position held by the Water Forum within the Sydney Water organisation.¹⁸³ This diagram shows that the Forum is in a position to review the Recycled Water Improvement Plan and provide two-way feedback on recycled water issues to the Leadership Group and to the JOG (for escalation of issues with NSW Health or WaterNSW).

The course notes for a training course held on 21-22 June 2016 were reviewed. This course worked through the elements of the AGWR through a series of illustrative examples and group exercises.

Awareness and training for contractors is formalised in the relevant contract document, where applicable. Training for end users is discussed in element 8.

Full Compliance

Implementation

Evidence on implementation of this element of the Recycled Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

Element 8 – Community involvement and awareness

- ***Consultation with users of recycled water and the community***
- ***Communication and education***

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 8 of the RWMM.¹⁸⁴

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Consultation; and
- Communication and awareness.

Sydney Water has two consultation forums: the Customer Council and the Business Customer Forum. The Customer Council provides advice to Sydney Water on matters that relate to residential customers and community groups. The Business Forum is composed of industry associations and peak bodies. It provides a venue for Sydney Water to engage with industry on matters of mutual interest.

Business Customer Representatives are assigned to significant business customers to provide a one-to-one consultation on customer-specific issues.

Sydney Water conducts a range of surveys with business and residential customers at intervals ranging from quarterly to biennially. While these surveys may be general, they may include items related to recycled water.

In relation to communication and awareness, Sydney Water provided the following response to the

¹⁸³ Recycled Water Management Manual (Reference BMIS0260), page 49.

¹⁸⁴ Recycled Water Management Manual (Reference BMIS0260), page 54.

audit questionnaire:

“Sydney Water has long-running education programs to build awareness of recycled water, particularly using the Water Recycling Education Centre at St Marys Advanced Water Treatment Plant. These programs target schools (secondary), universities and TAFE, stakeholder and community groups and professional delegations. Educational resources have been developed and are available on the website.”

Information about recycled water is provided on the Sydney Water website, is sometimes included in “Waterwrap”, a newsletter included with customer bills, and in Fact Sheets prepared on various aspects of recycled water and targeted to users or teachers and students.

Full Compliance

Implementation

Evidence on implementation of this element of the Recycled Water Management System has been incorporated into the above discussion and the discussion of previous elements.

Full Compliance

Element 9 – Validation, research and development

- ***Validation of processes***
- ***Design of equipment***
- ***Investigative studies and research monitoring***

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 9 of the RWMM.¹⁸⁵

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Validation of processes; and
- Investigative studies and research monitoring.

The AGWR notes:

“Validation involves evaluating available scientific and technical information (including historical data and operational experience) and, where necessary, undertaking investigations to validate system-specific operational procedures, critical limits and target criteria. The aim of process validation is to ensure effective operation and control of the recycled water system.”¹⁸⁶

The AGWR view is that validation of processes is important in ensuring that the processes are robust and that the final product is fit for purpose.

In the case of a process to remove pathogens, validation involves determining the maximum LRV capability through the operation of the system under extreme conditions and challenging the unit with pathogens or surrogates to determine maximum achievable LRV. Sydney Water suggests that, since the plants are operational, these measures are not possible. As noted in the discussion in respect of Element 2, Sydney Water has chosen to address this issue through a detailed verification process.

Sydney Water has developed a procedure to verify the LRVs actually achieved by treatment process steps in recycled water schemes.¹⁸⁷

A detailed verification monitoring program for all schemes has been developed and agreed with

¹⁸⁵ Recycled Water Management Manual (Reference BMIS0260), page 68.

¹⁸⁶ AGWR 2006, page 72.

¹⁸⁷ Recycled Water Treatment Detailed Verification Monitoring for Pathogen Reduction (Reference PAMWP001).

NSW Health to be fully implemented by March 2018. The plan involves monitoring actual LRVs achieved for specific organisms under very well documented conditions over a specified period and calculating a final LRV from an analysis of the set of actually achieved LRVs. It has been agreed that progress will be updated quarterly to NSW Health. The details of the verification monitoring plan were developed and implemented for Wollongong stage 1 WRP and Wollongong stage 2 WRP.

This process is being rolled out across all recycled water schemes as scheme specific RWQMPs are progressively updated. As at the end of the audit period, apart from the two Wollongong schemes, the Liverpool scheme had been finalised. The progress with other schemes is continuing according to the agreement with NSW Health and the results achieved to date appear to be encouraging.

In the 2014/15 Operational Audit Report, the auditor expressed three concerns, specifically concerning the Rouse Hill RWP, but possibly applicable across all RWPs. These were:

- Whether the UV unit is operating within its validated envelope;
- Whether the claimed UV dose of 40mJ/cm² with UVT of 75% - 95% is enough to achieve an LRV of 3.0 for Adenovirus; and
- High LRVs are claimed for primary and secondary treatment without being verified for both secondary treatment trains and without sufficient documentation to define CCP1 limits.

It is considered that the completion of the abovementioned verification monitoring plan, agreed by NSW Health, will address these concerns. This view is based on the proposition that it is more important to understand the performance of a particular process step that is being achieved (verification), rather than to understand what could be achieved by that process step (validation).

Sydney Water has developed a dedicated research function within the Corporate Strategy group. The Research and Development Program sets out Sydney Water's current research portfolio. The Health Environment and Asset Science group maintains a watching brief on research themes.

Scheme specific improvement actions are identified through recycled water risk assessment workshops and during the review of the RWQMP.

Full Compliance

Implementation

It is considered that this element of the Recycled Water Management System has not been fully implemented because the detailed verification monitoring program was incomplete at the end of the audit period.

High Compliance

Element 10 – Documentation and reporting

- *Management of documentation and records*
- *Reporting*

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 10 of the RWMM.¹⁸⁸

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Management of documentation and records; and
- Reporting.

The RWMM sets out a clear explanation of the Sydney Water Document and Records Management

¹⁸⁸ Recycled Water Management Manual (Reference BMIS0260), page 62.

System, as follows:¹⁸⁹

“The BMIS (Business Management Information System) contains Sydney Water’s quality systems documentation, including those for the SDIMS (Service Delivery Information System).

The BMIS ensures that only current versions of documents are used. Documents are flagged as either ‘draft’, ‘active’, ‘archived’, or ‘expired’.

All Recycled Water Management System documentation is reviewed on a frequency based on the nature of the document.

For each document there is a ‘controlled hard copy register’, which can be used to track and manage controlled hard copies.

An e-learning package for the BMIS is available. Service Delivery staff take part in SDIMS training.

There is a reminder and reporting system within BMIS. Monthly reminders are sent to document authors, owners, and controllers for documents due for review, and an internal report is prepared listing documents not updated prior to 90 days before their scheduled review.

The Document Management process (SDIMS0008) sets out direction and supporting information to ensure documentation that forms part of the SDIMS is managed in accordance with requirements.

The Records Management procedure (SDIMS0017) documents how records are created, registered, stored and disposed of within Service Delivery Division.

The SWIM (Sydney Water Information Management) system is Sydney Water’s principal records management system. It contains business records other than quality management system documentation or data held in systems such as SCADA, IICATS, LIMS, MAXIMO, BI, and SWIRL. SWIM is accessed through the Sydney Water intranet.”

The above summary is consistent with the details set out in the Document Management Procedure¹⁹⁰ and the Records Management procedure.¹⁹¹

The report of the 2014/15 Operational Audit noted some inconsistencies and errors in the document control system. A comment in the Document Management Procedure is noted:¹⁹²

“Businesses are extending document expiry date in BMIS, with minimal information recorded in the audit trail. This has created a mismatch of next review date found in document footers vs BMIS metadata. This has been identified by external auditors and the practice is not meeting the document management requirements for certified systems.”

This notice appears to close out the auditor’s comments in the 2014/15 report.

The preparation of regulatory reports is governed by the procedure Compilation of Regulatory Reports for Service Delivery.¹⁹³ This procedure is focussed on preparation of IPART submissions and updating Folios of Progress.

There is a description of the process associated with various laboratory and monitoring summary reports at section 13.2 of the RW Monitoring Plan 2015-16.¹⁹⁴

Full Compliance

Implementation

Evidence on implementation of this element of the Recycled Water Management System has been incorporated into the above discussion, including the notice in the Document Management

¹⁸⁹ Recycled Water Management Manual (Reference BMIS0260), page 62.

¹⁹⁰ Document Management procedure (Reference SDIMS0008).

¹⁹¹ Records Management Procedure (Reference SDIMS0017).

¹⁹² Document Management procedure (Reference SDIMS0008), page 10.

¹⁹³ Compilation of Regulatory Reports for Service Delivery (Reference SDIMS0015).

¹⁹⁴ RW Monitoring Plan 2015-16 approved (Reference BMIS0045.01) page 25.

procedure.

Full Compliance

Element 11 – Evaluation and Audit

- *Long term evaluation of results*
- *Audit of recycled water quality management*

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 11 of the RWMM.¹⁹⁵

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Long term evaluation of results; and
- Audit of recycled water quality management system.

The RWMM notes that long-term evaluation of results is used to assess performance and identify trends and anomalies. An example of the identification of anomalies is the Recycled Water Quality Management Plan for Wollongong Stage 1 and 2 which provided the results of a 10-year data study of influents to the RWP to identify Long-Term Trigger Values (LTV) of AGWR.^{196,197} A summary of these results was presented to the Risk Assessment Workshop.¹⁹⁸ This set of long-term data was also discussed more generally in the report.

Sydney Water has a procedure for Performance Monitoring (Audit and Inspection)¹⁹⁹ and an audit program²⁰⁰ which includes both internal and external audits. The audit plan has been developed which included an internal audit of the Operating Licence requirements, including the adequacy and implementation of the recycled water management system.

The evidence provided by Sydney Water included details of two internal audits. The first audit, which was conducted in early August 2015, considered the Rouse Hill and Liverpool RWPs. This audit reported one area of non-conformance and 18 areas of improvement opportunity. The non-conformance related to out-of-date Improvement Plans and lack of scheme RWQMP review. The second audit was conducted during June 2016 and considered all schemes. This audit reported six areas of non-conformance and six areas of improvement opportunity.

Most of the findings of these audits related to operational shortcomings within RW plants, which highlights the value of internal audits. It is important to get a comprehensive set of policies and procedures in place. However, it is probably more important to get confirmation that the existing procedures are being carried out as intended. This insight can only be achieved through a robust 'in-depth' audit. Sydney Water is to be congratulated and encouraged for the effort in developing this capability.

Full Compliance

Implementation

Evidence on implementation of this element of the Recycled Water Management System has been incorporated into the above discussion.

Full Compliance

¹⁹⁵ Recycled Water Management Manual (Reference BMIS0260), page 66.

¹⁹⁶ Wollongong Stage 1 RWQMP (Reference RW0002), Section 2.3, page 20 and Appendix C, page 75.

¹⁹⁷ Wollongong Stage 2 RWQMP (Reference WRHQ5052), Section 2.3, page 21 and Appendix C, page 83.

¹⁹⁸ Title slide - Briefing Paper and Presentation – Wollongong Stage 1 and 2 WRP HIDRA Workshop (Reference 549237).

¹⁹⁹ Performance Monitoring (Audits and Inspections) procedure (Reference SDIMS0010).

²⁰⁰ SDIMS Audit Plan 15-16 completed.

Element 12 – Review and continuous improvement

- ***Review by senior managers***
- ***Recycled water quality improvement plan***

Consistency with AGWR

A full discussion of the coverage of the key points of this element in the Sydney Water Recycled Water Management System is presented in Chapter 12 of the RWMM.²⁰¹

The significant points that demonstrate consistency of the Sydney Water Recycled Water Management System with this element of the AGWR are:

- Review by senior managers; and
- Recycled water quality improvement plan.

The management review process is governed by the Management Review Procedure.²⁰² This document sets out the inputs, process steps, outputs and accountabilities involved in senior management review of the Service Delivery Division. This Division oversees programs for the recycled water program. The procedure includes clear process maps for monthly and annual reviews. The focus of the annual process is to review the effectiveness of the current system and evaluate the need for change. The focus of the monthly process is to review progress towards the implementation of the improvement measures identified in the annual process.

In regards to continuous improvement, Sydney Water has developed a Product Improvement Framework that is intended to apply to drinking water, recycled water and wastewater.²⁰³ This document aims to document the processes for evidence-based improvements, define the process to identify improvement initiatives, and to define the governance processes to deliver the process improvement initiatives.

Separate Product Management Strategy Registers have been established for the four product groups. The Product Management Strategy Register for recycled water includes improvements initiatives for:

- Review of customer contracts;
- Review of scheme specific recycled water quality management plans;
- Review of recycled water development process;
- UVT monitoring plan;
- Review of validation data; and
- Cost study report.

The Recycled Water Improvement Plan was started 30 June 2016 and details progress on a range of projects for WRPs at Bombo, Castle Hill, Picton, Liverpool, Richmond, West Camden, Wollongong Stages 1 and 2. Completion dates for these initiatives cover the period June 2016 (complete) to February 2018 in 6-month intervals.

Full Compliance

Implementation

Evidence on implementation of this element of the Recycled Water Management System has been incorporated into the above discussion.

Full Compliance

²⁰¹ Recycled Water Management Manual (Reference BMIS0260), page 68.

²⁰² Management Review Procedure (Reference SDIMS0012).

²⁰³ Product Improvement Framework (Reference BMIS0214).

Table A.2.7 Recommendation 2013/14-1 (Recycled Water – Clause 2.2)

Reference	Requirement	Compliance Grade
2013/14-1	<p>Ongoing: Sydney Water should maintain an ongoing commitment to the review and update of its Recycled Water Quality Management Plans via the four-year rolling program agreed with NSW Health.</p> <p>Complete: Further, Sydney Water should be able to demonstrate progress with its program in both documentation development and scheme specific implementation by 30 June 2015. Formal endorsement of the Liverpool plan by NSW Health should also be achieved by 30 June 2015.</p>	<div></div> Addressed
<hr/>		
Risk	Target for Full Compliance	
Without an ongoing commitment to the review and update of its Recycled Water Quality Management Plans there is a high risk that Sydney Water may not be able to effectively manage risks to recycled water quality, thereby posing risks to both public health and the environment.	Sydney Water should maintain an ongoing commitment to the review and update of its Recycled Water Quality Management Plans via the four-year rolling program agreed with NSW Health.	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.Emails to NSW Health on RW Quality and 4 year RWQMP schedule, 25 August 2016.Sydney Water’s program and progress – RW HIDRA, RWQMP LRV UV Performance.		
<hr/>		
Summary of reasons for grade		
<p>To ensure that all RWQMPs were reviewed every four years, Sydney Water separated the program to conduct a major review of each plan from the ongoing program in place to conduct LRV verification monitoring for each scheme.</p> <p>Of the fourteen (14) workshops required to comprehensively and consistently review and update RWQMP risk assessments, nine (9) were completed within the audit period and the remaining five (5) were completed by the time of the audit interviews. Since the audit interviews, Sydney Water has advised that these five updated RWQMPs have been reviewed and await submission to NSW Health.</p> <p>Final RWQMP updates, including LRV verification monitoring, have been completed for five (5) schemes (Liverpool, Wollongong Stages 1 and 2, Rouse Hill, and Castle Hill), the first three of which were completed during the audit period. NSW Health has acknowledged satisfaction with the status of the review and update program for RWQMPs (this notification was received outside the audit period).</p> <p>Both the review and update of RWQMP risk assessments and the detailed LRV verification monitoring program are now being conducted consistent with the four-year rolling plan agreed with NSW Health, with all RWQMPs having been updated in all respects except for the LRV validation monitoring at the time of the audit. Given that the LRV verification monitoring is now being addressed under a separate recommendation (Recommendation 2014/15-4), this recommendation is assessed as having been addressed.</p>		

Discussion and notes

As discussed in respect of Recycled Water Quality Element 2 (refer Table A.2.6), Sydney Water's original intention was that the program to review and update RWQMP risk assessments should include results from a detailed verification log reduction value (LRV) monitoring exercise. However, the time required to conduct the LRV work can be extensive.

To ensure that all RWQMPs were reviewed regularly, as envisaged in the four-year rolling program, Sydney Water separated the program to conduct a major risk assessment review of each plan from the ongoing program in place to conduct LRV verification monitoring for each scheme. The rationale for this separation was to ensure that the program to update scheme plans was not delayed by the more time-intensive work associated with the LRV monitoring program.

Sydney Water then set about developing a comprehensive risk assessment format, which was to be delivered in a workshop format. This format included:

- reviewing system analysis for currency;
- reviewing historical data;
- review of the effectiveness of preventive measures;
- review of CCPs and operational controls; and
- use of a consistent risk assessment process and template.

The consistency of the format used in these workshops is discussed further in relation to Recommendation 2014/15-3.

In summary, of the fourteen (14) workshops required to comprehensively and consistently review and update RWQMP risk assessments, nine (9) were completed within the audit period and the remaining five (5) were completed by the time of the audit interviews. Since the audit interviews, Sydney Water has advised that these five updated RWQMPs have been reviewed and await submission to NSW Health.

The detailed LRV verification monitoring program is more fully discussed in Table A.2.10 dealing with Recommendation 2014/15-4. For the purposes of Recommendation 2013/14-1, Sydney Water has stated that the detailed LRV verification monitoring program at all schemes is progressing in accordance with the four-year rolling timetable as agreed with NSW Health. The auditors have confirmed that NSW Health is satisfied with the status of the review and update program for RWQMPs (this notification was received outside the audit period).²⁰⁴ When the LRV verification monitoring study is completed at each scheme, the RWQMP is further updated with the new LRV data. The auditors understand that final RWQMP updates, including LRV verification monitoring, have been completed for five (5) schemes (Liverpool, Wollongong Stages 1 and 2, Rouse Hill, and Castle Hill), the first three of which were completed during the audit period.

In summary, both the review and update of RWQMP risk assessments and the detailed LRV verification monitoring program are now being conducted consistent with the four-year rolling plan agreed with NSW Health, with all RWQMPs having been updated in all respects except for the LRV verification monitoring at the time of the audit. Given that the LRV validation monitoring is now being addressed under a separate recommendation (Recommendation 2014/15-4), this recommendation is assessed as having been addressed.

Recommendations

There are no further recommendations arising in respect of this previous recommendation.

²⁰⁴ Emails to NSW Health on RW Quality and 4 year RWQMP schedule, 25 August 2016.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this previous recommendation.

Table A.2.8 Recommendation 2014/15-2 (Recycled Water – Clause 2.2)

Reference	Requirement	Compliance Grade
2014/15-2	Sydney Water should develop organisation wide controls for use in recycled water quality management (including linkages between controls and personnel responsibilities). Organisation wide controls should be implemented within individual Scheme Recycled Water Quality Management Plans (by 30 June 2017).	<div></div> <div>Addressed</div>
Risk		Target for Full Compliance
Without organisation-wide controls linked to personnel responsibilities, there is a risk that controls may be confused, posing a threat to treatment effectiveness and, in turn, to public health.		Organisation wide controls should be developed for use in recycled water quality management (including linkages between controls and personnel responsibilities). These controls should be implemented within individual Scheme Recycled Water Quality Management Plans.
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.Internal Audit Report - Recycled Water Product and System Compliance (Reference SDIMS0148), August 2015.Recycled Water Product Specification (Reference D0000096).		
Summary of reasons for grade		
The auditors confirmed that the Recycled Water Product Specification identifies the appropriate level of organisation-wide controls and identifies controls for individual schemes in appendices. Controls are also defined in the RWQMPs. The auditor found evidence that these controls were being implemented. Accordingly, this recommendation is assessed as having been addressed.		
Discussion and notes		
Sydney Water has advised: <p><i>“The overarching Bath-To-Beach (B2B) risk assessment process will identify organisation wide controls. Ownership of these controls will be identified at business level, i.e. Treatment, Networks, and Business Customer Services.</i></p> <p><i>Organisation-wide operational and critical control points for all plants are now identified in the Recycled Water Product Specification and in each scheme plan.”</i></p> The auditors confirmed that the application of CCPs at all schemes is discussed in the RW Product Specification. Details relevant to each scheme are set out in the relevant RWQMP and as appendices in the RW Product Specification. ²⁰⁵		
In terms of implementation, a Sydney Water internal audit has noted that: <p><i>“In general CCP’s and OCP’s were well controlled by site, with most required records readily available including SCADA, completed monitoring checklists, calibration etc. Prompt attention was given to a few exceedances detected, with comprehensive debriefs kept on record.”</i>²⁰⁶</p>		

²⁰⁵ Recycled Water Product Specification (Reference D0000096).

Accordingly, this recommendation is assessed as having been addressed.

This matter is further discussed in respect of compliance with AGWR Element 3 (refer Table A.2.6).

Recommendations

There are no further recommendations arising in respect of this previous recommendation.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this previous recommendation.

²⁰⁶ Internal Audit Report - Recycled Water Product and System Compliance (Reference SDIMS0148), August 2015, page 13.

Table A.2.9 Recommendation 2014/15-3 (Recycled Water – Clause 2.2)

Reference	Requirement	Compliance Grade
2014/15-3	Sydney Water should review recycled water management risk assessment procedures to ensure consistent application of HIDRA risk matrix and consequence key across the organisation (by 30 June 2017).	<div></div> Addressed
Risk		Target for Full Compliance
Inconsistent application of risk assessment processes poses the risk that hazards are not appropriately treated, which could pose a threat to public health.		Evidence that the HIDRA risk matrix and consequence key is consistently applied in all risk assessments across the organisation.
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.Update four year schedule RWQMP-NSW Health Q4 2015-16, 17 May 2016.Briefing Paper and presentation – Wollongong Stage 1 and 2 WRP HIDRA Workshop 23 March 2016 (Reference 549237).Attendance Sheet – Wollongong Stage 1 and 2 WRP HIDRA Workshop, 23 March 2016 (Reference 549236).Agenda – Wollongong stage 1 and 2 WRP HIDRA Workshop, 23 March 2016 (Reference 549235).		
Summary of reasons for grade		
The auditor has been provided with material from the Wollongong RWQMP workshop. This material was developed for the Liverpool RWQMP; it includes an explanation of the application of the HIDRA risk matrix and consequence key, and it has been deemed as satisfactory by NSW Health. This material was applied at subsequent workshops to ensure consistent application of HIDRA risk matrix and consequence key across the organisation. Accordingly, this recommendation is assessed as having been addressed.		
Discussion and notes		
Sydney Water advised: “Sydney Water has a corporate risk management procedure, aligned to ISO 31000 to guide risk assessments across the organisation. Sydney Water is addressing consistency in the application of risk assessment procedures for recycled water as part of its recycled water management risk workshops. Recycled Water risk assessment workshops have been conducted for all recycled water schemes. The workshops include team members from Treatment Product & Asset, Business Customer Services, the water recycling plant operations team, and recycled water customers. <ul style="list-style-type: none">Liverpool - February 2016Quakers Hill – February 2016Wollongong Stages 1 and 2 - March 2016.Castle Hill – May 2016Picton – May 2016Bombo – May 2016		

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- *West Camden – May 2016*
 - *Richmond – May 2016*
 - *Rouse Hill – August 2016*
 - *St Marys – August 2016*
 - *Penrith – August 2016*
 - *Western Replacement Flows – August 2016*
 - *Gerrington-Gerroa – August 2016*

Note that the Hoxton Park scheme has been excluded from the risk assessment program, as the scheme has been mothballed, until there is sufficient recycled water demand in an estimated 5 years.”

In a progress update on the reviews of RWQMPs, Sydney Water explained to NSW Health that:²⁰⁷

“A consultant has been engaged to fast track the review of the remaining nine scheme RWQMPs. The reviews will involve primarily (but not limited to) recasting the existing RWQMP in the new template established for the Liverpool RWQMP, review of scheme descriptions and process flow diagrams, updating influent and effluent quality data, and reviewing the scheme risk assessments.”

Prior to this, NSW Health had acknowledged its satisfaction with the Liverpool RWQMP.

The auditor has been provided with material from the Wollongong RWQMP workshop. It includes an explanation of the application of the HIDRA risk matrix and consequence key in the Briefing Paper and Presentation²⁰⁸ which was provided to participants at the Wollongong Stage 1 and 2 WRP HIDRA Workshop. The auditor has also reviewed an Attendance Sheet²⁰⁹ and Agenda²¹⁰ from this workshop.

It is considered that Sydney Water has reviewed recycled water management risk assessment procedures to ensure consistent application of HIDRA risk matrix and consequence key across the organisation and has applied these reviewed procedures across schemes. Accordingly, this recommendation is assessed as having been addressed.

Recommendations

There are no further recommendations arising in respect of this previous recommendation.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this previous recommendation.

²⁰⁷ Update four year schedule RWQMP-NSW Health Q4 2015-16, 17 May 2016.

²⁰⁸ Briefing Paper and presentation – Wollongong Stage 1 and 2 WRP HIDRA Workshop 23 March 2016 (Reference 549237).

²⁰⁹ Attendance Sheet – Wollongong Stage 1 and 2 WRP HIDRA Workshop, 23 March 2016 (Reference 549236).

²¹⁰ Agenda – Wollongong stage 1 and 2 WRP HIDRA Workshop, 23 March 2016 (Reference 549235).

Table A.2.10 Recommendation 2014/15-4 (Recycled Water – Clause 2.2)

Reference	Requirement	Compliance Grade
2014/15-4	Sydney Water should review recycled water monitoring requirements in consultation with NSW Health to confirm that all validated UV units are operating within their UVT validation envelope, appropriate to the dose monitoring strategy in place (by 30 June 2017).	<div><div></div><div></div></div> Ongoing
Risk		Target for Full Compliance
If the recycled w monitoring is inadequate, there is a high risk that Sydney Water may not be able to effectively manage risks to recycled water quality, thereby posing risks to both public health and the environment.		Evidence that all validated UV units are operated within their UVT envelope. Appropriate to the dose monitoring strategy in place.
Evidence sighted		
<ul style="list-style-type: none"> Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016. Interviews with Sydney Water staff, 26-28 September 2016. UV Performance assessment – Rouse Hill WRP – Final Document. Wollongong Stage 2 RWQMP Appendix A and Copy of Sydney Water’s program and Progress – RW HIDRA RWQMP LRV UV performance. 		
Summary of reasons for grade		
<p>Sydney Water has demonstrated that, at the Rouse Hill scheme, the validated UV units are operated within their UVT validation envelope, and that the LRV verification (including the LRV for UV components) has demonstrated that all pathogens are removed or inactivated. Similar verification monitoring has been completed at Liverpool, Wollongong Stages 1 and 2 and Castle Hill.</p> <p>This work is progressing well and progress to date has been acknowledged as satisfactory by NSW Health; however, the program agreed with NSW Health will not be completed until March 2018. Accordingly, action in respect of this recommendation is assessed to be ongoing.</p>		
Discussion and notes		
<p>Sydney Water has advised:²¹¹</p> <p><i>“Regular monitoring of UVT has commenced to collect preliminary information and inform a more in depth review of UV unit operation against validated UVT envelopes. This review will confirm the appropriateness of dose strategies in place and inform any required changes. The review will be undertaken in consultation with NSW Health.</i></p> <p><i>Performance of pathogen inactivation in UV units are also being assessed during LRV verification monitoring, and is rolled out as per scheme LRV verification program. According to the program, Wollongong LRV verification has been completed and demonstrated that inactivation of pathogens has been achieved through UV unit.”</i></p> <p>This recommendation relates to the operation of validated UV units within their respective UVT validation envelope, appropriate to the dose monitoring strategy in place. The auditor has been provided with a report on the UV performance assessment conducted at the Rouse Hill WRP. The conclusion of this report states:²¹²</p>		

²¹¹ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

²¹² UV Performance assessment – Rouse Hill WRP – Final Document.

“Rouse Hill WRP’s UV unit is operating within its validation range of parameters, e.g. UVT, Flow and minimum UV dose. The verification monitoring confirmed that within validation envelope the UV unit effectively inactivates all the E.coli and >3 log10 removal was achieved, and given sufficient Cryptosporidium concentration at the influent of the UV unit required LRV for Cryptosporidium would have been achieved. The detail verification monitoring for LRV demonstrates that multiple barrier treatment process effectively removes bacteriophage MS2 prior to UV disinfection process, and no log concentration of bacteriophage MS2 was detected following chlorination process post UV disinfection process. The critical control points, especially chlorination process, are very conservatively designed to achieve maximum LRV for Coxsackie B5 viruses which has been shown most resistant to chlorine disinfection.”

This confirms that Rouse Hill RWP is operating within the validation range of parameters and the verification monitoring confirms that when so operated, the UV disinfection system achieves >3 log 10 removal of E. coli and the required LRV for Cryptosporidium. Viruses are effectively removed by chlorination, prior to UV treatment. In short, this report confirms that the validated UV units are operated within their UVT validation envelope, and that the LRV verification (including the LRV for UV components) has demonstrated that all pathogens are removed or inactivated.

As discussed in the commentary on Recommendation 2013/14-1 (refer Table A.2.7), similar LRV verification monitoring has been completed at Liverpool, Wollongong Stages 1 and 2 and Castle Hill²¹³ (LRV verification monitoring at Liverpool and Wollongong Stages 1 and 2 completed prior to 30 June 2016).

The auditor notes that this work is progressing well and that progress to date has been acknowledged as satisfactory by NSW Health; however, the program agreed with NSW Health will not be completed until March 2018. Accordingly, action in respect of this recommendation is assessed to be ongoing.

Recommendations

There are no further recommendations arising in respect of this previous recommendation.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this previous recommendation.

²¹³ Wollongong Stage 2 RWQMP Appendix A and Copy of Sydney Water’s program and Progress – RW HIDRA RWQMP LRV UV performance.

Table A.2.11 Recommendation 2014/15-5 (Recycled Water – Clause 2.2)

Reference	Requirement	Compliance Grade
2014/15-5	Sydney Water should establish and implement review frequencies for each action within the Australian Guidelines for Water Recycling Framework for both the Recycled Water Management Manual and Scheme Recycled Water Quality Management Plans (by 30 September 2016).	<div></div> <div>Addressed</div>
<hr/>		
Risk	Target for Full Compliance	
Without timely review processes, actions within the AGWR may be missed, which could pose a risk to the environment and public health.	Each action within the AGWR framework for both the RWMM and Scheme RWQMPs should have a review frequency which is observed.	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.Mapping of documentation to AGWR (Reference BMIS0260.02).Document Management procedure (Reference SDIMS0008).		
<hr/>		
Summary of reasons for grade		
<p>The auditor noted that the Document Management Procedure has been amended and that a notice has been included in the procedure to ensure that documents are correctly entered in the Document Management System to ensure that system-generated review dates are accurate. Accordingly, this recommendation is assessed as having been addressed.</p>		
<hr/>		
Discussion and notes		
<p>This recommendation arose from an observation by the 2014/15 auditor of some irregularities in document review dates. In response, Sydney Water has advised:²¹⁴</p> <p><i>“Key documentation for recycled water management has been mapped against the actions within the Australian Guidelines for Water Recycling, at the Recycled Water Management Manual level, and for a sample scheme. This will be applied to all recycled water schemes and mapping will be completed for all schemes by end of September 2016.</i></p> <p><i>All the documentation is maintained in authorised content management systems. Where required, review frequencies have been identified within these systems and implemented. Reviews are triggered through automatic notification.”</i></p> <p>The auditor understands that the reason for the observed irregularities was that some staff were incorrectly entering documents into the Document Management System, thereby resulting in errors in the system-generated review dates. The auditor noted that the Document Management System manager has amended the Document Management Procedure and has included the following statement:²¹⁵</p> <p><i>“Businesses are extending document expiry date in BMIS, with minimal information recorded in the audit trail. This has created a mismatch of next review date found in document footers vs BMIS metadata. This has been identified by external auditors and the practice is not meeting the document management requirements for certified systems.”</i></p> <p>This statement seeks to ensure that documents are correctly entered in the Document Management System in a way that will ensure that review dates are accurately calculated. Accordingly, this requirement</p>		

²¹⁴ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

²¹⁵ Document Management Procedure (Reference SDIMS0008) v4, page 16.

has been assessed as having been addressed.

Recommendations

There are no further recommendations arising in respect of this previous recommendation.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this previous recommendation.

A.3 Section 3 – Water Quantity

Table A.3.1 Economic Level of Water Conservation (Sub-clause 3.2.1)

Sub-clause	Requirement	Compliance Grade
3.2.1	<p>By 1 November 2015, Sydney Water must submit to IPART (for IPART's approval) a report outlining Sydney Water's approach to, and principles for, developing a methodology for determining its economic level of water conservation, including (at a minimum) each of the following elements of water conservation:</p> <ul style="list-style-type: none"> a) water leakage; b) water recycling; and c) water efficiency (including demand management). 	<div style="background-color: green; width: 100px; height: 20px; margin-bottom: 5px;"></div> <p>Full Compliance</p>
Risk		Target for Full Compliance
<p>Non-compliance with the requirement to submit a report as described in this sub-clause poses a low risk. Whilst determining its economic level of water conservation may have significant operational and financial implications, approval of the approach to be adopted in developing a methodology is of less concern.</p>		<p>Evidence that Sydney Water had submitted to IPART a report outlining Sydney Water's approach to, and principles for, developing a methodology for determining its economic level of water conservation.</p>
Evidence sighted		
<ul style="list-style-type: none"> ▪ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016. ▪ Sydney Water, <i>Economic Level of Water Conservation – Stage One; Approach and principles for developing a methodology</i>, undated (Reference: ELWC 151029). ▪ Letter dated 29 October 2015 from Sydney Water to IPART regarding submission of the ELWC Stage 1 Report. ▪ Email dated 29 October 2015 from Sydney Water to IPART regarding submission of the ELWC Stage 1 Report. ▪ Email dated 29 October 2015 from IPART to Sydney Water confirming receipt of the ELWC Stage 1 Report. ▪ Email dated 20 November 2015 from IPART to Sydney Water regarding follow up from ELWC meeting. ▪ Letter dated 26 November 2015 from Sydney Water to IPART and attached revised ELWC Stage 1 Report. ▪ Email dated 26 November 2015 from Sydney Water to IPART and attached revised ELWC Stage 1 Report. ▪ Email dated 26 November 2015 from IPART to Sydney Water confirming receipt of the revised ELWC Stage 1 Report. ▪ Letter dated 10 December 2015 from IPART to Sydney Water advising approval of Sydney Water's proposed approach. ▪ Interviews with Sydney Water staff, 26-28 September 2016. 		

Summary of reasons for grade

Notwithstanding that the report was subsequently revised prior to being approved, Sydney Water demonstrated that it had submitted a report outlining its approach to, and principles for, developing a methodology for determining its economic level of water conservation to IPART for approval prior to 1 November 2015. Accordingly, it is assessed that Sydney Water was compliant with this obligation.

Discussion and notes

Sydney Water advised that:²¹⁶

“Sydney Water submitted a report outlining its approach to, and principles for, developing a methodology for determining its economic level of water conservation (Stage 1 Report) to IPART for approval on 29 October 2015.

IPART requested that Sydney Water revise the report, to focus on the approach and principles. IPART also requested some minor revisions to wording.

Sydney Water revised the report to address IPART’s feedback and re-submitted its revised Stage 1 report on 26 November 2015.

IPART approved the revised Stage 1 report on 10 December 2015.”

Review of the evidence provided confirmed Sydney Water’s advice, as follows:

- Sydney Water submitted a Stage 1 Report,²¹⁷ identified in the above comments, to IPART on 29 October 2015.^{218,219} (ie. before the required date of 1 November 2015). This was a 36-page document that described a reasonably detailed approach to developing the required methodology.
- Receipt of the Stage 1 Report was confirmed by IPART.²²⁰
- It is understood that IPART provided comments on the Stage 1 report, asking Sydney Water to revise the report, to focus on the approach and principles. Based on email correspondence,²²¹ it appears that Sydney Water met with IPART on 20 November 2015 to discuss the draft revised Stage 1 Report. Editorial comments were provided by IPART, and the required date for resubmission (27 November 2015) confirmed.
- Sydney Water submitted the revised Stage 1 Report to IPART on 26 November 2015.^{222,223} The revised draft report was a two-page document.
- Receipt of the revised Stage 1 Report was confirmed by IPART.²²⁴
- IPART advised that it had approved Sydney Water’s approach to and principles for determining its economic level of water conservation of 10 December 2015.²²⁵

In summary, notwithstanding that the report was subsequently revised prior to being approved, Sydney Water demonstrated that it had submitted a report outlining its approach to, and principles for, developing a methodology for determining its economic level of water conservation to IPART for approval prior to 1 November 2015.

²¹⁶ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016

²¹⁷ Sydney Water, *Economic Level of Water Conservation – Stage One; Approach and principles for developing a methodology*, undated (Reference: ELWC 151029).

²¹⁸ Letter dated 29 October 2015 from Sydney Water to IPART regarding submission of the ELWC Stage 1 Report.

²¹⁹ Email dated 29 October 2015 from Sydney Water to IPART regarding submission of the ELWC Stage 1 Report.

²²⁰ Email dated 29 October 2015 from IPART to Sydney Water confirming receipt of the ELWC Stage 1 Report.

²²¹ Email dated 20 November 2015 from IPART to Sydney Water regarding follow up from ELWC meeting.

²²² Letter dated 26 November 2015 from Sydney Water to IPART and attached revised ELWC Stage 1 Report.

²²³ Email dated 26 November 2015 from Sydney Water to IPART and attached revised ELWC Stage 1 Report.

²²⁴ Email dated 26 November 2015 from IPART to Sydney Water confirming receipt of the revised ELWC Stage 1 Report.

²²⁵ Letter dated 10 December 2015 from IPART to Sydney Water advising approval of Sydney Water’s proposed approach.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.3.2 Economic Level of Water Conservation (Sub-clause 3.2.5)

Sub-clause	Requirement	Compliance Grade
3.2.5	<p>Until Sydney Water has developed and obtained IPART's approval for the Methodology (in accordance with clauses 3.2.2 and 3.2.3), Sydney Water must:</p> <p>a) maintain the weather corrected quantity of Drinking Water that it draws from all sources to a level of water usage equal to, or less than, 329 litres per person per day (the Water Usage Level). In calculating water usage for the purpose of the Water Usage Level, Sydney Water may make reasonable adjustments to account for the effects of weather on water usage, using a methodology approved by IPART;</p> <p>b) ensure that the level of water leakage from its Drinking Water supply system (the Water Leakage Level) does not exceed 121 megalitres per day; and</p> <p><i>[Note: The water leakage level in the licence that was the immediate predecessor to this Licence was 105 megalitres per day. Sydney Water's performance against this level was calculated using actual and estimated data. As a result, IPART accepted an uncertainty allowance of +/- 16 megalitres per day when determining Sydney Water's performance against the water leakage level. It is intended that IPART will not apply an uncertainty allowance when calculating Sydney Water's performance against the water leakage level set out in this Licence (121 megalitres per day). Therefore, the water leakage level in this Licence is effectively equivalent to the water leakage level in the licence that was the immediate predecessor to this Licence.]</i></p> <p>c) promote, foster and encourage the efficient use of water and the production and use of Recycled Water, where financially viable.</p> <p><i>[Note: Clause 3.2: (a) requires Sydney Water to develop a Methodology for determining the economic level of water conservation over an 18 month period; and (b) requires Sydney Water to maintain existing water conservation requirements while the Methodology is being developed.]</i></p>	<div></div> <p>Full Compliance</p>
Risk	Target for Full Compliance	
Non-compliance with the requirements of this sub-clause poses a high risk. Failure to ensure that the Water Usage Level and Water Leakage Level are minimised may have significant operational and financial implications. Promoting efficient water use supports the objective of minimising the Water Usage Level.	Evidence that Sydney Water maintained the Water Usage Level at less than 329 litres per person per day; ensured that the Water Leakage Level did not exceed 121 megalitres per day; and promote, foster and encourage the efficient use of water and the production and use of Recycled Water during the audit period.	

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Sydney Water, *Procedure; Updating the weather climate correction model* (Reference: CS0001), 25 August 2016.
- Sydney Water, *Sydney Water Weather Correction Model Fact Sheet*, undated.
- MS Excel Workbook: Climate Corrected Demand Model_current_20160802.wlsm (MWH, *Daily Water Trend Tracking and Climate Correction Model*).
- MWH, *Daily Water and Wastewater Trend Tracking; Version 12.0 User Manual*, September 2009.
- Sydney Water, *Water Conservation Report 2015–16*, 1 September 2016.
- Interviews with Sydney Water staff, 26–28 September 2016.

Summary of reasons for grade

Sydney Water demonstrated that during 2015/16, it had:

- achieved a Water Usage Level of 293 litres per day (less than the 329 litres per person per day limit);
- achieved a Water Leakage Level of 103 megalitres per day (ie. less than the 121 megalitres per day limit);
- continued to promote, foster and encourage the efficient use of water through programs such as PlumbAssist and WaterFix; and
- continued to promote the production and use of recycled water, subject to case-by-case assessment of feasibility.

Accordingly, it is assessed that Sydney Water was fully compliant with this obligation.

Discussion and notes

3.2.5(a) – Water Usage:

To determine the weather corrected quantity of Drinking Water that it draws from all sources, Sydney Water applies a correction factor to actual volumes of water drawn from its sources using the weather correction model. As indicated in the model procedure:²²⁶

“The weather correction model is used to estimate the impact of actual weather conditions on demand in any one year relative to the baseline. The output provides an estimate of what the volume of water use per person would have been if the weather had been ‘average’ throughout the year. It does not remove seasonal variations in demand.”

A more extensive overview of the weather correction model is presented in a fact sheet provided to the auditors.²²⁷

Review of the procedure reveals that the weather correction model takes into climatic conditions including rainfall, evaporation and temperature. Data is obtained from the Bureau of Meteorology and WaterNSW; water volume data is obtained from Sydney Water’s record systems.

Copies of the weather correction model²²⁸ and User Manual²²⁹ were provided to the auditors. The “Cover” worksheet in the model indicates that it was verified on 24 June 2009. Sydney Water advised that the weather correction model has been approved for use by IPART.²³⁰

²²⁶ Sydney Water, *Procedure; Updating the weather climate correction model* (Reference: CS0001), 25 August 2016.

²²⁷ Sydney Water, *Sydney Water Weather Correction Model Fact Sheet*, undated.

²²⁸ MS Excel Workbook: Climate Corrected Demand Model_current_20160802.wlsm (MWH, *Daily Water Trend Tracking and Climate Correction Model*).

²²⁹ MWH, *Daily Water and Wastewater Trend Tracking; Version 12.0 User Manual*, September 2009.

The computed value of the weather corrected quantity of drinking water drawn from all sources during 2015/16 as shown in the model is consistent with the reported value of 293 litres per day.²³¹

3.2.5(b) – Water Leakage:

Sydney Water advised that:²³²

“Sydney Water determines the Water Leakage Level based on a Waterbalance calculation that complies with the International Water Association framework model. AMQ0059 ‘Water Product – Calculation and Reporting – Corporate Waterbalance From Storages’ details SWC procedure for calculating, reporting and archiving the corporate water calculation.

Excel Spreadsheet ‘New Waterbalance from 201213’ consolidates all components of the Waterbalance and performs the leakage calculation.”

The Water Balance Procedure²³³ provides an overview of the various components (ie. defines) the water balance, and sets out in detail the process to be followed to compile the water balance. It identifies the data that is required and from where it is sourced. An MS PowerPoint presentation provides a simpler explanation of the process.²³⁴

As noted by Sydney Water, the water balance calculation undertaken in the model is consistent with the International Water Association (IWA) framework model.²³⁵

Sydney Water provided a number of spreadsheets from which data is derived, as well as the water balance model (spreadsheet) itself.²³⁶ The calculation process can be followed within the model.

Review of the model also reveals that the computed value of water leakage from the drinking water supply system during 2015/16 as shown in the model is consistent with the reported value of 103 megalitres per day.²³⁷

3.2.5(c) – Efficient Water Use/Recycled Water Use:

Initiatives implemented during 2015/16 in an endeavour to promote, foster and encourage the efficient use of water are described in the *Water Conservation Report*,²³⁸ which also outlines initiatives in respect of promoting and encouraging water recycling.

Apart from ongoing leakage management initiatives, programs/initiatives explained by Sydney Water during the audit interviews included:

- WaterFix – a program that allows customers to choose the type of plumbing service they need to improve water efficiency in the home; costs to the customer vary, depending on the type of service selected. This program has been subsidised in previous years, but the service now comes at a standard cost. The benefit to the customer is a reduced cost of water due to the efficiencies gained.
- PlumbAssist – this program is offered through the BillAssist program (refer Table A.5.3). It provides a tailored and comprehensive plumbing service for customers experiencing financial hardship and aims to rectify problems customers may have with high water use. Under this program, plumbers may (for example) fix tap and toilet leaks, find and repair concealed water leaks, and replace

²³⁰ Evidence of IPART approval was requested but not provided at the time of writing.

²³¹ Sydney Water, *Water Conservation Report 2015–16*, 1 September 2016, pages 5 and 22.

²³² Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

²³³ Sydney Water, *Procedure, Water Product - Calculation & Reporting - Corporate Waterbalance From Storages* (Reference: AMQ059), April 2011.

²³⁴ MS PowerPoint Presentation: *Water Leakage 2015/16 FY*.

²³⁵ Document: *The IWA Water Loss Task Force; Water 21 - Article No 2; Assessing Non-Revenue Water and its Components: A Practical Approach*, undated.

²³⁶ MS Excel Workbook: *New Waterbalance from 201213.xls*.

²³⁷ Sydney Water, *Water Conservation Report 2015–16*, 1 September 2016, pages 10 and 24.

²³⁸ Sydney Water, *Water Conservation Report 2015–16*, 1 September 2016.

inefficient toilets.

- Water Recycling – is encouraged where it can replace drinking water (for example) for green space irrigation, industrial/business processes; residential outdoor use, or toilet flushing. Water recycling opportunities are assessed on a case-by-case basis.

Recommendations


There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

A.4 Section 4 – Assets

Table A.4.1 Asset Management System (Sub-clause 4.1.5)

Sub-clause	Requirement	Compliance Grade
4.1.5	<p>Until the Asset Management System has been developed in accordance with clause 4.1.1, certified in accordance with clause 4.1.2(a) and implemented in accordance with clause 4.1.4:</p> <p>a) Sydney Water must continue to maintain and implement the asset management framework that was required to be maintained and implemented by Sydney Water under the licence that was the immediate predecessor to this Licence (the Asset Management Framework), as set out in Schedule 2 of this Licence;</p> <p>b) to avoid doubt, until the Asset Management System has been developed in accordance with clause 4.1.1, Sydney Water may only make changes to the Asset Management Framework that will assist in the transition of the Asset Management Framework to the Asset Management System; and</p> <p>c) Sydney Water must notify IPART, in accordance with the Reporting Manual, of any significant changes that it proposes to make to the Asset Management Framework.</p> <p><i>[Note: Clause 4.1.5 permits Sydney Water to transition, over several years, its current Asset Management Framework to an Asset Management System that is consistent with International Standard ISO 55001:2014 Asset Management System – Requirements.]</i></p>	 Full Compliance

Risk

Non-compliance with the requirements of this sub-clause poses a high level of operational risk in respect of public health, the environment and the ability of Sydney Water to meet its business objectives.

Target for Full Compliance

Evidence that Sydney Water has continued to maintain and implement the Asset Management Framework.

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Interviews with Sydney Water staff, 26-28 September 2016.

Asset Management Framework and Asset Management System documentation

- Sydney Water, Asset Management Framework, *AMF 11 July 16.pptx*.
- Sydney Water, *Asset Management Policy*, AMQ0033, October 2009.
- Sydney Water, *Asset Class Strategies*, 2015/00002750, 23 September 2015.
- Sydney Water, Asset Management Obligation – Folio of Progress 2015-16, 1 September 2016.
- Sydney Water, State of the Assets Report: 2015, 2015/00001884, 31 August 2015.

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- Sydney Water, *Strategic Asset Management Framework (SAMF) Updated*, 2004/0988F, 17 September 2015.
 - Sydney Water, *Sustainability Planning Manual*, BMIS0144, October 2010.
 - NSW Government, Finance & Services, Sydney Water Enterprise Asset Management Business Process Landscape Assessment, Corporate and Shared Services, March 16 2015.

Other

- Sydney Water, Business case - Operationalise the learnings from the Advanced Condition Assessment and Pipe Failure Prediction Project (ACAPFP), 19 May 2016.
- Sydney Water, Project Business Case Data Integrity Project DIP 2 - for Network and Property Assets, Version 4.3, 2015-00005016, 14 April 2016.
- Sydney Water, *CWM Program – Pricing Review 10 September 2016.ppt*.
- Sydney Water, *C&O research themes, activities and benefits v8.xlsx*.
- Sydney Water, *C&O Roadmap - one pagers.pptx*.
- Sydney Water, *IPART AM in SW Preso 2016.pptx*, 26 September 2016.
- Sydney Water, *ISO55000 project update.pptx*.

Asset Management Plans

- Sydney Water, *Asset Management Plan 2015-20: Control and Monitoring Systems*, AMQ0119, 24 September 2015.
- Sydney Water, *Asset Management Plan 2015-2020: Reservoirs*, Version 4, AMQ0120, 30 July 2015.
- Sydney Water, *Sewer Main Asset Management Plan: 2015-2020*, AMQ0032, Version 9, 30 July 2015.
- Sydney Water, *Asset Management Plan: Wastewater Pumping Stations 2015-2020*, Version 4, AMQ0021, 31 July 2015.
- Sydney Water, *Water Main Asset Management Plan: 2015-2010*, Version 4, AMQ0049, 30 July 2015
- Sydney Water, *Water Filtration Plants Asset Management Plan: 2015-2020*, Version 3, AMQ0123, 31 July 2015.
- Sydney Water, *Asset Management Plan 2015-20: Water Pumping Stations*, Version 4, AMQ0122, 31 July 2015.
- Sydney Water, *Wastewater Treatment and Water Recycling Plants Asset Management Plan: 2015-2020*, Version 3, AMQ0113, 3 September 2015.

Decision Frameworks

- Sydney Water, *Decision Framework: Avoid Fail Sewer*, Version 6, AMQ0014, 29 August 2016.
- Sydney Water, *Decision Framework: Critical Water Main Renewal*, Version 4, AMQ0035, 31 August 2016.
- Sydney Water, *Decision Framework: Reticulation Water Main Renewal*, Version 5, AMQ0100, 31 August 2016.
- Sydney Water, *Decision Framework: Assets Renewal, Reliability & Business Efficiency Decision Frameworks*, AMQ0116, 9 March 2015.
- Sydney Water, *Decision Framework: Above Ground Pipeline*, Version 4, AMQ0136, 31 August 2016.
- Sydney Water, *Decision Framework: Dry Weather Overflow Management, Version*, AMQ0139, 31 August 2016.
- Sydney Water, *Decision Framework: Water Service Reservoirs – Major Periodic Maintenance*, AMQ0552, 31 August 2016.

Procedures

- Sydney Water, *Allocation of Civil Maintenance jobs – Service Delivery Integrated Management System (SDIMS)*, D0000101, July 2016.
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- Sydney Water, *Safe Work Method Statement (SWMS), Civil Maintenance, Standard Start*, SWMS Number: 1, CDCM0006, October 2015.
 - Sydney Water, *Safe Work Method Statement (SWMS), Civil Maintenance, Excavation*, SWMS Number: 3, CDCM0006, October 2015.
 - Sydney Water, *SDIMS Work Instruction for CDWI001 Actioning Water Priority 5 & 6 jobs*, CDCM0034.01, 5 January 2016.
 - Sydney Water, *SDIMS Work Instruction for Road and Site restoration*, CDCM0034.11, 16 January 2016.

Asset Data Quality

- KPMG, *820975658 Sydney Water Data Quality Framework Assessment 16Jun2016.pdf*.
- Unknown, *ADQ - Benefits Realisation Plan v0.1.pptx*.
- Sydney Water, *Asset Data Quality Assessment Report Pilot Draft v0.3.pptx*, 10 December 2015.
- Sydney Water, *Standards: Asset Hierarchy (DRAFT)*, Version 4, 1 December 2015.
- Sydney Water, *Asset Information Management & Asset Knowledge Organisational Design Current State to Future Outcomes*, June 2016.
- Sydney Water, *Enterprise Data Quality Framework, Operating Model & Approach (DRAFT)*, Version 0.9, 11 March 2016.
- Sydney Water, *Enterprise Data Quality Governance Model - Final v9.pptx*, 24 June 2016.
- Sydney Water, *Enterprise Data Quality Process: Enterprise Data Quality Management Standard Document*, 5 February 2016.

Asset Management Records

- Sydney Water, Civil - FS Field Safety Audit Form, 9835511, Partial Inspection, 18 April 2016.
- Sydney Water, Civil - FS Field Safety Audit Form, 9835632, Full Inspection, 17 April 2016.
- Sydney Water, Civil Site Safety Inspection Report, February 2016.
- Sydney Water, Information extracted from Maximo related to: Sewage Treatment Plant – Cronulla, “Screenings Removal Stream 3” and “Submersible Pump Unit - Interstage Sump Pump No.1”.

Summary of reasons for grade

Sydney Water demonstrated that it had continued to maintain and implement its *Asset Management Framework* whilst developing and transitioning its asset management practices into an Asset Management System consistent with ISO 55001:2014. The *Asset Management Improvement Plan* being implemented by Sydney Water is aimed at addressing five principal areas: Customer Focussed Asset Solutions; Asset Knowledge Management; Risk Management; Service and Cost; and Standardisation.

Assessment of the field implementation of asset management practices at Prestons Maintenance depot revealed that field personnel have a clear, well-founded understanding of their roles and responsibilities and effectively fulfil their asset management role. This was reinforced by inspection of the Orchard Hills Water Treatment Plant and Cronulla Wastewater Treatment Plant.

Although there was considerable activity in improving Sydney Water’s approach to asset management during the audit period, there no requirement to report any changes to the *Asset Management Framework* to IPART. All changes contributed to the development of an ISO 55001:2014 compliant *Asset Management System*.

Accordingly, it is assessed that Sydney Water has fully complied with this obligation.

Discussion and notes

Overview

Sydney Water manages its assets in accordance with an *Asset Management Framework*, which sets the strategic direction for what it terms “Customer-Centred Asset Management”. This is supported by a

series of Asset Management Plans and Decision Frameworks; the Asset Management Policy promotes Sydney Water's commitment to the managing the life cycle of assets to achieve a desired level of service and financial return within an acceptable risk framework.

Pursuant to its obligations under the *2015-2020 Operating Licence* Sydney Water is developing its current asset management practices as it transitions to an ISO 55001:2014 compliant *Asset Management System*.

The 2014/15 Operational Audit (conducted in relation to the previous 2010-2015 *Operating Licence*),²³⁹ included a detailed investigation by the auditor covering various elements of how Sydney Water's *Asset Management Framework* was implemented in the field. In summary the auditor found that:

"Sydney Water has a robust asset management system in place and has demonstrated that it implements this system in the areas reviewed. However, we identified two minor shortcomings in the application of the asset management framework, being the quality of data being received by the M&E service contractor and the asset hierarchy for the one site reviewed. Sydney Water also notes in its State of the Assets Report that "currently, the quality of asset information is problematic and in some instances creates difficulty in use for operations, decision-making and planning." We consider that in the overall context of Sydney Water's asset management approach that these issues constitute a number of minor shortcomings. We also consider that these shortcomings do not compromise the ability of Sydney Water to achieve its defined objectives or assure controlled processes, products or outcomes."

The approach to this audit has been to undertake an assessment of the ongoing maintenance and implementation of the *Asset Management Framework*, as demonstrated by the development of the system and field implementation

Asset Management Framework – ongoing maintenance

During the audit period a change to the SAMF²⁴⁰ was made to reflect updated corporate strategy and a move towards customer driven asset management. The updated SAMF focusses on *"life cycle management of assets to achieve a desired level of service and financial return within an acceptable risk framework"*. It brings together: asset management policy; integrated planning; processes; decision support tools; risk management frameworks; quality management systems; resource capability; and benchmarking and continuous improvement. Sydney Water advised that SAMF will continue until certification of the Asset Management System (scheduled for June 2019) occurs.

Sydney Water advised that the SAMF is an adaption of the Institute of Asset Management's (IAM) model that meets the requirements of ISO 55001:2014 and is also consistent with the Water Services Association of Australia (WSAA) Asset Management Assessment Framework and NSW Treasury Guidelines. Key elements of the adopted SAMF included (1) product and asset strategy and planning; (2) product and asset management decision making; (3) Lifecycle delivery of assets (including acquisition, operation, maintenance and disposal); and risk management and performance improvement. Sydney Water have begun management of the framework using a business process model software called *Helix*.

Sydney Water further elaborated on *Helix* and its role in centralising asset management documentation. *Helix*:

- identifies what asset management procedures and guidelines are to be followed;
- (ultimately) will demonstrate compliance with ISO 55001:2014;
- includes definition for each all 39 elements associated with ISO 55001:2014;
- considers all key asset classes differently to match with their asset management practice level of maturity (e.g. water treatment assets would be displayed differently to networks); and
- enables visibility of the entire value chain and understanding an assets role within.

Sydney Water advised that documents that relate to asset management and business processes are currently being loaded and duplicates within the system are being removed. Current development status

²³⁹ Risk Edge, *Sydney Water Corporation; 2014/15 Operational Licence Audit; (RFQ 15 703) for IPART*, 19 February 2016, appendix A.3.

²⁴⁰ Sydney Water, *Strategic Asset Management Framework (SAMF) Updated*, 2004/0988F, 17 September 2015.

indicated since 20 of the 39 elements that relate to asset management have been populated (representing some 20,000 artefacts). Each process area in *Helix* has an owner (typically who is the lead for that part of the business) so that any changes to business processes can be passed through a single person. Sydney Water is aiming to reduce the current 10,000 processes to less than 3,000 processes.

In addition to *Helix*, Sydney Water outlined other key recent improvements to key SAMF documentation including:

- Integrated System Plans;
- Long term financial & investment plans (looking forward 20 & 30 years);
- Risk frameworks;
- Investment governance;
- Evidence based planning criteria;
- Better understanding of asset condition; and
- A report on the *State of Services*;

Sydney Water advised that in relation to planning, they are undertaking integrated planning across their networks with a focus on how they will meet various system drivers over shorter and longer planning horizons. Further review of the SAMF indicates that risks associated with service demands are further assessed using the *Sustainability Planning Manual*²⁴¹. Sydney Water advised that were in the process of updating their “sustainability planning process” and were evaluating process and assessment criteria.

Sydney Water also outlined how they are improving practices, principally related to:

- Servicing growth (integrated service options and working closer to deliverers);
- Longer term planning – considering and integrating drivers;
- Streamlined business case process;
- Delivery structure to get best value;
- O&M maturity roadmap;
- Research and development; and
- Enterprise Asset Management Process, and technology to improve Asset Management.

Finally, Sydney Water outlined planned improvements including updates to:

- Processes:
 - Planning to delivery process;
 - Customer & community engagement framework; and
 - Asset Management Framework and System.
- Tools:
 - Asset Data Standards;
 - Configuration management; and
 - Standardisation.

The updated SAMF provides evidence of the ongoing maintenance of the Asset Management Framework.

Asset Management Framework – ongoing implementation

To demonstrate evidence of the SAMF implementation, the ongoing implementation was audited

²⁴¹ Sydney Water, Sustainability Planning Manual, BMIS0144, October 2010.

primarily by seeking evidence that supports:

- *“Robust and transparent methodologies for determining and prioritising licensing and other regulatory requirements and current and future services levels as well as identifying the infrastructure needed to achieve those service levels and requirements;*
- *Robust, transparent and consistent processes, practices and programs to ensure sustainable delivery of service levels and regulatory requirements, based on sound risk management;*
- *Robust and transparent decision making processes that balance acceptable risks with cost and service provision to achieve prudent, efficient and effective operating and capital investment;*
- *An approach that achieves the lowest cost of service delivery through the effective life cycle management of the asset base; and*
- *Robust and transparent processes of review and continuous improvement in asset management.”*

Sample documentation related to each of these items to address this licence requirement was provided as evidence or made available during audit interviews.

- *Robust and transparent methodologies for determining and prioritising licensing and other regulatory requirements and current and future services levels as well as identifying the infrastructure needed to achieve those service levels and requirements*

Sydney Water’s *Asset Management Policy*²⁴² identifies that they must comply with all legislation, regulations and licencing requirements. Responsibility to comply with licencing and regulatory requirements lies with managers and deviations from reporting methodologies must be approved by the Chief Executive Officer. Sydney Water provided evidence that their method for determining requirements is transparent. With regard to IPART licencing requirements, Sydney Water’s *Folio of Progress 2015-16*²⁴³ references IPART requirements with Sydney Water’s and makes a self-assessment of their performance for the period, whether they are on track to address requirements and any mitigations measures (actions) that are required to ensure compliance.

Sydney Water advised they are actively servicing growth and are collaborating with planners in other agencies and developers to service upcoming housing stock. Sydney Water advised whilst the location and order of growth locations remains outside of their control, they actively stay close to new developments.

To test whether Sydney Water were meeting their requirement related to planning for current future service levels, the auditors selected the *Wastewater Treatment and Water Recycling Plants Asset Management Plan: 2015-2020* which was updated during the period for review. With regard to urban growth, the plan identifies impact urban growth will have on wastewater treatment facilities and the capital investments required to service the 5-year horizon. Discussion and projections related to longer term considerations (20 years) was also included. Considerations include:

- Implementation of innovative servicing solutions (e.g. water smart communities);
- Servicing of growth (including alternatives to the Sydney Water network);
- regional servicing strategies (e.g. development of a Hawkesbury Nepean Regional Servicing Strategy);
- potential for resource recovery (e.g. co-digestion to improve energy recovery, beneficial reuse of biosolids, the potential for recycled water product, and renewable energy);
- Technology changes;
- Adaption to climate change; and
- Odour encroachment.

²⁴² Sydney Water, Asset Management Policy, AMQ0033, October 2009.

²⁴³ Sydney Water, Asset Management Obligation – Folio of Progress 2015-16, 1 September 2016.

The auditors found that Sydney Water was able to demonstrate how they are actively engaging with developers and are considering what licence and regulatory requirements they must adhere to and how service levels can be maintained to meet projected growth forecasts. Additionally, Sydney Water was actively looking to apply learning from its assets to their approach to planning.

- *Robust, transparent and consistent processes, practices and programs to ensure sustainable delivery of service levels and regulatory requirements, based on sound risk management*

In reviewing processes, practices and programs, the following was observed:

Processes:

Sydney Water conducts both planned and reactive maintenance. All jobs are logged in Maximo and Work Orders are created. To manage priority, Sydney Water has in place a single platform known as *Field Resource Management* (FRM), which is a software that is used to identify, prioritise and manage maintenance jobs.

Documentation on how Sydney Water responds to Civil Maintenance jobs was contained within the *Service Delivery Integrated Management System* (SDIMS) manual. This identifies a set of rules and guidelines to ensure consistent and efficient civil maintenance job allocation (to meet required business service levels) for breakdown (reactive) and planned work (forward planning). Maintenance is primarily driven from their maintenance depots and at the location of drinking water treatment and wastewater treatment facilities. In addition to breakdowns, civil maintenance undertakes forward planned work comprising: customer requested; asset creation; corrective; preventative (inspections and maintenance); and operational assistance. Reactive or breakdown jobs are classified with a priority level from 1 to 6 (6 being the most urgent). Priority levels are defined in the *Reporting Manual*. Criteria that influences priority includes: whether the work is reactive or planned; job suitability (matching skill levels of nearby and available crews); asset criticality (consequence of failure which is based on asset size, location, properties & customers affected, and potential for environmental incidents related to failure); incidents; plant and equipment availability; and job density).

A live demonstration of how network reactive maintenance issues are tracked, jobs are created and maintenance response is planned was demonstrated by Staff at the Preston Works Depot using FRM. At the maintenance depot, operators receive calls from customers and make an initial assessment of work required (including required resources required, time, materials, plant and equipment) based on the description of the issue identified. When technicians attend a job they refine the assessment of work required and conduct a risk assessment (including the application of mitigation measures). Depending on hazards present, adjustments to priority may occur.

SDIMS stores all processed data including: checklists, forms, HYDRA, lists, plans, procedures, registers, Safe Work Method Statements (SWMS) and Work Instructions. SWMS were defined by Sydney Water as how a staff member would logically go about a job; and Work Instructions which were identified as how a staff member would manage a job. The Auditors requested examples of SWMS and Work Instructions.

- Two examples of SWMS were provided (No. 1 Standard Start and No. 3 Excavation). SWMS were consistently formatted. They identified PPE, equipment and training required. SWMS identified potential hazards (associated standard rank) and suggests controls (and associated revised rank). Documentation review dates were not marked on the SWMS's.
- Two examples of Work Instructions were provided. Both were consistently formatted, versioned, identified document owners, date of issue and revision dates. Work Instructions included decision flow charts accompanied by work instructions.

The auditors Sydney Water's FRM platform to be appropriate to manage, prioritise and respond to planned and reactive maintenance. Documentation provided for review was able to demonstrate the consistent application of processes.

Practices:

Within the maintenance depots, Sydney Water Apply what they refer to as *Management Operating System* (MOS) principles. Sydney Water advised this comprises:

- *Daily Conversations* – These conversations are regular (conducted at least twice per shift) between each crew and their Field Supervisor to understand progress on jobs and assess whether any delays are likely. These conversations also provide crew and their Field Supervisor to an opportunity to discuss options that could prevent a job overrun.
- *Daily Area Meetings* – This meeting aims to identify time, quality and cost variances in the delivery of the daily work plan. It also assists in reprioritising work and / or reallocating resources as required to meet failures in planning and execution.

The Daily meetings are led by the Planned or Reactive Team Managers for each geographic area with attendees including the Field Supervisors, Network Technician Field Supervisors, Logistics Coordinator, Work Plan Coordinator.

During this meeting area specific metrics are discussed along with a review of actions identified during the previous meeting/s.

- *Weekly Production meetings* – This meeting aims to identify time, quality and cost variances in the delivery of the monthly work plan. During this meeting actions across all areas are tracked to understand trends and develop improvement plans to reduce issues identified.

The weekly meetings are attended by the L4 and L5 Civil Maintenance managers, Logistics & Support managers and the Networks Field Response Manager.

- *Weekly Planning meetings* – This meeting aims to identify resources and performance requirements for the delivery of the weekly work plan. Outstanding breakdown maintenance jobs are also considered during this meeting.

The area Work Plan Coordinators, Field Supervisors, Network Technician Field Supervisors and Team Managers (Planned and Reactive) attend this meeting.

Sydney Water advised they prepare daily and weekly reports and this is discussed at meetings and is also used to conduct internal *meet the market analysis* (Sydney Water advised a saving of 18.5% has been achieved over three years), however recognise the market has moved from 3 years ago and they need to find further savings. Sydney Water also identified that they prepare monthly reports that are distributed to all relevant staff including those involved in maintenance at the particular depot where the report is generated, as well as managers at corresponding depots and head office. Sydney Water provided a copy of their February safety inspection report which tracks issues by category (including metrics) and identifies non-compliances by staff member.

The auditors were satisfied that the various reports daily, weekly and monthly reports sufficiently cover issues and exceptions and the dissemination of information is reaching its intended audience.

Internal audits of jobs are completed once per month. Eight (8) partial internal audits are conducted per month along with one (1) full internal audit per month, covering at a minimum safety and chokes. Audit data is stored in *Maximo* and is attached to Work Orders. One example of a partial audit and one example of a full audit was requested. Comments related to audits were as follows:

- *Partial internal audit* – The example provided was for an internal field safety audit. The actual problem was defined as “water on footpath”. The internal audit used a standard template that identified all of the risks present at this Site. Yes/No answers to the Risk/Hazard Assessment questions were then provided. The internal partial safety audit was deemed to be in compliance by the internal Sydney Water Audit.
- *Full internal audit* – The example provided was for an internal field safety audit. The actual problem was defined as “Other reason”. The internal audit used a standard template that was identical to the partial audit albeit with different risks identified.

Whilst it was unclear how the partial and full audits differed, the process of implementing regular internal audits is helpful to maintain sustainable service levels and manage risk.

Programs:

Sydney Water engages in a number of programs to drive efficiencies and reduce expenditure. For example, Sydney Water is actively improving data quality across a range of enterprise databases and is implementing programs to reduce maintenance costs. Details of programs related is contained within Asset Management Plans.

Sydney Water provided evidence of two programs (1) Critical Water Mains Program; and (2) Condition Assessment Program (water mains) which had ongoing delivery through the audit period.

The *Critical Water Mains Program* seeks to apply a proactive risk based approach to minimise failure and also reduce the consequences of failure. Sydney Water is using tools that are top-down and bottom-up as part of assessments. Sydney was advised efficiencies gained from the *Critical Water Mains Program* include:

1. An improved risk-based approach to renewals - more effective system optimisation and a dramatic increase in the decommissioning, re-routing, downsizing
2. Introducing system integrated planning to incorporate renewal, growth, reliability and operational issues together
3. Better targeting of renewals through an improved condition assessment process, resulting in the shorter lengths – better targeting

Using the insights from the *Critical Water Mains Program*, Sydney Water are then able to prioritise the selection of pipes for condition assessment as part of the *Condition Assessment Program*.

The *Condition Assessment Program* is also applying learnings from the *Advanced Condition Assessment and Pipe Failure Prediction Project*. Sydney Water advised that knowledge transfer associated with these projects is helping Sydney Water improve their appetite for risk.

Sydney Water further elaborated on the role of their reliability team members, who rather than having a responsibility to manage a single facility (e.g. a wastewater treatment facility), they respond to issues and challenges across a number of facilities. Benefits realised include: improved standardisation, knowledge sharing and learning, innovation, improved data quality and technology selection, which all contribute to improved asset reliability.

- *Robust and transparent decision making processes that balance acceptable risks with cost and service provision to achieve prudent, efficient and effective operating and capital investment*

To understand whether this licence requirement was being enacted, requests were made in relation to how assets were being managed at the Cronulla Waste Water Treatment Plant (WWTP). The Auditors selected two assets from Maximo for further investigation: (1) 'Screenings Removal Stream 3'; and (2) 'Submersible Pump Unit - Interstage Sump Pump No.1'. Staff were able to assist with this query onsite and provided a live demonstration of how Maximo is used to display information.

Work related to 'Screenings Removal Stream 3' – Asset hierarchy information was listed in Maximo that connected the asset with its function and location within the plant. Planned maintenance (PM) was listed for electrical and mechanical maintenance with maintenance scheduled to occur on a yearly frequency. A work description was recorded in Maximo detailing job preparation, acceptable operating limits and details on when to undertake corrective maintenance (CM) and what is required for completion (which included completion of a condition rating). Maintenance records were observed to cover both planned electrical (Work Order: 72128433) and mechanical (Work Order: 72512032) maintenance were (recorded within the 2015-16 audit period). Electrical maintenance was completed within 1 day of the actual planned date and mechanical maintenance was completed within 8 days of the actual planned date, which is within the one-month maximum response time for this asset. *Maximo* recorded information on the completed mechanical and electrical (M&E) work orders, actual labour (hours) and services (cost). No materials were recorded. Planned follow-up

work listed was to (1) determine whether any follow up work is required; and (2) record a condition assessment.

Work related to 'Submersible Pump Unit - Interstage Sump Pump No.1' – Asset hierarchy information was listed in Maximo that connected the asset with its function and location within the plant. Planned maintenance (PM) was listed for electrical and mechanical maintenance with maintenance scheduled to occur on a yearly frequency. A work description was recorded in Maximo detailing job preparation, acceptable operating limits and details on when to undertake corrective maintenance (CM) and what is required for completion (which included a condition rating). Maintenance records were observed to cover both planned electrical (Work Order: 72562773) and mechanical (Work Order: 72562740) maintenance (recorded within the 2015-16 audit period). There was an additional record of maintenance identified as GN (Work Order: 72615577) which related to electrical maintenance conducted on 7 April 2016. Within the Maximo record provided, there was no work description, therefore it is not possible to determine what the work was related to. General electrical maintenance was completed within 10 days of the actual planned date, planned M&E maintenance was completed within 19 days of the actual planned date, which is within the one-month maximum response time for this asset. *Maximo* recorded information on the M&E completed work orders, actual labour (hours) and services (cost). No materials or failures were recorded. Planned follow-up work listed was to (1) determine whether any follow up work is required; and (2) record a condition assessment.

From the live demonstration and records provided, the auditors consider that Sydney Water has in place appropriate systems and processes to record asset information to support the decision-making processes that govern maintenance and renewals. Two shortcomings were identified, namely:

1. Condition assessments were not completed for the two assets interrogated; and
2. Because condition assessments were not conducted following the completion of planned maintenance, a separate inspection will be required to inspect the assets again in order to report on condition.

An opportunity for improvement (**OFI-2015/16-01**) has been identified in respect of this issue.

■ *An approach that achieves the lowest cost of service delivery through the effective life cycle management of the asset base*

Sydney Water advised that they are constantly working through how they consider risks related to the asset base. Understanding the consequence of failure is a key part of this, so that Sydney Water can understand risk versus cost. When replacing mechanical and electrical equipment, Sydney Water advised they consider alternative approaches (e.g. standardisation, lower cost replacement costs vs shorter life spans).

Sydney Water uses various tools to help make decisions that achieve the lowest cost of service, including:

- Decision frameworks (to make asset decisions around key asset classes).
- Value management frameworks and models

To make asset management decisions, Sydney Water relies on data SCADA data (from *icats*) and their Business Intelligence (BI) analytics capability (which uses data from Sydney Water's data warehouse). The asset decision frameworks are then used as to process data for asset decision making. Sydney Water provided a number of decision frameworks for review.

Sydney Water is continuing to do a lot of work around maintenance (including development of manuals, identifying spares, training, and validation). Sydney Water acknowledged current challenges associated how maintenance is delivered internally (currently it is handled via contractual clauses). Consequently, they have restructured so that maintenance management responsibility is handled single division.

Sydney Water also advised they are preparing improved guidance and plans that cover standardisation

and how standardisation can be used as a platform for innovation.

When considering other measures to achieve lowest cost delivery costs, Sydney Water draws on its Investment Governance Framework. The Portfolio Control Group (PCG) use the framework to package together interrelated items in a management portfolio. Any re-prioritisation of investment to drive lower costs of service would then be handled by the Portfolio Performance Group (PPG).

The auditors were satisfied Sydney Water was actively implementing measures that allow them to continually assess how they can achieve the lowest lifecycle cost of the asset base.

- *Robust and transparent processes of review and continuous improvement in asset management*

The Auditor notes examples of continuous improvement are provided throughout the auditors detailed findings. Additional information not listed elsewhere is provided below.

Sydney Water advised that through its R&D programs they were able to reduce critical works from \$50m to \$30m (one example of this is the critical water mains program described above which used learning to develop new tools that help prioritise renewals programs). Sydney Water is also investigating corrosion and odour, and how ventilation can be incorporated into specifications for Odour Control Units (OCU's).

Sydney Water also advised as their assets reach maturity, they are investigating how they can improve operational readiness, how to bring in more data and how to undertake more efficient handover of new plant and equipment.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

The following opportunity for improvement has been identified in respect of this previous recommendation:

- **OFI-2015/15-01:** Sydney Water should consider the capture of asset condition as part of work order completion.
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Table A.4.2 Recommendation 2013/14-4 (Asset Management Obligation – Sub-clause 3.1.2(e))

Reference	Requirement	Compliance Grade
2013/14-4	<p>Ongoing: Sydney Water should ensure that document control is implemented across the organisation for all key documents relating to its services and activities covered by the operating licence. Key knowledge processes and practices should be documented, controlled and endorsed with appropriate signoff.</p> <p>Complete: Sydney Water should demonstrate that information in controlled documents retains currency by implementing regular reviews in accordance with its risk based document control review schedules. By 30 June 2015, Sydney Water should establish a review schedule to ensure that all controlled documents are brought up to date according to the risk level of the document.</p>	<div></div> Addressed
<hr/>		
Risk	Target for Full Compliance	
Failure to have an effective document control system in place poses a high risk that records and documented procedures and other guidance becomes out-of-date and no longer relevant to its purpose.	Evidence that Sydney Water has: <ul style="list-style-type: none">ensured that document control is implemented across the organisation for all key documents relating to its services and activities covered by the operating licence; andestablished a review schedule to ensure that all controlled documents are brought up to date according to the risk level of the document.	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.Sydney Water, <i>BMIS – When should I use it</i>, December 2014.Sydney Water, <i>When to use OFFICE 365 & when to use SWIM documents</i>, undated.Document (extract): iConnect recordkeeping page.Sydney Water, 2016 - OL Folio Key Documents_tracking table consolidated.xlsx.Sydney Water, BMIS how to review a document, BMIS0172, Version 2, June 2015.Sydney Water, docs July 2016.xlsx (Extract from BMIS).Sydney Water, Procedure: Documentation and Document Control, QMAF0008, Version 2, 10 December 2015.Sydney Water, Screen Print - BMIS Document Control Work Instructions.docx (Screen Capture from BMIS).Sydney Water, OL Folio Key Documents_tracking table - Customer Services April 2016.xlsx.Sydney Water, OL Folio Key Documents_tracking table 060315 - May 2015.xlsx.Sydney Water, BMIS PAMS docs Aug 2016.xlsx.		

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- Sydney Water, Copy of PAMS documents_160516.xlsx.
 - Sydney Water, Copy of PAMS documents_160615.xlsx.
 - Sydney Water, Doc Review Plan for Op licence IPART audit EOFY 15 16.xlsx.
 - Sydney Water, SDIMS Monthly Performance Report-June16.xlsx.
 - Sydney Water, Additional analysis 20150702.xlsx.
 - Sydney Water, Doc Review Plan for Op licence IPART audit APR2016 - Treatment.xlsx.
 - Sydney Water, SD Plan for expired docs for IPART.xlsx.
 - Sydney Water Asset Management Plans, as referenced.
 - Sydney Water Decision Framework documents, as referenced.
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Summary of reasons for grade

This recommendation is assessed as having been addressed. Sydney Water demonstrated that it has improved the management and control of its key documents, and continues to do so. Sydney Water's BMIS (*Business Management Information System*) is the principal document management system for its ISO-based management system documents (which include Procedures, Policies, Work Instructions, Templates, Forms Audits and Action Request related documents). Records indicate that the currency of documents managed within the BMIS had increased to more than 90 percent by June 2016, consistent with Sydney Water's adopted target. The *Sydney Water Information Management System* (SWIM) remains the overarching document management system employed by Sydney Water, of which the BMIS is a specific component.

Whilst there remains some opportunity for improvement, it is apparent that Sydney Water is implementing document control in respect of key management system documents across the organisation. Furthermore, knowledge processes and practices are being documented, reviewed and approved with appropriate signoff.

Discussion and notes

Pursuant to the requirements of clause 7.1 of the *Operating Licence*, Sydney Water is currently transitioning to an enterprise Quality Management System (QMS). As part of this transition, the *Business Management Information System* (BMIS) is now being used to control all key documents related to services and activities covered by the *Operating Licence* and (together with related document control metadata) is considered to be Sydney Water's "source of truth". HELIX, Sydney Water's business process model, links to BMIS.

Sydney Water further advised that all of its formal management system key documents are controlled using BMIS, and that documents that are not part of a formal management system are managed through the Sydney Water Information Management System (SWIM),²⁴⁴ which is the overarching document management system of which BMIS is a component. This is consistent with the *Documentation and Document Control Procedure*,²⁴⁵ which indicates that: "It [the procedure] refers to all content management systems, including SWIM (*Sydney Water Information Management System*) and BMIS (*Business Management Information Systems*)."

Further clarification is provided in internal guidance including "BMIS – When should I use it",²⁴⁶ "When to use OFFICE 365 & when to use SWIM documents",²⁴⁷ and the iConnect (intranet) "Recordkeeping" page.²⁴⁸ This guidance indicates that documents types including Procedures, Policies, Work Instructions, Templates,

²⁴⁴ Sydney Water comments in response to Draft Audit Report.

²⁴⁵ Sydney Water, Procedure; *Documentation and Document Control* (Reference: QMAF0008), 10 December 2015.

²⁴⁶ Sydney Water, *BMIS – When should I use it*, December 2014.

²⁴⁷ Sydney Water, *When to use OFFICE 365 & when to use SWIM documents*, undated.

²⁴⁸ Document (extract): iConnect recordkeeping page.

Forms, Audits and inspections and Files associated with Action Requests that relate to management systems should be managed via the BMIS.²⁴⁹

Sydney Water advised that:²⁵⁰

“Initially, to ensure key documents related to compliance with the Operating Licence retain currency, Sydney Water developed a tracking table listing the key document name, document owner, document control method, last review date, review period and the next review date for each key document. (see 2016 - OL Folio Key Documents_tracking table consolidated this document has a tab for each Operating Licence folio and contains separate update tabs for 2015 and 2016 listing outstanding documents).

In reviewing and updating this document it was found that most of these documents are managed through the Business Management Information System (BMIS) – the repository for documents covered by Sydney Water’s management systems. As a result, Sydney Water is now addressing the document control audit recommendation through monitoring the currency of documents in BMIS. Sydney Water has a common document Control procedure used by all Management systems (See QMAF0008 Documentation and Document Control Procedure), as well as detailed instructions on using BMIS to control documents. (Screen Print - BMIS Document Control Work Instructions, BMIS0172 BMIS how to Review a document).

In addition, to sharpen the focus on document control, the percentage of BMIS documents reviewed within the required review period is tracked and reported on a monthly basis as part of our business performance reporting to the Sydney Water Executive. A target of 90% has been set for documents to be reviewed on time. At the end of June 2016, 90% of documents in BMIS were current (see Docs July 2016), which shows a summary of the status for all BMIS documents to the end of June 2016).

Each Division also tracks their key documents to ensure they are up to date. (see tracking evidence for each division in separate folders, Service Delivery (SD), Customer Services (CS) and Liveable City Solutions (LCS))

Service Delivery also produce a detailed report of the status of their documents as part of their monthly reports. (see SDIMS Monthly Performance Report-June16 in the SD folder).”

Review of the documentation referenced by Sydney Water revealed:

- QMAF0008 Documentation and Document Control Procedure – is a detailed procedure that appears to cover all of the relevant aspects of document management.
- BMIS extract “Docs July 2016” – provides an extensive list of documents, and provides evidence that 90 percent of the listed documents were up-to-date at the time the list was extracted. The separate Divisional tracking records provide supporting evidence.
- SDIMS Monthly Performance Report-June16 register – demonstrates improvement in document currency for Service Delivery Division during 2015/16 (refer later discussion).

Upon questioning Sydney Water further about how document review cycles are managed, Sydney Water advised that:

- BMIS notifies document owner, document author and document controller 90 days prior to the identified document revision due date.
- If revisions are not acted on, then, the system continues to generate follow-up emails.
- Documents maintained outside of BIMS do not have review cycle notification emails automatically generated.

Sydney Water further described system related issues when a document is created without being recorded in the BMIS database. Another issue arises as a result of documentation being linked to people rather than roles; this may result in the document update being delayed as the appropriate person isn’t notified. This is a rare occurrence, which is ultimately captured through exception reporting.

The auditors attempted to cross-reference three documents provided as evidence for the audit with the

²⁴⁹ Sydney Water, *When to use OFFICE 365 & when to use SWIM documents*, undated, page 5.

²⁵⁰ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

spreadsheet titled “*Docs July 2016.xlsx*” (BMIS extract) to check their BMIS records status. Results are as follows.

- Minor Service Extension Policy (Document: ACDP0393) – document listed in BMIS extract; the document indicates that review is scheduled for 12 December 2015; however, BMIS record indicates that it is not due until 12 December 2016.
- Records Management Policy (Document: SWIM 189255) – unable to locate document in BMIS extract, however, as indicated by its document reference number (and subsequently advised by Sydney Water) this document is managed via SWIM; the document indicates that a review scheduled for 9 October 2014 has not been completed.
- QMAF0008 Documentation and Document Control Procedure – document is listed in BMIS extract and is current.

It was noted that one of these documents had not been revised almost two years after its due date, whilst another showed a different review date to that recorded in the BMIS; this indicates that there remain some cases for improvement. It was further noted that the Records Management Policy is recorded in SWIM; this is appropriate as it is an overarching policy that applies to all records managed by the organisation and is not exclusively related to management system documents.

The Liveable City Solutions (LCS) tracking record “*BMIS PAMS docs Aug 2016*” (which is dated August 2016) includes the Asset Management Plans provided to the auditors; the auditors confirmed that they were also included in the “*Docs July 2016.xlsx*” BMIS extract. It was noted, however, that the BMIS records indicate that the Asset Management Plans are to be reviewed on a 3-yearly cycle, whilst the Plans themselves indicate a 4-yearly cycle; Sydney Water has confirmed that, as assumed by the auditors, the BMIS records would prevail.

It is also noted that LCS maintained documentation currency levels above 90 percent based on the August 2016 data snapshot. Further analysis revealed that 92 percent remained current as at 30 June 2016 (ie. at the end of the audit period). Similar analysis for the “*Docs July 2016.xlsx*” BMIS extract confirmed the abovementioned 90 percent document currency.

Service Delivery (SD) provided additional monthly performance statistics regarding document currency for the audit period; these in general showed:

- a downward trend of expired documentation for all delivery sectors (improvement);
- a downward trend in non-conformances for all delivery sectors (improvement);
- a downward trend of overdue improvement opportunities for all delivery sectors with the exception of networks which increased for four months from February-June 2016 (overall improvement).

In respect of the documentation and control of key knowledge processes and practices, review of the Asset Management Plans provided by Sydney Water (for example, the *Asset Management Plan 2014-15; Wastewater Pumping Stations*²⁵¹ and *Asset Management Plan 2014-15; Water Filtration Plants*²⁵²) revealed that they had been appropriately documented, reviewed and approved and that document control mechanisms were in place. Review of a sample of Decision Framework documents (for example *Decision Framework; Avoid Sewer Fail*²⁵³ and *Decision Framework; Reticulation Water Main Renewal*²⁵⁴) confirmed this assessment.

In summary, Sydney Water demonstrated that it has improved the management and control of its key documents, and continues to do so. The currency of documents managed within the BMIS appears to be well controlled with greater than 90 percent compliance, which is consistent with the target adopted by Sydney Water. Sydney Water explained that it has, and continues to, substantially reduce the number of

²⁵¹ Sydney Water, *Asset Management Plan 2014-15; Wastewater Pumping Stations* (Reference: AMQ0021, Revision 04), 31 July 2015.

²⁵² Sydney Water, *Asset Management Plan 2014-15; Water Filtration Plants* (Reference: AMQ0123, Revision 03), 31 July 2015.

²⁵³ Sydney Water, *Decision Framework; Avoid Sewer Fail* (Reference: AMQ0015, Revision 06), 29 August 2016.

²⁵⁴ Sydney Water, *Decision Framework; Reticulation Water Main Renewal* (Reference: AMQ0100, Revision 5), 29 August 2016.

“active” documents; it is expected that this will ultimately lead to improvement from this perspective.

It was noted that there are some discrepancies between review dates shown in individual documents and those shown in the BMIS. Whilst Sydney Water has indicated that the BMIS records would prevail, it is suggested that Sydney Water considers taking action as part of the document review process to ensure that there is consistency in the recorded information. An opportunity for improvement (**OFI-2015/16-02**) has been identified in respect of this issue.

Based on the evidence provided, it is apparent that Sydney Water is implementing document control in respect of key management system documents across the organisation. Furthermore, knowledge processes and practices are being documented, reviewed and approved with appropriate signoff.

Recommendations

There are no further recommendations arising in respect of this previous recommendation.

Opportunities for improvement

The following opportunity for improvement has been identified in respect of this previous recommendation:

- **OFI-2015/16-02:** It is suggested that, as part of the document review process, action is taken to ensure consistency between review dates recorded in the BMIS and those recorded in the individual documents.

Table A.4.3 Recommendation 2014/15-6 (Asset Management Obligation – Sub-clauses 3.1.1 and 3.1.2)

Reference	Requirement	Compliance Grade
2014/15-6	Sydney Water should review and implement measures relating to obtaining asset information to ensure that mechanical and electrical asset data quality and coverage for works completed by contractors provide sufficient detail to maintain robust asset inventories and support asset planning, replacement and other business needs (by 30 September 2016).	Addressed

Risk	Target for Full Compliance
Failure to capture adequate asset data compromises asset knowledge, thereby posing a high risk that Sydney Water is not sufficiently prepared for failure response or have the necessary asset knowledge for life-cycle asset planning and management.	Evidence that Sydney Water has implemented measures relating to obtaining asset information to ensure that mechanical and electrical asset data quality and coverage for works completed by contractors provide sufficient detail.

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Interviews with Sydney Water staff, 26-28 September 2016.
- MS Excel Workbook: *KPI Trend Summary FY 2015_16.xlsx*.
- Sydney Water, *2014/15 Asset Data Recovery; Closeout Audit Report*, undated.

Summary of reasons for grade

Sydney Water has introduced new arrangements for the capture of data in relation to mechanical and electrical asset renewals. These arrangements include the use of mobile devices for data capture and the introduction of KPIs as a means of monitoring performance. A data recovery program was implemented during 2015/16 to capture missing historical data.

On the basis of the action taken, and Sydney Water's longer term plans for the management of asset information, this recommendation is deemed to have been addressed.

Discussion and notes

Sydney Water advised that:²⁵⁵

"The issues identified with poor data collection have been rectified by:

1. *Enacting a data recovery plan to manually retrieve and input data that was missing. This was successfully achieved for 2014/15 and 2015/16.*
2. *Implementing a field mobility device for each tradesman to enable the data to be captured at the time of carrying out work. The monitoring and measurement of the performance of contractual partners still continues through a suite of KPIs.*

Longer term improvements for asset information are outlined in Recommendation 2014-15-7 ..."

During the audit interviews, Sydney Water reiterated the above advice. Asset renewal undertaken under mechanical and electrical maintenance contracts had not been captured into the Maximo asset management system.

²⁵⁵ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

A data recovery program was developed and missing historical data captured during 2015/16. In parallel with the historical data capture, a new approach to data capture was developed and a mobility solution (which was demonstrated during the field verification visit to Prestons Maintenance depot, introduced.

KPIs in respect of data capture were introduced. These require the capture of data within two (2) months of a Work Order being recorded as finished; the Work Order cannot be closed under the data has been captured.

Sydney Water also provided an audit report that assessed the extent to which missing data for work orders undertaken during 2014/15 had been recovered.²⁵⁶ This report noted that the audit had assessed:

- where the contractor had indicated that data was not required (projects where value of replace asset is less than \$2,000), whether this assessment was appropriate – initial assessment revealed that performance target had not been met, however, action was taken to address this deficiency; and
- the completeness of data where it had been provided – it was assessed that where provided, data was complete.

Sydney Water also provided a copy of spreadsheet²⁵⁷ showing performance (KPI) trends for its mechanical and electrical maintenance contractor. These showed that comprehensiveness of data collection is assessed in respect of:

- Percentage of actual start and finish dates (for work orders);
- Percentage of condition monitoring measurement points with data (preventative maintenance);
- Percentage of work orders with problem, cause and remedy codes (breakdown maintenance and corrective maintenance); and
- Percentage of corrective maintenance records with the originating record.

Whilst the action taken effectively addresses the requirements of this recommendation, longer term improvements in respect of asset information, including data capture are discussed in respect of Recommendation 2014/15-7 (refer Table A.4.4).

Recommendations

There are no further recommendations arising in respect of this previous recommendation.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this previous recommendation.

²⁵⁶ Sydney Water, *2014/15 Asset Data Recovery; Closeout Audit Report*, undated.

²⁵⁷ MS Excel Workbook: *KPI Trend Summary FY 2015_16.xlsx*.

Table A.4.4 Recommendation 2014/15-7 (Asset Management Obligation – Sub-clauses 3.1.1 and 3.1.2)

Reference	Requirement	Compliance Grade
2014/15-7	<p>Sydney Water should review technical asset registers to identify:</p> <ul style="list-style-type: none">whether existing asset hierarchy across all asset classes meets business needs; andthe extent to which asset data conforms to the hierarchy (structure, coverage and quality); <p>and commence programs of work to improve asset registers to achieve business needs identified, which may include regulatory requirements (30 September 2016).</p>	<div></div> <p>Addressed</p>
Risk	Target for Full Compliance	
Failure to capture and maintain robust asset data poses a high risk that Sydney Water will be unable to effectively manage in infrastructure in a manner that enables it to provide the required levels of service and meet its business objectives	Evidence that Sydney Water has reviewed its asset knowledge requirements and commenced programs of work to improve the integrity of its data.	
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.Sydney Water, Standards; Asset Hierarchy, 9 December 2015.Sydney Water, Enterprise Data Quality Framework, Operating Model & Approach; Putting our Information to Work; Version 0.9, 11 March 2016.Sydney Water, Enterprise DQ Governance Model, June 2016.Sydney Water, Asset Information Management & Asset Knowledge Organisational Design; Current State to Future Outcomes, June 2016.		
Summary of reasons for grade		
<p>On the basis that a program of work has commenced (as required by the recommendation), this recommendation is deemed to have been addressed; however, given the forecast timeline for the project it would be prudent to continue monitoring progress.</p>		
Discussion and notes		
<p>Sydney Water explained that action being taken to improve its asset knowledge as follows:²⁵⁸</p> <p><i>“Projects that address this recommendation are already underway as part of our wider asset management improvement program. These projects are:</i></p> <ol style="list-style-type: none"><i>Structure – asset data structure (asset data standards).</i><i>Control – management of an asset’s status (configuration management).</i><i>Content – mechanical and electrical asset data quality within facilities (data integrity project).</i>		

²⁵⁸ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

Asset Information Standards – finalising the data requirements for asset management across the corporation and then structuring our Computerised Maintenance Management System (Maximo) to support the information needs and be our definitive asset register. The project has been delayed and a revised completion date will be set after the new Asset Knowledge business is running (October 2016).

Configuration Management – formalising the processes and guides to control the status of asset data through the life of an asset. This project is scheduled to be completed by December 2017.

Data integrity project (DIP) for our network facilities, now in its planning phase, involves auditing all network facilities to update and correct our asset inventory. This project is scheduled to be completed by June 2018.

Sydney Water is establishing a new business unit – Asset Knowledge – to implement best practice information management capabilities to improve and sustain asset information.

An improvement plan (roadmap) has been prepared to fix root cause issues, data problems and sustain data improvements. This includes the asset hierarchy and asset registers.”

During the audit interviews, Sydney Water provided evidence that the business case for the Data Integrity Project was approved in May 2016 and advised that the planning phase of the project is now underway. Other actions that have been undertaken include (for example):

- An asset hierarchy has been developed, albeit in draft form.²⁵⁹
- An Enterprise Data Quality Framework,²⁶⁰ which sets a roadmap to the achievement of Sydney Water’s information management maturity aspirations has been developed.
- Data Quality Governance Model,²⁶¹ including a data quality framework, roles and responsibilities and an operating model has been developed.
- Development of the new Asset Knowledge business unit has been planned.²⁶²

In summary, Sydney Water has embarked on a significant program of work that will lead to a much more robust portfolio of knowledge in relation to its extensive asset base.

Recommendations

There are no further recommendations arising in respect of this previous recommendation.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this previous recommendation.

²⁵⁹ Sydney Water, *Standards; Asset Hierarchy*, 9 December 2015.

²⁶⁰ Sydney Water, *Enterprise Data Quality Framework, Operating Model & Approach; Putting our Information to Work; Version 0.9*, 11 March 2016.

²⁶¹ Sydney Water, *Enterprise DQ Governance Model*, June 2016.

²⁶² Sydney Water, *Asset Information Management & Asset Knowledge Organisational Design; Current State to Future Outcomes*, June 2016.

A.5 Section 5 – Customers

Table A.5.1 Providing Information (Sub-clause 5.2.4)

Sub-clause	Requirement	Compliance Grade
5.2.4	Sydney Water must advertise in a Sydney-based newspaper at least annually on: <ul style="list-style-type: none"> a) the types of account relief available for Customers experiencing financial hardship; and b) rights of Customers to claim rebates and the conditions that apply to those rights. 	Non-Compliant

Risk	Target for Full Compliance
Non-compliance with the requirements of this sub-clause poses a high level of risk in respect of customer relations and the financial management of Sydney Water's business.	Evidence that Sydney Water had advertised in a Sydney-based newspaper at least annually on the types of account relief available for Customers experiencing financial hardship; and the rights of Customers to claim rebates and the conditions that apply to those rights.

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Sydney Water, *Operating Licence Statement of Compliance 2015-16*, 25 August 2016.
- Document: NSW Government Strategic Communications Booking Request (Booking Ni: A01211) dated 19 July 2016.
- Document: Extracts from The Sydney Morning Herald, Daily Telegraph and the Illawarra Mercury showing Sydney Water advertisement.
- Interviews with Sydney Water staff, 26-28 September 2016.

Summary of reasons for grade

Sydney Water has declared non-compliance in respect of this sub-clause. Whilst the requisite newspaper advertisements were placed on 27 July 2016, this lies outside of the audit period, and more specifically means that they were not placed “at least annually” as required under this obligation.

Sydney Water advised that it has revised its program for the placement of advertisements in order to meet its obligations under this sub-clause.

Discussion and notes

Sydney Water advised that:²⁶³

“This is a new requirement introduced in the Sydney Water Operating Licence 2015-2020. An advertisement was placed in three (3) Sydney-based newspapers (The Daily Telegraph, The Sydney Morning Herald and the Illawarra Mercury) covering Sydney Water's area of operations on Wednesday 27 July 2016. As the placement of the advertisement did not occur prior to 30 June 2016, Sydney Water has reported this as a non-compliance.”

Review of the *Statement of Compliance*²⁶⁴ confirmed that Sydney Water has declared a non-compliance in respect of this obligation.

²⁶³ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

²⁶⁴ Sydney Water, *Operating Licence Statement of Compliance 2015-16*, 25 August 2016.

Sydney Water further advised that:

“Sydney Water’s procedure for the development of a number of other customer information pamphlets and brochures is being reviewed to include this new requirement. The requirement is now included within the ‘Customer Contract’ folio of progress.”

Sydney Water provided evidence, including the following, to demonstrate that it had advertised in respect of the account relief available for Customers experiencing financial hardship and the rights of Customers to claim rebates (albeit outside the audit period):

- An advertisement booking request, as submitted to NSW Government Strategic Communications on 19 July 2016;²⁶⁵ and
- Extracts from The Sydney Morning Herald, Daily Telegraph and the Illawarra Mercury showing the advertisements.²⁶⁶

During the audit interviews, Sydney Water advised that it has now re-scheduled issue of the newspaper advertisements so that they will now be placed in February.

Recommendations

The following recommendation is made in respect of this sub-clause:

- **REC-2015/16-02:** Sydney Water should develop and implement a procedure (or process) to ensure that it advertises in a Sydney-based newspaper at least once each year on:
 - a) the types of account relief available for Customers experiencing financial hardship; and
 - b) rights of Customers to claim rebates and the conditions that apply to those rights.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this previous recommendation.

²⁶⁵ Document: NSW Government Strategic Communications Booking Request (Booking Ni: A01211) dated 19 July 2016.

²⁶⁶ Document: Extracts from The Sydney Morning Herald, Daily Telegraph and the Illawarra Mercury showing Sydney Water advertisement.

Table A.5.2 Consumers (Sub-clause 5.3.1)

Sub-clause	Requirement	Compliance Grade
5.3.1	Sydney Water’s obligations under the Customer Contract relating to Complaint handling and Complaint resolution procedures are extended to Consumers as if Consumers were parties to the Customer Contract.	<div></div> Full Compliance
<hr/>		
Risk	Target for Full Compliance	
Non-compliance with the requirements of this sub-clause poses a high level of risk in respect of Sydney Water’s customer relations and the financial management of its business.	Evidence that Sydney Water extends its obligations under the <i>Customer Contract</i> relating to complaint handling and complaint resolution to Consumers as if Consumers were parties to the <i>Customer Contract</i> .	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Sydney Water, <i>Policy; Customer Complaints</i>, 1 June 2015.Sydney Water, <i>Procedure; Customer Complaint Procedure</i>, August 2014, section 2.2.Interviews with Sydney Water staff, 26-28 September 2016.		
<hr/>		
Summary of reasons for grade		
Definitions/terminology presented in Sydney Water’s <i>Complaints Policy</i> and <i>Customer Complaint Procedure</i> provide documentary evidence that Sydney Water extends its obligations in respect of complaint handling and complaint resolution to consumers as if they were parties to the <i>Customer Contract</i> . An explanation of the approach adopted by Sydney Water’s Contact Centre (ie. no discrimination is exercised in relation to the source of any complaint) aligns with the documented position.		
Accordingly, it is assessed that Sydney Water has demonstrated compliance with this obligation.		
<hr/>		
Discussion and notes		
Sydney Water advised that: ²⁶⁷		
“Sydney Water has in place a Complaint Policy and Complaint Procedure. Both documents acknowledge both customers and consumers and their rights regarding complaint handling and resolution.”		
Review of the <i>Complaints Policy</i> ²⁶⁸ reveals that it includes a definition that:		
“A Customer is any consumer of our products.”		
Review of the <i>Customer Complaint Procedure</i> ²⁶⁹ reveals that it references both Customers and Consumers. It also defines a Customer as follows:		
“A Customer is any consumer of products or services provided by Sydney Water or its agents.”		
During the audit interviews, Sydney Water explained that complaints are handled (in the first instance) via its Contact Centre, and that no discrimination is exercised in relation to the source of the complaint.		
<hr/>		
Recommendations		
There are no recommendations in respect of this sub-clause.		

²⁶⁷ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

²⁶⁸ Sydney Water, *Policy; Customer Complaints*, 1 June 2015.

²⁶⁹ Sydney Water, *Procedure; Customer Complaint Procedure*, August 2014, section 2.2.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.5.3 Assistance Options for Payment Difficulties and Actions for Non-Payment (Sub-clause 5.4.1)

Sub-clause	Requirement	Compliance Grade
5.4.1	<p>Sydney Water must maintain and fully implement:</p> <ul style="list-style-type: none">a) a financial hardship policy that assists residential Customers experiencing financial hardship to better manage their current and future Bills;b) procedures relating to a payment plan for residential Customers who are responsible for paying their Bills and who are, in Sydney Water’s reasonable opinion, experiencing financial hardship;c) procedures for identifying the circumstances under which Sydney Water may disconnect or restrict the supply of water to a Customer’s Property; andd) provisions for self-identification, identification by community welfare organisations and identification by Sydney Water of residential Customers experiencing financial hardship,<p>(the Assistance Options for Payment Difficulties and Actions for Non-Payment).</p>	<div></div> <p>Full Compliance</p>
<hr/>		
Risk	Target for Full Compliance	
Non-compliance with the requirements of this sub-clause poses a high level of risk in respect of Sydney Water’s customer relations and the financial management of its business.	Evidence that Sydney Water has maintained and fully implemented arrangements for assisting residential customers who are experiencing financial hardship to better manage their current and future bills.	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">▪ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.▪ Sydney Water, <i>Policy; Payment Assistance Policy</i>, 9 March 2016.▪ Sydney Water, <i>Procedure; Payment Assistance Scheme (PAS)</i>, 15 July 2016.▪ Sydney Water, <i>Payment Assistance Scheme; Assessment checklist for agencies</i> (Reference: SW112 10/15).▪ Document: CAP screen in CMS_hardship assessment indicators.jpg.▪ Sydney Water, <i>Policy; Overdue payments and disconnections for non-payment</i>, 1 June 2016.▪ Sydney Water, <i>Procedure; Overdue payments and disconnections for non-payment</i>, 30 June 2016.▪ Interviews with Sydney Water staff, 26-28 September 2016.		
<hr/>		
Summary of reasons for grade		
Sydney Water provided evidence to demonstrate that it has maintained and fully implemented arrangements for assisting residential customers who are experiencing financial hardship to better manage their current and future bills. These arrangements, which are summarised in the <i>Payment Assistance Policy</i> , include both Government funded and Sydney Water sponsored programs. They include, but are not limited to, payment assistance plans.		

There is a policy and procedures are in place for identifying the circumstances under which Sydney Water may disconnect or restrict the supply of water; these documents emphasise the need to exhaust all debt recovery approaches that must be exhausted before action is taken to disconnect or restrict a service.

Sydney Water is proactive in ensuring the robustness of its payment assistance team (case managers), thereby ensuring a high standard of service in implementing its *Payment Assistance Policy*.

On the basis of the evidence provided, it is assessed that Sydney Water has demonstrated full compliance with this obligation.

Discussion and notes

Sydney Water's *Payment Assistance Policy*²⁷⁰ provides an overview of Sydney Water's arrangements. It identifies various assistance mechanisms including:

- Government funded: Pensioner concessions; Payment Assistance Scheme (PAS); and
- Sydney Water support: Flexible payment arrangements; Centrepay; PlumbAssist; BillAssist; Financial Accounting; Other options.

In respect of the Government funded programs:

- Pensioner concessions relate only to the service component of the account.
- Sydney Water administers the Payment Assistance Scheme, which fulfils a community service obligation of the State Government, on its behalf. Under this scheme, debt can be "written off" on the basis of an assessment of ability to pay. Only the water use component of the account is considered in the case of tenants (the landlord pays the fixed component).
- The Payment Assistance Scheme (PAS) procedure²⁷¹ sets out the process for administering the scheme from Sydney Water's perspective. Sydney Water actively engages community welfare agencies to participate in the scheme; they are trained and accredited to undertake this role. These agencies conduct eligibility assessments with Sydney Water's customers, using a Sydney Water checklist.²⁷²

In respect of the support provided by Sydney Water:

- Flexible payment arrangements can be implemented as a "one-off" extension of time to pay an outstanding account, or an ongoing series of payments in smaller instalment than otherwise provided.
- Centrepay arrangements facilitate direct payment of instalments from Centrelink; a regular amount is deducted from an eligible customer's Centrelink payments.
- PlumbAssist provides assistance to undertake essential plumbing work; it is primarily aimed at reducing consumption. Payments of up to \$1,500 can be made for repairs, beyond which a payment arrangement can be put in place (dependent upon eligibility).
- BillAssist provides longer term financial support through the provision of advisory services in respect of the suite of available assistance programs. Qualified case coordinators are assigned to customers participating in this program.
- Sydney Water has procedures in place that help identify customers who would benefit from financial counselling (provided by a qualified financial advisor).

Customers can access the abovementioned programs by contacting Sydney Water themselves, through referral by a welfare agency or following identification of hardship (principally due to outstanding bills) by

²⁷⁰ Sydney Water, *Policy; Payment Assistance Policy*, 9 March 2016.

²⁷¹ Sydney Water, *Procedure; Payment Assistance Scheme (PAS)*, 15 July 2016.

²⁷² Sydney Water, *Payment Assistance Scheme; Assessment checklist for agencies* (Reference: SW112 10/15).

Sydney Water. Sydney Water's on-line customer management system (CMS) includes specific screen prompts to guide the assessment of hardship.²⁷³

The overall objective of Sydney Water's approach to payment assistance is the provision of support services that will help customers who are genuinely experiencing financial hardship to meet their payment obligations. Background assessments are undertaken to ensure that the costs associated with implementing the program are outweighed by the benefits gained (principally the payment of bills that may not otherwise occur).

Sydney Water is proactive in ensuring the robustness of its payment assistance team (case managers). Points of note include:²⁷⁴

- Staff are all tertiary qualified in financial management and/or human services; all must have at least three years' community experience.
- New staff inductions involve a rigorous job specific training program, followed by ongoing monthly audits of the quality of their service provision. These audits inform the identification of any requirements for further training.
- Staff have access to an extensive wellness program, which includes quarterly wellness checks, mental health training and the access to a registered psychologist.

Notwithstanding its extensive financial support program for customers experiencing financial hardship, Sydney Water may ultimately disconnect or restrict the supply of water for the non-payment of bills. Sydney Water has a documented policy that outlines the circumstances under which it may disconnect or restrict supply;²⁷⁵ actions that must be taken in respect of debt recovery before doing so are clearly specified. A related procedure²⁷⁶ provides more detailed guidance for policy implementation, but again emphasises the debt recovery approaches that must be exhausted before action is taken to disconnect or restrict a service.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

²⁷³ Document: CAP screen in CMS_hardship assessment indicators.jpg.

²⁷⁴ Personal comments during audit interviews.

²⁷⁵ Sydney Water, *Policy; Overdue payments and disconnections for non-payment*, 1 June 2016.

²⁷⁶ Sydney Water, *Procedure; Overdue payments and disconnections for non-payment*, 30 June 2016.

Table A.5.4 Assistance Options for Payment Difficulties and Actions for Non-Payment (Sub-clause 5.4.4)


Sub-clause	Requirement	Compliance Grade
5.4.4	Sydney Water must make the explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment referred to in clause 5.4.3 available on its website for downloading by any person, free of charge.	<div></div> Full Compliance
Risk		Target for Full Compliance
Non-compliance with the requirements of this sub-clause poses a high level of risk in respect of Sydney Water’s customer relations and the financial management of its business.		Evidence that Sydney Water has made an explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment available on its website.
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Help with your bill webpage at: http://www.sydneywater.com.au/SW/accounts-billing/paying-your-bill/help-with-your-bill/index.htmInterviews with Sydney Water staff, 26-28 September 2016.		
Summary of reasons for grade		
The auditors confirmed that an explanation of the Assistance Options for Payment Difficulties and Actions for Non-Payment is available on Sydney Water’s website and that copies of the <i>Payment Assistance Policy</i> and a <i>Payment Assistance Program Summary</i> are available for downloading. Accordingly, it is assessed that Sydney Water has demonstrated full compliance with this obligation.		
Discussion and notes		
Information related to the Assistance Options for Payment Difficulties and Actions for Non-Payment, ie. Sydney Water’s <i>Payment Assistance Policy</i> , is available on its “Help with your bill” webpage. ²⁷⁷ This can be accessed from the Home page via the following links: <ul style="list-style-type: none">↳ Accounts and billing↳ Help with your bill.		
Drop down boxes provide access to specific information; the <i>Payment Assistance Policy</i> is available for download in pdf format together with a <i>Payment Assistance Program Summary</i> ; and a further link is provided to access details of community agencies accredited to make assessments under the Payment Assistance Scheme (PAS).		
Sydney Water noted that during the audit period, information was also provided in the following editions of its customer newsletter, Waterwrap (which are also available on its website): <ul style="list-style-type: none">Waterwrap Feb-April 2016 – included information about payment assistanceWaterwrap Nov 2015-Jan 2016 – included information about WaterFix (aimed at reducing bills)		
Recommendations		
There are no recommendations in respect of this sub-clause.		

²⁷⁷ Help with your bill webpage at: <http://www.sydneywater.com.au/SW/accounts-billing/paying-your-bill/help-with-your-bill/index.htm>

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.5.5 Customer Council and Customer Council Charter (Sub-clause 5.5.1)

Sub-clause	Requirement	Compliance Grade
5.5.1	Sydney Water must maintain and regularly consult with organisations representing a broad cross-section of its Customers and Consumers through the Customer Council.	 Full Compliance
Risk		
Failure to consult with its customer and consumers poses a moderate risk. In the absence of customer input, Sydney Water may not be aware of customer perceptions of issues relevant to its performance.		Target for Full Compliance
		Evidence to demonstrate that Sydney Water has regularly consulted with organisations representing a broad cross-section of its Customers and Consumers through the Customer Council.
Evidence sighted		
<ul style="list-style-type: none"> Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016. Documents: Customer Council Meeting Agenda for meetings held on 2 September 2015, 2 December 2015, 1 March 2016 and 1 June 2016. Documents: Customer Council – Chair’s Notes for meetings held on 2 September 2015, 2 December 2015, 1 March 2016 and 1 June 2016. Documents: Customer Council Minutes for meetings held on 2 September 2015, 2 December 2015, 1 March 2016 and 1 June 2016. Interviews with Sydney Water staff, 26-28 September 2016. 		
Summary of reasons for grade		
<p>Sydney Water demonstrated that, during the audit period, it regularly consulted with its Customer Council, which represents a broad cross-section of its customers and consumers. Consultation is achieved through quarterly meetings as well as out of session involvement in relevant workshops, forums and meetings, and through a secure on-line discussion forum.</p> <p>Accordingly, is assessed that Sydney Water has fully complied with this obligation.</p>		
Discussion and notes		
<p>Sydney Advised that, consistent with its Charter (refer Table A.5.8 for further discussion), the Customer Council met four times during the audit period. As evidence, Sydney Water provided copies of the agenda,²⁷⁸ Chair speaking notes²⁷⁹ and minutes²⁸⁰ of Customer Council meetings held on 2 September 2015, 2 December 2015, 4 March 2016 and 1 June 2016.</p> <p>As advised by Sydney Water,²⁸¹ reference to these documents reveals that the following topics were discussed during these meetings:</p> <ul style="list-style-type: none"> “Latest news and events featuring Sydney Water Property disposal program 		

²⁷⁸ Documents: Customer Council Meeting Agenda for meetings held on 2 September 2015, 2 December 2015, 1 March 2016 and 1 June 2016.

²⁷⁹ Documents: Customer Council – Chair’s Notes for meetings held on 2 September 2015, 2 December 2015, 1 March 2016 and 1 June 2016.

²⁸⁰ Documents: Customer Council Minutes for meetings held on 2 September 2015, 2 December 2015, 1 March 2016 and 1 June 2016.

²⁸¹ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

-
- *Customer Council charter revision*
 - *Wet Wipes – progress update*
 - *Economic level of water conservation- update on reporting requirements*
 - *Beneficial use of biosolids*
 - *Culturally and linguistically diverse (CALD) speaking customers*
 - *Overview and plant tour of North Head Treatment Plant*
 - *Economic level of water conservation- update on methodology*
 - *Customer Experience Design*
 - *Enhancing Sydney Water’s customer engagement*
 - *Property disposal program- update on Property Optimisation Program assessment tool*
 - *Water for firefighting purposes*
 - *Metropolitan Plan Review.”*

It is noted the minutes of Customer Council meetings are also available on the Sydney Water website (refer Table A.5.10 for further detail).

Sydney Water advised that it invited Customer Council members:²⁸²

“... to attend workshops, forums, and meetings relevant to their customer segment and subject matter expertise out of session.

Events Customer Council members attended out of session included:

- *Tank Stream tour (Dec 15)- Kristal Burry PLAC*
- *Parramatta Council Breakfast (Dec16) -Barry Mann UDIA*
- *IPART price submission hearing (Nov 15)-Kristal Burry PLAC, Leigh Martin TEC*
- *St Marys Treatment plant tour (Mar 16)- Kristal Burry PLAC, Mary Karras ECC, Mike Bailey NCOSS*
- *Belrose property divestment (Apr-May 16) -Conny Harris NCC*
- *Western Sydney University P1SQ Morning tea (Jun 16)- Bruce McClelland SBC.”*

Sydney Water further advised that it seeks feedback from Customer Council members out of session via email and an on-line closed discussion forum (Sydney Water talk), which was demonstrated during the audit interviews:²⁸³

“Sydney Water talk items posted to members have included:

- *Introducing Tap InTM – a new online service for building approvals and diagram requests*
 - *Stakeholder engagement award for Sydney Water and GHD*
 - *Sydney Water pricing submission – update*
 - *Welcome Kristal Burry from PLAC and Armanda Scorrano to join the council, and thank you to retiring member Oliver Derum and Jed Horner*
 - *Sydney Water partners with Cricket NSW*
 - *Wet Wipes advertisements in local clubs and shopping centres*
 - *Customer Council changes in new operating licence*
 - *Sydney Water proposed lower bills in new pricing proposal IPART*
 - *IPART Final determination of Sydney Water’s pricing 2016-2020*
 - *Cronulla Wastewater Treatment Plant update*
 - *Sydney Water’s customer complaint decline (ref EWON annual report 2014-15)*
-

²⁸² Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

²⁸³ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

-
- *MoUs with key state agencies*
 - *June 2016 meeting feedback.”*

Whilst this discussion forum has only been operational since September 2015, it has the potential to increase the level of engagement of Customer Forum members.

The organisations through which customers and consumers are represented on the Customer Council are identified and discussed in Table A.5.7. For the purposes of this obligation, it can be assessed that the Customer Council represents a broad cross-section of Sydney Water’s customers and consumers.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.5.6 Customer Council and Customer Council Charter (Sub-clause 5.5.2)

Sub-clause	Requirement	Compliance Grade
5.5.2	Sydney Water must utilise the Customer Council to, among other things, obtain advice on the interests of Sydney Water's Customers and Consumers, the Customer Contract and such other key issues related to Sydney Water's planning and operations as Sydney Water may determine, consistent with the Customer Council Charter (referred to in clause 5.5.4).	Full Compliance
Risk		
Failure to make effective use of the Customer Council poses a moderate risk to Sydney Water's operations. In the absence of customer and consumer input, Sydney Water may not be aware of customer and consumer perceptions of issues relevant to its performance.		Target for Full Compliance
		Evidence that Sydney Water has used the Customer Council to obtain advice on the interests of Sydney Water's customers and consumers, the Customer Contract and such other key issues related to Sydney Water's planning and operations as Sydney Water may determine.
Evidence sighted		
<ul style="list-style-type: none"> Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016. Sydney Water, <i>Customer Council Charter</i>, August 2015. Sydney Water, Customer Council Minutes for meeting held 2 September 2015. Interviews with Sydney Water staff, 26-28 September 2016. 		
Summary of reasons for grade		
Sydney Water demonstrated that, during the audit period, it had consulted with the Customer Council in respect of a range of issues including (for example) a review of the <i>Customer Council Charter</i> , the Economic Level of Water Conservation, and the disposal of surplus property. Accordingly, it is assessed that Sydney Water has demonstrated full compliance with this obligation.		
Discussion and notes		
The <i>Customer Council Charter</i> (refer Table A.5.8) states that the objectives of the Customer Council are: ²⁸⁴		
<ul style="list-style-type: none"> "to provide a forum for effective input and examination by consumer and community groups into policy, planning and service decision-making processes relevant to Sydney Water's customers. to promote a just, equitable and effective delivery of Sydney Water's services. to assist the development of a climate of trust between Sydney Water and its customers by fostering an open and honest approach to Sydney Water's services. to provide a forum for facilitating two-way communication between Council members and Sydney Water. to provide opportunities for Council members to raise matters on behalf of the representative groups and receive a considered response from Sydney Water." 		
Matters in respect of which Sydney Water has consulted with the Customer Council and/or its members are listed in Table A.5.5. These matters included (for example): ²⁸⁵		

²⁸⁴ Sydney Water, *Customer Council Charter*, August 2015.

²⁸⁵ Examples aligning with the requirements of this obligation.

-
- Customer Council charter revision;
 - Enhancing Sydney Water's customer engagement;
 - Economic level of water conservation; and
 - Metropolitan Water Plan Review.

During the audit interviews (as a more specific example), Sydney Water mentioned property disposals as an issue in respect of which it had consulted with the Customer Council. Input had been obtained via the September 2015 Customer Council meeting²⁸⁶ and Sydney Water conducted a workshop with the Council to identify and understand community perceptions in relation to disposing of property. Sydney Water subsequently developed a tool to prioritise which properties will be disposed of. The property disposal tool incorporates factors other than just financial criteria into the decision making process (for example, some land may be returned to parkland/community use).

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

²⁸⁶ Sydney Water, Customer Council Minutes for meeting held 2 September 2015, item 5.0.

Table A.5.7 Customer Council and Customer Council Charter (Sub-clause 5.5.3)

Sub-clause	Requirement	Compliance Grade
5.5.3	<p>Sydney Water must:</p> <p>a) ensure that, at all times, the membership of the Customer Council is appointed and determined by Sydney Water in accordance with the Customer Council Charter, and</p> <p>b) use its best endeavours to include, as members of the Customer Council, at least one person representing each of the following categories:</p> <p>i) business groups, including small, medium and large business and non-residential customers;</p> <p>ii) consumer groups;</p> <p>iii) organisations representing low income households;</p> <p>iv) people living in rural and urban fringe areas;</p> <p>v) residential consumers;</p> <p>vi) environmental groups;</p> <p>vii) local government;</p> <p>viii) older people;</p> <p>ix) people with disabilities;</p> <p>x) indigenous Australians; and</p> <p>xi) people from non-English speaking backgrounds.</p>	<div></div> <p>Full Compliance</p>
Risk	Target for Full Compliance	
Failure to include representatives of the nominated interests as members of the Customer Council poses a moderate risk. Sydney Water needs to consult across a cross-section of its customer and consumer base to ensure that issues relevant to its performance are fully captured.	Evidence that membership of the Customer Council is appointed in accordance with the Customer Council Charter, and that Sydney Water has used its best endeavours to include representatives of the nominated categories.	
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Sydney Water, Letters of invitation for Customer Council representation (as identified in footnote).Emails dated 1 December 2015 from Sydney Water to People with Disability, Australia welcoming representatives to membership of the Customer Council.Letter from Reconciliation Australia declining an invitation to provide Customer Council representation.Interviews with Sydney Water staff, 26-28 September 2016.		

Summary of reasons for grade

Current membership of the Customer Council is such that all nominated interest groups are represented with the exception of indigenous Australians. Sydney Water demonstrated that it had used its best endeavours to include a suitable representative, having approached a number of relevant interest groups. Furthermore, it demonstrated that its action in seeking new members and replacing retiring members of the Customer Council had been consistent to the provisions of the Customer Council Charter in respect of membership vacancies.

Accordingly, it is assessed that Sydney Water has demonstrated compliance with this obligation

Discussion and notes

Sydney Water advised that members of the Customer Council represent the following organisations:²⁸⁷

1. *“Urban Development Institute of Australia (UDIA)*
2. *NSW Council of Social Service (NCOSS)*
3. *Public Interest Advocacy Centre (PIAC)*
4. *Local Government NSW*
5. *Ethnic Communities Council*
6. *Total Environment Centre*
7. *Multiculturalism NSW (formerly Community Relations Commission)*
8. *Illawarra Forum Inc*
9. *Nature Conservation Council*
10. *Sydney Business Chamber*
11. *Council of the Ageing (COTA) – joined December 2015*
12. *People with Disabilities, Australia – joined December 2015.”*

It appears that these organisations represent most of the nominated interests, with the exception of indigenous Australians. It is noted that there was some change to the interests required to be represented on the Customer Council as identified in the new (2015-2020) *Operating Licence*.

Sydney Water provided copies of invitations for Customer Council representation to interest groups including National Disability Service, NSW Aboriginal Lands Council, Metro Aboriginal Lands Council, Reconciliation Australia, Youth Action Group, Council for the Aging and People with Disability.²⁸⁸ As a result, representatives of the Council of the Aging and People with Disabilities, Australia have now been appointed members of the Customer Council; copies of welcome correspondence was provided.²⁸⁹

Sydney Water advised that the following organisations have declined invitations to send representation to the Customer Council:

- Youth Action and Policy Association NSW (invited September 2015);
- Reconciliation Australia (invited September 2015);²⁹⁰
- Metro Aboriginal Lands Council (invited September 2015); and
- NSW Aboriginal Lands Council (invited January 2016).

In view of the evidence provided, the auditors are of the opinion that Sydney Water has used its best

²⁸⁷ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

²⁸⁸ Sydney Water, Letters of invitation for Customer Council representation sent to National Disability Service, NSW Aboriginal Lands Council, Metro Aboriginal Lands Council, Reconciliation Australia, Youth Action Group, Council for the Aging (all dated 16 September 2015) and People with Disability, Australia, (dated 16 November 2015).

²⁸⁹ Emails dated 1 December 2015 from Sydney Water to People with Disability, Australia welcoming representatives to membership of the Customer Council.

²⁹⁰ Letter from Reconciliation Australia declining an invitation to provide Customer Council representation.

endeavours to appoint a representative of indigenous Australians, the only interest not currently represented, to its Customer Council.

It is noted that changes to the Customer Service Charter in August 2015 resulted in two long serving members having to retire (the maximum term of membership is now limited to three (3) terms of 3 years, ie. 9 years). One member who represented Local Government NSW has been replaced by that organisation; the other position was effectively redundant due to changes in the representation criteria. This is consistent to the provisions of the Customer Council Charter in respect of membership vacancies.


Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.5.8 Customer Council and Customer Council Charter (Sub-clause 5.5.4)

Sub-clause	Requirement	Compliance Grade
5.5.4	<p>Sydney Water and members of the Customer Council must, for the term of this Licence, maintain a charter (the Customer Council Charter) that addresses all of the following issues:</p> <ul style="list-style-type: none"> a) the role of the Customer Council; b) selection criteria on how members of the Customer Council will be drawn from the community and information on how vacancies for membership will be advertised; c) the processes for appointment of new members; d) the term for which members are appointed; e) information on how the Customer Council will operate; f) a description of the type of matters that will be referred to the Customer Council and how those matters will be referred; g) procedures for the conduct of Customer Council meetings, including the appointment of a chairperson and the requirement to invite, on an annual basis, a co-chair of the Customer Council from Customer representatives; h) procedures for communicating the outcomes of the Customer Council's work to the public; i) procedures for monitoring issues raised at meetings of the Customer Council and ensuring appropriate follow-up of those issues; and j) funding and resourcing of the Customer Council by Sydney Water. 	 Full Compliance

Risk	Target for Full Compliance
Failure to maintain a charter that addresses the requirements of this obligation poses a moderate risk that the Customer Council may not be effective in enabling Sydney Water to consult with its customers and consumers.	Evidence that Sydney Water and the Customer Council has maintained a Customer Council Charter that addresses all of the nominated issues.

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Sydney Water, *Customer Council Charter*, August 2015.
- Sydney Water, Customer Council Minutes for meeting held 2 September 2015.
- Sydney Water, Customer Council Minutes for meeting held 2 December 2015.
- Interviews with Sydney Water staff, 26-28 September 2016.

Summary of reasons for grade

Sydney Water advised that it had revised its *Customer Council Charter* during the audit period, with the revised version being endorsed at the September 2015 meeting of the Customer Council. Review of the *Charter* confirms that it addresses all of the nominated issues. The Customer Council continued to operate in accordance with the revised provisions of the *Customer Council Charter*.

Accordingly, it is assessed that Sydney Water has demonstrated full compliance with this obligation.

Discussion and notes

Sydney Water advised that its *Customer Council Charter*²⁹¹ was revised during the audit period, with the revised version being endorsed at the September 2015 meeting of the Customer Council.²⁹²

Review of the *Customer Council Charter* reveals that it addresses the required issues as follows:

- a) the role of the Customer Council – under the heading “*Role of the Council*” (section 3);
- b) selection criteria on how members of the Customer Council will be drawn from the community and information on how vacancies for membership will be advertised – under the heading “*Selection criteria for member agencies and appointment of their representatives*” (section 7);
- c) the processes for appointment of new members – under the heading “*Membership vacancies*” (section 9);
- d) the term for which members are appointed – under the heading “*Term of membership*” (section 8);
- e) information on how the Customer Council will operate – under the headings “*Member responsibilities*” (section 4), “*Sydney Water’s responsibilities*” (section 5) and “*Administration of meetings*” (section 10);
- f) a description of the type of matters that will be referred to the Customer Council and how those matters will be referred – under the headings “*Role of the Council*” (section 3) and “*Administration of meetings*” (section 10);
- g) procedures for the conduct of Customer Council meetings, including the appointment of a chairperson and the requirement to invite, on an annual basis, a co-chair of the Customer Council from Customer representatives – under the heading “*Administration of meetings*” (section 10);
- h) procedures for communicating the outcomes of the Customer Council’s work to the public – under the heading “*Communicating meeting outcomes*” (section 11);
- i) procedures for monitoring issues raised at meetings of the Customer Council and ensuring appropriate follow-up of those issues – under the heading “*Administration of meetings*” (section 10); and
- j) funding and resourcing of the Customer Council by Sydney Water – under the heading “*Funding and resourcing of the Council*” (section 12).

The monitoring of issues raised at meetings of the Customer Council and ensuring appropriate follow-up of those issues is managed via the meeting minutes which include a summary listing of “New actions arising”; these are addressed as a standard agenda item “Status of actions arising” at the subsequent meeting.^{293,294}

The outcomes of the Customer Council’s work is communicated to the public by publishing minutes of the Customer Council meeting minutes on the Sydney Water website (refer Table A.5.10).

It is noted that the impact of the revised provisions in respect of membership terms, which resulted in the

²⁹¹ Sydney Water, *Customer Council Charter*, August 2015.

²⁹² Sydney Water, Customer Council Minutes for meeting held 2 September 2015, item 6.0

²⁹³ Sydney Water, Customer Council Minutes for meeting held 2 September 2015, items 2.1 and summary list of actions.

²⁹⁴ Sydney Water, Customer Council Minutes for meeting held 2 December 2015, items 2.1 and summary list of actions.

retirement of two long serving members, is discussed in Table A.5.7.


Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.5.9 Customer Council and Customer Council Charter (Sub-clause 5.5.5)

Sub-clause	Requirement	Compliance Grade
5.5.5	Sydney Water must provide the Customer Council with information in Sydney Water's possession or under its control necessary to enable the Customer Council to discharge the tasks assigned to it, other than information or documents that are confidential (including documents that are subject to client legal privilege).	 Full Compliance
Risk		Target for Full Compliance
Failure to provide information poses a moderate risk. In the absence of suitable information, the Customer Council would be unable to provide effective input in respect of the issues discussed		Evidence that Sydney Water has provided information in its possession or under its control necessary to enable the Customer Council to discharge the tasks assigned to it.
Evidence sighted		
<ul style="list-style-type: none"> Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016. Document: Customer Council meeting checklist. Sydney Water, Customer Council Minutes for meeting held 2 December 2015. Sydney Water, Customer Council Minutes for meeting held 4 March 2016. Email correspondence from Sydney Water to Customer Council members regarding Wet weather sewage overflows (March 2016). Email correspondence from Sydney Water to Customer Council members regarding Sydney Water's Methodology for Determining its Economic Level of Water Conservation (May 2016). Email correspondence from Sydney Water to Customer Council members regarding IPART Price Determination (August 2016). Interviews with Sydney Water staff, 26-28 September 2016. 		
Summary of reasons for grade		
<p>Sydney Water demonstrated that it had provided the Customer Council with information necessary to enable the Customer Council to discharge the tasks assigned to it. Information is provided as meeting papers, in presentations to Customer Council meetings, via the Sydney Water talk on-line closed discussion forum for Customer Council members or via email. Sydney Water is guided by the provisions of the <i>Government Information (Public Access) Act</i> in relation to the disclosure of information that may be deemed confidential.</p> <p>Accordingly, it is assessed that Sydney Water has demonstrated full compliance with this obligation.</p>		
Discussion and notes		
<p>Matters in respect of which Sydney Water has consulted with the Customer Council and/or its members are listed in Table A.5.5. Where appropriate, Sydney Water has provided information to Customer</p>		

Council members in relation to these matters.

Sydney Water provided a copy of its Customer Council meeting checklist,²⁹⁵ which lists action items in relation to the preparation, collation, approval and issue of papers prior to each meeting. Action items in relation to the preparation of presentations to Customer Council meetings are also included.

Information provided at Customer Council meeting is recorded in the minutes. For example:

- Presentations in respect of the Beneficial use of biosolids, and Culturally and Linguistically Diverse (CALD) speaking customers were given at the December 2015 meeting;²⁹⁶ and
- Presentations in respect of Community Sponsorships including Taronga Zoo partnership, Sydney Water news and events, Stakeholder Perception Audit results & proposed Stakeholder Engagement Plan 2015, and Sydney Water Pricing Submission to IPART & customer research were given at the March 2016 meeting.²⁹⁷

Sydney Water advised that:²⁹⁸

“The agenda for Customer Council meetings and minutes (once approved by members at the subsequent meeting) are also published on Sydney Water’s website and Sydney Water talk.”

As noted in Table A.5.5, Sydney Water talk, which was demonstrated during the audit interviews, is an on-line closed discussion forum that is accessible by Customer Council members only.

Sydney Water also provided evidence of email updates provided to Customer Council members; these related to:

- Wet weather sewage overflows (March 2016);²⁹⁹
- Sydney Water’s Methodology for Determining its Economic Level of Water Conservation (May 2016);³⁰⁰ and
- IPART Price Determination (August 2016, albeit outside of the audit period).³⁰¹

In response to queries regarding procedures in place to determine the status of information with respect to confidentiality, Sydney Water advised that the issue of all information is subject to the approval of the Chief Executive Officer or other senior executive, cognisant of the principals of the *Government Information (Public Access) Act* in relation to the disclosure of information. Details are provided on the “How we provide information” page on the Sydney Water website.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

²⁹⁵ Document: Customer Council meeting checklist.

²⁹⁶ Sydney Water, Customer Council Minutes for meeting held 2 December 2015.

²⁹⁷ Sydney Water, Customer Council Minutes for meeting held 4 March 2016.

²⁹⁸ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

²⁹⁹ Email correspondence from Sydney Water to Customer Council members regarding Wet weather sewage overflows (March 2016).

³⁰⁰ Email correspondence from Sydney Water to Customer Council members regarding Sydney Water’s Methodology for Determining its Economic Level of Water Conservation (May 2016).

³⁰¹ Email correspondence from Sydney Water to Customer Council members regarding IPART Price Determination (August 2016).

Table A.5.10 Customer Council and Customer Council Charter (Sub-clause 5.5.6)

Sub-clause	Requirement	Compliance Grade
5.5.6	Sydney Water must make a copy of the Customer Council Charter and minutes from proceedings of the Customer Council, available to any person, free of charge: a) on its website for downloading; and b) upon request made to the Contact Centre.	<div></div> Full Compliance
<hr/>		
Risk	Target for Full Compliance	
Non-compliance with this obligation poses low (if any) operational risk; however, it poses a moderate risk that Sydney Water may not gain the full extent of potential input from its customers and consumers.	Evidence that Sydney Water has made copies of the <i>Customer Council Charter</i> and minutes from proceedings of the Customer Council available on its website and from the Contact Centre upon request.	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Customer forums webpage at: http://www.sydneywater.com.au/SW/about-us/our-organisation/who-we-are/customer-forums/index.htmInterviews with Sydney Water staff, 26-28 September 2016.		
<hr/>		
Summary of reasons for grade		
<p>The auditors confirmed that a copy of the <i>Customer Council Charter</i> and minutes of Customer Council meetings are available for downloading on the Sydney Water website. Sydney Water explained the mechanisms now in place to enable customers to request copies of these documents via the Contact Centre, which are considered appropriate.</p> <p>Accordingly, it is assessed that Sydney Water is compliant with this obligation.</p>		
<hr/>		
Discussion and notes		
<p>The auditors confirmed that a copy of the <i>Customer Council Charter</i> and minutes of Customer Council meetings are available for downloading in pdf format on the Sydney Water website at:³⁰² http://www.sydneywater.com.au/SW/about-us/our-organisation/who-we-are/customer-forums/index.htm</p> <p>Minutes of Customer Council meetings held during the audit period in September 2015, December 2015, March 2016 and June 2016 were available.</p> <p>The “Customer forums” webpage Home page via the following links:</p> <ul style="list-style-type: none">↳ About us↳ Our organisation/Who are we↳ Customer forums (from where pdf files can be downloaded). <p>Sydney Water advised that all “shop front” public access facilities were now closed and access to the Contact Centre is made via telephone or email (as it is located remote from Sydney Water’s principal office). Enquiries made to the concierge in Sydney Water’s Parramatta offices are directed to the Contact</p>		

³⁰² Customer forums webpage at: <http://www.sydneywater.com.au/SW/about-us/our-organisation/who-we-are/customer-forums/index.htm>

Centre via a “hot line”. All requests for information are then addressed by the Contact Centre.


Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.5.11 Internal Complaints Handling (Sub-clause 5.6.1)

Sub-clause	Requirement	Compliance Grade
5.6.1	Sydney Water must maintain a procedure for receiving, responding to and resolving Complaints, which is consistent with the <i>Australian Standard AS/NZS 10002:2014 – Guidelines for complaint handling in organisations (AS/NZS 10002:2014)</i> (the Internal Complaints Handling Procedure).	 Full Compliance

Risk

Non-compliance with the requirements of this sub-clause poses a moderate operational risk in that Sydney Water may not otherwise become aware of operational problems; it also poses a high risk in respect of Sydney Water's customer and public relations.

Target for Full Compliance

Evidence that Sydney Water has maintained a Complaints Handling Procedure consistent with *AS/NZS 10002:2014 Customer satisfaction – Guidelines for complaints handling in organizations*.

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Sydney Water, *Procedure; Customer Complaint Procedure* (Reference: SWEMS0152v2), August 2014.
- Risk Edge, *Sydney Water Corporation; 2014/15 Operational Licence Audit; (RFQ 15 703) for IPART*, 19 February 2016, appendix A.4.
- AS/NZS 10002:2014 *Guidelines for complaint management in organizations*.
- CompliSpace, *Two new '10002' complaints handling standards – now that's confusing*, 25 March 2015: <https://complispace.wordpress.com/2015/03/25/two-new-10002-complaints-handling-standards-now-thats-confusing/>
- MS Excel Workbook: *Complaints standard comparison.xlsx*.
- Interviews with Sydney Water staff, 26-28 September 2016.

Summary of reasons for grade

Sydney Water demonstrated that the complaint handling procedure is consistent with AS/NZS 10002:2014. The *Customer Complaint Procedure* has been certified as compliant with the requirements of ISO/AS 10002:2006, and Sydney Water demonstrated that there were no significant differences between the requirements of ISO/AS 10002:2006 and AS/NZS 10002:2014 that would necessitate revision of the procedure.

Accordingly, it is assessed that Sydney Water is compliant with this obligation.

Discussion and notes

Sydney Water advised that:³⁰³

“Sydney Water has maintained a Complaint Handling Procedure.

The procedure and complaints management process is consistent with the provision of AS/NZS 10002:2014.”

Sydney Water's *Customer Complaint Procedure*³⁰⁴ sets out guidance in respect of the management/processing of complaints; it includes definitions (in relation to the procedure), identifies methods and key areas of

³⁰³ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

³⁰⁴ Sydney Water, *Procedure; Customer Complaint Procedure* (Reference: SWEMS0152v2), August 2014.

contact, assigns roles and responsibilities and outlines in detail (using process flow charts and work instructions) the processes to be followed in processing complaints. The flow charts and work instructions are limited to a complaint overview process, and a procedure for handling complaints relating to leaks and faults; a privacy complaints process chart is also included. The procedure identifies thirty-one (31) complaint categories, although notes that categories may vary from time to time.

In order to assess consistency with AS/NZS 10002:2014, consideration has been given to the following:

- The 2014/15 Operational Audit³⁰⁵ assessed that the *Customer Complaint Procedure* was consistent with AS/ISO 10002:2004 MOD *Customer satisfaction – Guidelines for complaint handling* as required under the 2010-2015 Operating Licence. The version of the *Customer Complaint Procedure* in place at the time of the 2014/15 Operational Audit remains current.
- The 2014/15 assessment referenced (and was based on) certification that Sydney Water's internal complaint handling procedure was compliant with AS/ISO 10002:2006 *Customer satisfaction - Guidelines for complaints handling in organizations* (ISO 10002:2004, MOD) issued by the Customer Service Institute of Australia (CSIA).
- AS/ISO 10002:2006 was superseded by AS/NZS 10002:2014 *Guidelines for complaint management in organizations*, which is based on, but not equivalent to ISO 10002:2004.³⁰⁶ ISO 10002:2004 has now been superseded by ISO 10002:2014.
- It is understood that changes from ISO 10002:2004 to ISO 10002:2014 are minimal; however, the change from AS/ISO 10002:2006 to AS/NZS 10002:2014 has shifted the focus from satisfaction of the complainant to the quality of the complaint management system.³⁰⁷
- Whilst it is apparent that Sydney Water maintains and implements a robust complaints management system, the auditor sought evidence from Sydney Water as to whether it had undertaken a gap analysis (or other action) to confirm consistency of its complaints handling procedure with AS/NZS 10002:2014. Such evidence, which is discussed below, was subsequently provided.

Sydney Water demonstrated that it had undertaken an assessment of the respective requirements of AS/ISO 10002:2006 and AS/NZS 10002:2014 in relation to its obligations under the Licence. The aim of the assessment was to identify the nature and extent of any differences between the two standards and the need for any changes to the *Customer Complaint Procedure*.

The record of the assessment undertaken by Sydney Water shows that:³⁰⁸

- The assessment was made in respect of each element of the Licence requirement, ie. that the Sydney Water must maintain a procedure for receiving, responding to and resolving complaints.
- Each requirement of the two standards in relation to "Operation of complaints-handling process" had been assessed.
- Sydney Water had concluded that there had been no significant change between the requirements of the two standards and that no change to the *Customer Complaint Procedure* was required.
- Where relevant, the findings of the above referenced certification audit of the *Customer Complaint Procedure* against the requirements of AS/ISO 10002:2006, undertaken by CSIA in August 2013, were cited as evidence of compliance.³⁰⁹

Upon reviewing the assessment, the auditor is also of the opinion that there were no significant changes to

³⁰⁵ Risk Edge, *Sydney Water Corporation; 2014/15 Operational Licence Audit; (RFQ 15 703) for IPART*, 19 February 2016, appendix A.4.

³⁰⁶ AS/NZS 10002:2014 *Guidelines for complaint management in organizations*, preface.

³⁰⁷ CompliSpace, *Two new '10002' complaints handling standards – now that's confusing*, 25 March 2015: <https://complispace.wordpress.com/2015/03/25/two-new-10002-complaints-handling-standards-now-thats-confusing/>

³⁰⁸ MS Excel Workbook: *Complaints standard comparison.xlsx*.

³⁰⁹ CSIA audit report not sighted, but was referenced in the 2014/15 Operational Audit Report (Risk Edge, *Sydney Water Corporation; 2014/15 Operational Licence Audit; (RFQ 15 703) for IPART*, 19 February 2016, appendix A.4).

the requirements under AS/NZS 10002:2014 (in comparison to AS/ISO 10002:2006) that would require amendment to the *Customer Complaint Procedure*. Accordingly, considers that consistency with the requirements of AS/NZS 10002:2014 has been demonstrated.

It is noted that the *Operating Licence* does not require certification to AS/NZS 10002:2014, only that the *Customer Complaint Procedure* is consistent with the standard.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.5.12 Internal Complaints Handling (Sub-clause 5.6.2)

Sub-clause	Requirement	Compliance Grade
5.6.2	Sydney Water must ensure that the Internal Complaints Handling Procedure is fully implemented and that all relevant activities are carried out in accordance with the Internal Complaints Handling Procedure.	<div></div> Full Compliance
<hr/>		
Risk	Target for Full Compliance	
Non-compliance with the requirements of this sub-clause poses moderate risk to public health and the environment in that Sydney Water may not otherwise become aware of operational problems; it also poses a high level of risk in respect of Sydney Water’s customer relations.	Evidence that the Internal Complaints Handling Procedure is fully implemented and that all relevant activities are carried out in accordance with the procedure.	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Sydney Water, <i>Procedure; Customer Complaint Procedure</i> (Reference: SWEMS0152v2), August 2014.Complaint records SR#1-AV8XCS, SR#1-CGS916 and SR#1-CXBFG9.Sydney Water, <i>Operating Licence 2015-2020 Compliance and Performance Report; Performance Indicators Report 2015-16</i>, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.		
<hr/>		
Summary of reasons for grade		
<p>Sydney Water demonstrated that it continued to implement its <i>Customer Complaint Procedure</i> throughout the audit period. Review of a sample of complaint records revealed that they had been effectively managed, whilst an extract from the Customer Management System (CMS) indicated that 195 complaints were open as at 1 September 2015.</p> <p>Performance statistics indicate that a total of 4,299 water and sewerage related complaints were received during 2015/16, with 88.9 percent closed within 10 working days. This indicates that the <i>Customer Complaint Procedure</i> is being implemented.</p> <p>Based on the evidence provided, it is assessed that Sydney Water has demonstrated full compliance with this obligation.</p>		
<hr/>		
Discussion and notes		
<p>Sydney Water advised that:³¹⁰</p> <p>“Complaints are recorded in the customer management system (CMS) with an audit trail maintained of the complaint. The system also includes escalation rules to ensure timely actioning of the complaint.</p> <p><i>Complaints performance reports are generated periodically from the CMS.”</i></p> <p>Customer complaints are managed in accordance with the <i>Customer Complaint Procedure</i>.³¹¹ Records for a sample of complaints made during the audit period were provided for review; examples are as follows:³¹²</p>		

³¹⁰ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

³¹¹ Sydney Water, *Procedure; Customer Complaint Procedure* (Reference: SWEMS0152v2), August 2014.

³¹² Complaint records SR#1-AV8XCS, SR#1-CGS916 and SR#1-CXBFG9.

-
- SR#1-AV8XCS – related to backflow prevention: raised by customer at 13:08 on 10 October 2015; identified as water damage; resolved by referral to Insurance and Claims Department at 11:17 on 13 October 2015; ownership accepted by Sydney Water.
 - SR#1-CGS916 – related to drinking water quality: raised by customer at 10:29 on 7 March 2016; identified as general bad taste; resolved as internal property issue at 05:05 on 8 March 2016; ownership accepted by customer.
 - SR#1-CXBFG9 – related to field staff: raised by customer at 15:50 on 26 April 2016; identified as a vehicle accident/driver error; resolved as vehicle was not a Sydney Water vehicle at 08:15 on 28 April 2016; ownership accepted by customer.

These records show that the complaints have been effectively managed, with the outcomes completed and reported to the complainant. Details of the timeline over which the complaint has been received, addressed, resolved and closed out are recorded, thereby enabling analysis of response and closure times.

An extract from the Customer Management System (CMS) showing the status of complaints as at 1 September 2015 was provided,³¹³ including allocation under twenty different categories. These categories are generally consistent with those identified in the Customer Complaint Procedure, which indicates that categories may vary from time to time.

The status report indicated that 195 complaints were open at that time. As a sample of the number of complaints by category, there were nine (9) related to drinking water quality; seven (7) related to meters; fifteen (15) related to odour; and eight (8) related to field staff. Categories with the maximum number of open complaints were Wastewater – Other and Wastewater – Overflow, each of which had thirty-four (34) complaints at that time.

During the audit interviews, it was noted that all water quality related contacts are treated as complaints. Sydney Water also advised that it has adopted the Australian Standard definition of a complaint.

In respect of complaints, in its *2015/16 Compliance and Performance Report*, Sydney Water reported that:³¹⁴

- the total of 4,299 water and sewerage related complaints were received in 2015/16 (NWI Indicator C13);
- 73 percent of calls had been answered by an operator within 30 seconds (NWI Indicator C14; and
- 88.9 percent of complaints had been resolved within 10 business days (IPART Indicator C1).

These statistics provides further evidence that Sydney Water does fully implement its *Customer Complaint Procedure*.

Sydney Water advised that all new staff are trained in respect of complaints handling. As evidence, a copy of the New Starter ‘other’ sign offs checklist for Staff No 9155180 was provided; the record showed that complaints handling induction training had been completed on 27 May 2016.

On the basis of the evidence sighted, it is apparent that Sydney Water fully implemented its *Customer Complaint Procedure* during the audit period.

Recommendations

There are no recommendations in respect of this sub-clause.


Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

³¹³ MS Excel Workbook: *CMS Complaints Performance Report 15_09_01.xlsx*.

³¹⁴ Sydney Water, *Operating Licence 2015-2020 Compliance and Performance Report; Performance Indicators Report 2015-16*, 1 September 2016.

Table A.5.13 Internal Complaints Handling (Sub-clause 5.6.3)

Sub-clause	Requirement	Compliance Grade
5.6.3	Sydney Water must provide to Customers, at least annually with their Bills, information concerning internal complaints handling, which explains how to make a Complaint and how Sydney Water will receive, respond to and resolve Complaints.	 Full Compliance

Risk	Target for Full Compliance
Non-compliance with the requirements of this sub-clause poses moderate risk to public health and the environment in that customers may not otherwise be aware of how to notify Sydney Water of potential operational problems; it also poses a high level of risk in respect of Sydney Water's customer relations.	Evidence that Sydney Water has provided information concerning the Internal Complaints Handling Procedure to customers at least annually with their bills.

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Sydney Water, *Procedure; Producing Waterwrap, Business update and Your water*, 3 June 2016.
- Sydney Water Newsletter, *Waterwrap; Aug-Oct 2015*.
- Sydney Water Brochure, *Our contract with you* (Reference: SW340 06/16).
- Interviews with Sydney Water staff, 26-28 September 2016.

Summary of reasons for grade

Sydney Water demonstrated that, during the audit period, it had provided information concerning the internal complaints handling procedure to customers with their bills during the August-October 2015 billing cycles. Information was provided both in the Waterwrap newsletter (residential customers), Business Update (non-residential customers) and the "Our contract with you" brochure.

Accordingly, it is assessed that Sydney Water has demonstrated full compliance with this obligation.

Discussion and notes

Sydney Water advised that:³¹⁵

"Information is provided to Customers at least annually with their bills via a newsletter, Waterwrap (residential customers) and Business Update (commercial customers)."

Sydney Water provided a copy of a procedure *Producing Waterwrap, Business update and Your water*,³¹⁶ which describes the detailed process involved in producing these documents. Of particular note is the requirement in respect of regulatory information, which indicates that information in respect of complaints management is to be provided in the August-October editions:

"August–October edition: Sharing your views – 'how customers can contact us' – as well as the regulatory requirements about complaints. We should also refer customers to our social channels."

"Our contract with you" the customer contract summary is also sent as a separate brochure with this edition. It is loaded to the website on 1 July.

³¹⁵ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

³¹⁶ Sydney Water, *Procedure; Producing Waterwrap, Business update and Your water*, 3 June 2016.

The procedure further indicates that:

- *“We send Waterwrap to residential customers with their bills each quarter.*
- *We send Business update to commercial and industrial customers each quarter.”*

Review of the August-October 2015 edition of Waterwrap³¹⁷ reveals that it includes a section under the heading “*Share your views with us*” which provides contact details and indicates:

“If you have any questions or concerns about us, we’ll investigate them and try to resolve them immediately. To contact us: ... (telephone, postal and website details are provided).”

It further indicates:

“If you aren’t satisfied with our response, you can ask us to review our decision. If you are still not satisfied, you can contact the Energy & Water Ombudsman NSW on ...”

Review of the “Our contract with you”³¹⁸ brochure, which is also issued with the August-October billing cycle provides more extensive information in relation to complaints management under the heading “*What if I’m not happy with Sydney Water’s service?*”.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

³¹⁷ Sydney Water Newsletter, *Waterwrap*; Aug-Oct 2015.

³¹⁸ Sydney Water Brochure, *Our contract with you* (Reference: SW340 06/16).

Table A.5.14 Internal Complaints Handling (Sub-clause 5.6.4)

Sub-clause	Requirement	Compliance Grade
5.6.4	<p>Sydney Water must make the information concerning internal complaints handling referred to in clause 5.6.3 available to any person, free of charge:</p> <p>a) on its website for downloading; and</p> <p>b) upon request made to the Contact Centre.</p>	<div></div> <p>Full Compliance</p>
Risk		Target for Full Compliance
Non-compliance with the requirements of this sub-clause poses moderate risk to public health and the environment in that customers may not otherwise be aware of how to notify Sydney Water of potential operational problems; it also poses a high level of risk in respect of Sydney Water’s customer relations.		Evidence that Sydney Water has made information concerning the Internal Complaints Handling Procedure available on its website and from the Contact Centre upon request.
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Sydney Water Brochure, <i>Our contract with you</i> (Reference: SW340 06/16).Account enquiries webpage at: http://www.sydneywater.com.au/SW/accounts-billing/managing-your-account/account-enquiries/index.htmContact us webpage: http://www.sydneywater.com.au/SW/Contactus/index.htmInterviews with Sydney Water staff, 26-28 September 2016.		
Summary of reasons for grade		
<p>The auditors confirmed that a copy of the “Our contract with you”, which provides information in regarding internal complaints handling, is available for downloading on the Sydney Water website. Sydney Water explained the mechanisms now in place to enable customers to request copies of these documents via the Contact Centre, which are considered appropriate.</p> <p>Accordingly, it is assessed that Sydney Water is compliant with this obligation.</p>		
Discussion and notes		
<p>Sydney Water advised, and the auditors confirmed, that information regarding internal complaints handling (the “Our contract with you” brochure)³¹⁹ is available for downloading in pdf format on the Sydney Water website at (the “Account enquiries” webpage):³²⁰</p> <p>http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq0/~cdisp/dd_044115.pdf</p> <p>The “Account enquiries” webpage Home page via the following links:</p> <p>↳ Accounts and billing</p>		

³¹⁹ Sydney Water Brochure, *Our contract with you* (Reference: SW340 06/16).

³²⁰ Account enquiries webpage at: <http://www.sydneywater.com.au/SW/accounts-billing/managing-your-account/account-enquiries/index.htm>

↳ Account enquiries (from where pdf file can be downloaded).

The “Contact us” webpage³²¹ provides contact details for Compliments, complaints compliments and claims and a pdf copy of the *Customer Complaints Policy* available for download, but does not have a link to the “Our contract with you” brochure.

As noted in Table A.5.10, Sydney Water advised that all “shop front” public access facilities were now closed and access to the Contact Centre is made via telephone or email (as it is located remote from Sydney Water’s principal office). Enquiries made to the concierge in Sydney Water’s Parramatta offices are directed to the Contact Centre via a “hot line”. All requests for information are then addressed by the Contact Centre.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

³²¹ Contact us webpage: <http://www.sydneywater.com.au/SW/Contactus/index.htm>

Table A.5.15 External Dispute Resolution (Sub-clause 5.7.1)

Sub-clause	Requirement	Compliance Grade
5.7.1	Sydney Water must be a member of the Energy and Water Ombudsman NSW to facilitate the resolution, by a dispute resolution body, of disputes between Sydney Water and its Customers and Consumers.	<div></div> <div>Full Compliance</div>
Risk		Target for Full Compliance
Non-compliance with the requirements of this sub-clause poses high level of risk in respect of Sydney Water’s customer relations. It is important that customers and consumers have an alternative independent means of raising concerns in respect of Sydney Water’s actions and/or performance.		Evidence that Sydney Water is a member of the Energy & Water Ombudsman NSW.
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Energy & Water Ombudsman NSW website: http://www.ewon.com.au/page/suppliers/suppliers-in-nsw/water-providersInterviews with Sydney Water staff, 26-28 September 2016.		
Summary of reasons for grade		
Review of the “Water providers” webpage on the Energy & Water Ombudsman NSW website confirms that Sydney Water subscribes to the complaint management services provided by the Ombudsman. Accordingly, it is assessed that Sydney Water has demonstrated full compliance with this obligation.		
Discussion and notes		
Review of the “Water providers” webpage on the Energy & Water Ombudsman NSW website ³²² confirms that Sydney Water subscribes to the complaint management services provided by the Ombudsman.		
Recommendations		
There are no recommendations in respect of this sub-clause.		
Opportunities for improvement		
No opportunities for improvement have been identified in respect of this sub-clause.		

³²² Energy & Water Ombudsman NSW website: <http://www.ewon.com.au/page/suppliers/suppliers-in-nsw/water-providers>

Table A.5.16 External Dispute Resolution (Sub-clause 5.7.2)

Sub-clause	Requirement	Compliance Grade
5.7.2	Sydney Water must: a) prepare a pamphlet that explains the operation of the dispute resolution service provided by the Energy and Water Ombudsman NSW, including any right to have a Complaint or dispute referred to the Energy and Water Ombudsman NSW and how such a Complaint or dispute can be assessed; b) provide a copy of the pamphlet prepared under clause 5.7.2(a), free of charge to Customers at least once a year with their Bills; and c) make a copy of the pamphlet prepared under clause 5.7.2(a) available to any person, free of charge: i) on its website for downloading; and ii) upon request made to the Contact Centre.	<div></div> Full Compliance
Risk	Target for Full Compliance	
Non-compliance with the requirements of this sub-clause poses high level of risk in respect of Sydney Water’s customer relations. It is important that customers and consumers are aware that they have an alternative independent means of raising concerns in respect of Sydney Water’s actions and/or performance.	Evidence that Sydney Water has prepared a pamphlet that explains the operation of the dispute resolution service provided by the Energy & Water Ombudsman NSW; has provided a copy to customers at least annually with their bills; and has made the pamphlet available on its website and from the Contact Centre upon request.	
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Sydney Water, <i>Procedure; Producing Waterwrap, Business update and Your water</i>, 3 June 2016.Sydney Water Newsletter, <i>Waterwrap; Aug-Oct 2015</i>.Sydney Water Brochure, <i>Our contract with you</i> (Reference: SW340 06/16).Account enquiries webpage at: http://www.sydneywater.com.au/SW/accounts-billing/managing-your-account/account-enquiries/index.htmContact us webpage: http://www.sydneywater.com.au/SW/Contactus/index.htmInterviews with Sydney Water staff, 26-28 September 2016.		
Summary of reasons for grade		
Sydney Water demonstrated that, during the audit period, it had provided information concerning the dispute resolution service provided by the Energy & Water Ombudsman NSW (EWON) to customers with their bills during the August-October 2015 billing cycles. Information was provided both in the Waterwrap newsletter (residential customers), Business Update (non-residential customers) and the “Our contract with you” brochure.		
The auditors confirmed that a copy of the “Our contract with you” is available for downloading on the Sydney Water website. Sydney Water explained the mechanisms in now place to enable customers to		

request copies of these documents via the Contact Centre, which are considered appropriate. Accordingly, it is assessed that Sydney Water has demonstrated full compliance with this obligation.

Discussion and notes

Sydney Water advised that:³²³

“Information regarding EWON is provided to Customers at least annually with their bills via a newsletter, Waterwrap (residential customers) and Business Update (commercial customers).

Additionally, the Sydney Water brochure ‘Our contract with you’ and the ‘Contact Us’ section of Sydney Water’s website provides details of how customers can register a complaint including escalation to EWON. It also includes a link to Sydney Water’s Complaint Policy.”

Sydney Water provided a copy of a procedure *Producing Waterwrap, Business update and Your water*,³²⁴ which describes the detailed process involved in producing these documents. Of particular note is the requirement in respect of regulatory information, which indicates that information in respect of complaints management is to be provided in the August-October editions:

“August–October edition: Sharing your views – “how customers can contact us” – as well as the regulatory requirements about complaints. We should also refer customers to our social channels.

“Our contract with you” the customer contract summary is also sent as a separate brochure with this edition. It is loaded to the website on 1 July.

The procedure further indicates that:

- *“We send Waterwrap to residential customers with their bills each quarter.*
- *We send Business update to commercial and industrial customers each quarter.”*

Review of the August-October 2015 edition of Waterwrap³²⁵ reveals that it includes a section under the heading *“Share your views with us”* which provides contact details and indicates:

“If you have any questions or concerns about us, we’ll investigate them and try to resolve them immediately. To contact us: ... (telephone, postal and website details are provided).”

It further indicates:

“If you aren’t satisfied with our response, you can ask us to review our decision. If you are still not satisfied, you can contact the Energy & Water Ombudsman NSW on ...”

Review of the *“Our contract with you”*³²⁶ brochure, which is also issued with the August-October billing cycle provides more extensive information in relation to complaints management under the heading *“What if I’m not happy with Sydney Water’s service”*. This information includes reference to the service provided by the Energy & Water Ombudsman NSW (EWON), together with contact details

Sydney Water advised, and the auditors confirmed, that information regarding the service provided by EWON (the *“Our contract with you”* brochure)³²⁷ is available for downloading in pdf format on the Sydney Water website at (the *“Account enquiries”* webpage):³²⁸

http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq0/~e disp/dd_044115.pdf

The *“Account enquiries”* webpage Home page via the following links:

³²³ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

³²⁴ Sydney Water, *Procedure; Producing Waterwrap, Business update and Your water*, 3 June 2016.

³²⁵ Sydney Water Newsletter, *Waterwrap; Aug-Oct 2015*.

³²⁶ Sydney Water Brochure, *Our contract with you* (Reference: SW340 06/16).

³²⁷ Sydney Water Brochure, *Our contract with you* (Reference: SW340 06/16).

³²⁸ Account enquiries webpage at: <http://www.sydneywater.com.au/SW/accounts-billing/managing-your-account/account-enquiries/index.htm>

↳ Accounts and billing

↳ Account enquiries (from where the pdf file can be downloaded).

The “Contact us” webpage³²⁹ provides contact details for Compliments, complaints compliments and claims and a pdf copy of the *Customer Complaints Policy* available for download, but does not have a link to the “Our contract with you” brochure.

As noted in Table A.5.10, Sydney Water advised that all “shop front” public access facilities were now closed and access to the Contact Centre is made via telephone or email (as it is located remote from Sydney Water’s principal office). Enquiries made to the concierge in Sydney Water’s Parramatta offices are directed to the Contact Centre via a “hot line”. All requests for information are then addressed by the Contact Centre.

Recommendations

There are no recommendations in respect of this sub-clause.


Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

³²⁹ Contact us webpage: <http://www.sydneywater.com.au/SW/Contactus/index.htm>

A.6 Section 6 – Environment

Table A.6.1 Environmental Management (Sub-clause 6.1.1)

Sub-clause	Requirement	Compliance Grade
6.1.1	Sydney Water must maintain a Management System certified to <i>Australian Standard AS/NZS ISO 14001:2004: Environmental Management Systems – Requirements with guidance for use</i> (the Environmental Management System).	 Full Compliance

Risk	Target for Full Compliance
Without a comprehensive and effectively implemented Environmental Management system, there is a high risk that Sydney Water may not be able to effectively manage risks to the environment resulting from its operations.	Evidence that an Environmental Management System is established, maintained and kept up to date, and that its certification to AS/NZS ISO 14001 is maintained.

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Interviews with Sydney Water staff, 26-28 September 2016.
- EMS certification to AS/NZS ISO 14001:2004 (Reference 6-1-1SWEMS0135).
- Extract 2016-03 External Audit Report (Reference 6-1-1 08-22).

Summary of reasons for grade

The auditors reviewed Sydney Water's current certificate of accreditation to AS/NZS ISO 14001:2004 and an extract from the Post Certification (Surveillance) Audit conducted during March 2016. Sydney Water is progressing towards certification to the current standard, ISO 14001:2015, and expects that certification will be obtained by March 2017. Accordingly, it was assessed that Sydney Water has fully complied with this obligation.

Discussion and notes

The auditors were provided with the Certificate of Approval issued by Global Mark that certifies Sydney Water to AS/NZS ISO 14001:2004.³³⁰ The expiry of this certificate was noted as 28 April 2017.

Sydney Water provided an extract of the Global Mark post-certification (surveillance) audit, which was conducted during March 2016.³³¹ This audit considered accreditation of the Sydney Water Environmental Management System.

The Global Mark audit confirmed that the Sydney Water Environmental Management System was maintained and kept up to date through the audit period, and that its certification to AS/NZS ISO 14001 was maintained.

The auditors note that Sydney Water plans to seek certification to the most recent standard, ISO 14001:2015³³² in 2017.

³³⁰ Global-Mark Compliance Certificate 2014-2017, expires 28 April 2017 (Reference 6-1-1SWEMS0135).

³³¹ Global-Mark Form: Business review report – SDIMS/SWEMS 2016-03 REVIEW, undated, but refers to audit conducted during March 2016.

³³² Certification will be to ISO 14001:2015; Australian Standard AS/NZS ISO 14001:2016 is equivalent to ISO 14001:2015.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.6.2 Environmental Management (Sub-clause 6.1.2)

Sub-clause	Requirement	Compliance Grade
6.1.2	Sydney Water must fully implement, and carry out all relevant activities in accordance with, the Environmental Management System.	<div></div> Full Compliance
<hr/>		
Risk	Target for Full Compliance	
If the Environmental Management System is not fully implemented, there is a high risk that Sydney Water may not be able to effectively manage risks to the environment resulting from its operations.	Evidence that the Environmental Management System is fully implemented and that all relevant activities are carried out in accordance with the System.	
<hr/>		
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.Extract from 2016-03 external audit report (Reference 6-1-2-08-22).		
<hr/>		
Summary of reasons for grade		
Sydney Water successfully completed an EMS surveillance audit against AS/NZS ISO 14001:2004 in March 2016. This surveillance audit found that the Sydney Water EMS was well implemented throughout the organisation.		
Accordingly, it was assessed that Sydney Water has fully complied with this obligation.		
<hr/>		
Discussion and notes		
Sydney Water has an external surveillance audit carried out each year and a recertification audit carried out every third year to ensure that it carries out all relevant requirements and activities in accordance with the Environmental Management System (EMS). The most recent surveillance audit was undertaken by Global Mark in March 2016. ³³³		
The Global Mark auditor concluded that the EMS continues to be well implemented across all sites visited and across all levels and functions of the business.		
In regard to the EMS, the Global Mark auditor commented:		
<i>“Overall the Service Delivery Integrated Management System (SDIMS) and Sydney Water Environmental Management System (SWEMS) continue to be well implemented across all sites visited and across all levels and functions of the business. As identified in previous certification business reviews, the management system is mature and well documented to address the needs of Sydney Water, yet continues to be rigorously monitored to identify key improvement and assurance risk areas.</i>		
<i>The managements systems (SWEMS and SWIMS) are well supported at a high level including strategic planning, policy and objective setting, and reporting and accountability. The management systems continue to be we communicated to the Sydney Water employees through various communication internal channels and consultation strategies.</i>		
<i>There were no non-conformances raised during the audit, however, there were thirteen (13) improvement requests and seven (7) observations. These findings require review and action to ensure that they do not develop into non-conformances. One improvement request remains open from the previous assessment, with all other previous findings closed during this audit. Both management systems continue to be monitored through a process of internal audits and</i>		

³³³ Global-Mark Form: Business review report – SDIMS/SWEMS 2016-03 REVIEW, undated, but refers to audit conducted during March 2016.

management review and are continually improved through the use of the Action Request database, business plans and improvement programs.”

The Global Mark auditor’s assessment confirms that Sydney Water has fully complied with this requirement.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.6.3 Environmental Management (Sub-clause 6.1.4)

Sub-clause	Requirement	Compliance Grade
6.1.4	Sydney Water must provide IPART, in accordance with the Reporting Manual, with a report on the outputs of the Environmental Management System.	<div></div> Full Compliance
Risk		Target for Full Compliance
Failing to report on the outputs of the Environmental Management System poses a risk that Sydney Water may not be monitoring or effectively managing its environmental impacts.		Evidence that Sydney Water has reported on the outputs of the Environmental Management System in accordance with the Reporting Manual
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.Transmittal to IPART – Sydney Water Operating Licence reports 2014-15, 1 October package.Environmental Plan Report and Environmental Indicators Report (Reference SWEMS0004.04v6).IPART Reporting Manual July 2015.		
Summary of reasons for grade		
<p>The auditors confirmed that the Operating Licence Environment Report was provided to IPART on 1 October 2015, the date required by the Reporting Manual.</p> <p>Accordingly, it was assessed that Sydney Water has fully complied with this obligation.</p>		
Discussion and notes		
<p>According to IPART's Reporting Manual for Sydney Water Corporation (July 2015), Sydney Water must submit its Environment Plan Annual Report by 1st October each year. The auditors reviewed the Sydney Water Operating Licence Environment Report³³⁴ and email correspondence dated 1 October 2015,³³⁵ which confirmed that the reports were provided to IPART as required by the Reporting Manual.</p>		
Recommendations		
<p>There are no recommendations in respect of this sub-clause.</p>		
Opportunities for improvement		
<p>No opportunities for improvement have been identified in respect of this sub-clause.</p>		

³³⁴ Operating Licence Environment Report, 2014-15 (Reference SWEMS0004.04v6).

³³⁵ Transmittal to IPART, Sydney Water Operating Licence Reports 2014-15, 1 October Package.

Table A.6.4 Environmental Indicators (Sub-clause 6.2.1)

Sub-clause	Requirement	Compliance Grade
6.2.1	<p>Sydney Water must:</p> <p>a) prepare indicators of the direct impact on the environment of Sydney Water’s activities (the Environmental Performance Indicators);</p> <p>b) monitor and compile data on the Environmental Performance Indicators; and</p> <p>c) report on the Environmental Performance Indicators in accordance with the Reporting Manual.</p> <p><i>[Note: Under section 14(1)(d) of the Act, this Licence must require Sydney Water to compile indicators of the direct impact on the environment of its activities to: (a) enable preparation of an annual report on Sydney Water’s performance; and (b) provide information for a year-to-year comparison in relation to Sydney Water’s performance in this area.]</i></p>	<div></div> <p>Full Compliance</p>
Risk	Target for Full Compliance	
Failure to prepare and monitor against relevant indicators poses a risk that Sydney Water may be unable to effectively measure the impact of its activities on the environment.	Evidence that Sydney Water has prepared indicators of the direct impact on the environment of its activities, monitored and compiled data on these indicators, and reported on the indicators in accordance with the Reporting Manual.	
Evidence sighted		
<ul style="list-style-type: none">Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.Interviews with Sydney Water staff, 26-28 September 2016.IPART Reporting Manual, July 2015.2014-15 Operating Licence Environment Report (Reference SWEMS0004.04v6).Transmittal to IPART, Sydney Water Operating Licence Reports 2014-15, 1 October Package.2015-16 Statement of Compliance with SWC Operating Licence.Folios of progress relevant to Environmental Performance Indicators E1-E14.Folio on Biosolids 2015-16.Folio on Electricity 2015-16.		
Summary of reasons for grade		
Sydney Water demonstrated that it has prepared indicators of the impact of its activities on the environment, monitored and compiled data on these indicators, and reported on the indicators on 1 October 2015, in accordance with the Reporting Manual. Accordingly, it was assessed that Sydney Water has fully complied with this obligation.		

Discussion and notes

There are fourteen (14) environmental indicators listed in the Reporting Manual.³³⁶ The auditors confirmed that Sydney Water had monitored and compiled data on these indicators and reported them in the Operating Licence Environment Report on 1 October 2015, as required by the Reporting Manual.^{337,338}

In the following paragraphs, some comments on a sample of these indicators are provided.

Renewable Energy Generation E5³³⁹

Sydney Water has eight sites with biogas cogeneration facilities, three hydroelectric generators, and several solar installations across Sydney Water sites. Indicator E5 relates to electricity consumption from renewable resources or generated by Sydney Water expressed as a percentage of total electricity consumption.

In 2014/15, Sydney Water indicator E5 was 17.5%. This is the highest level of this indicator over the period 2010/11 to 2014/15.

Biosolids E8³⁴⁰

Biosolids are collected from Sewage Treatment Plants and Recycled Water Plants by contractors. These biosolids are rich in nutrients and are used for composting and land application.

The amount of biosolids provided to contractors is assessed at weighbridges as wet tonnes. However, biosolids are reported as dry tonnes. The conversion is effected by applying the average moisture content to the weight of wet tonnes to derive the weight in dry tonnes.

In 2014/15, Sydney Water produced 40,627 dry tonnes of biosolids. This value is the highest production over the period 2010/11 to 2014/15.

Accordingly, it was assessed that Sydney Water had complied with this requirement.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

³³⁶ IPART Reporting Manual, July 2015, Appendix D, page 40.

³³⁷ Transmittal to IPART, Sydney Water Operating Licence Reports 2014-15, 1 October Package.

³³⁸ Operating Licence Environment Report 2014-15 (Reference SWEMS0004.04v6), Section 3, page 27.

³³⁹ Sydney Water Folio on Electricity, 2015-16.

³⁴⁰ Sydney Water Folio on Biosolids 2015-16.

A.7 Section 8 – Performance Monitoring

Table A.7.1 Reporting (Sub-clause 8.2.1)

Sub-clause	Requirement	Compliance Grade
8.2.1	<p>Sydney Water must comply with its reporting obligations set out in the Reporting Manual, which include:</p> <ol style="list-style-type: none"> reporting to IPART and NSW Health in accordance with the Reporting Manual; making reports and other information publicly available, in the manner set out in the Reporting Manual; and reporting to IPART on Sydney Water's performance against the National Water Initiative Performance Indicators. 	<div style="background-color: green; width: 100px; height: 20px;"></div> <p>Full Compliance</p>
Risk		Target for Full Compliance
<p>This requirement represents a low operational risk. Failure to report has no direct impact on operational performance, although compliant reporting enables independent monitoring and promotes public confidence.</p>		<p>Evidence that Sydney Water has prepared, submitted and published the requisite reports in accordance with the requirements set out in the <i>Reporting Manual</i>.</p>
Evidence sighted		
<ul style="list-style-type: none"> ▪ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016. ▪ IPART, <i>Sydney Water Corporation Reporting Manual; Water – Reporting Manual</i>, July 2015. ▪ Email dated 1 September 2015 from Sydney Water to IPART regarding submission of annual compliance and performance reports. ▪ Email dated 1 September 2015 from IPART to Sydney Water confirming receipt of the annual compliance and performance reports. ▪ Email dated 1 October 2015 from Sydney Water to IPART regarding submission of annual compliance and performance reports. ▪ Email dated 16 May 2016 from Sydney Water to IPART regarding submission of report on status of 2014/15 Operational Audit recommendations. ▪ Letter dated 27 November 2015 from IPART to Sydney Water advising Deferral of Audit Recommendation Status (31 March) Reporting (IPART Reference: D15/28661). ▪ Quarterly Water Quality Monitoring Report available at: http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdgy/~edisp/dd_082222.pdf and is readily accessible from the website Home page. ▪ Document: Screen capture_Oracle WebCenter Content manager_quarterly DW reports.jpg. ▪ Email dated 11 May 2016 from Sydney Water to NSW Health regarding availability of Quarterly Drinking Water Quality Monitoring Report. ▪ Document: Screen capture_detail of entry for SWIRL WQ incidents_INC12441_24Jun16.jpg. ▪ Sydney Water, <i>Situation Report #8; Nepean raw water quality and flooding of Georges River SPSs</i>, 9 June 2016. ▪ http://www.sydneywater.com.au/SW/about-us/our-publications/reports-and- 		

[publications/index.htm](#)

- Interviews with Sydney Water staff, 26-28 September 2016.

Summary of reasons for grade

Sydney Water demonstrated that it had fulfilled its reporting obligations in respect of annual, periodic and intermittent reporting during the audit period. More specifically, it had submitted the required reports in accordance with the required timelines and had made the necessary reports available via its website.

Accordingly, it is assessed that Sydney Water has demonstrated full compliance with this obligation.

Discussion and notes

The *Sydney Water Corporation Reporting Manual*³⁴¹ nominates the reporting regime with which Sydney Water must comply under the provisions of its *Operating Licence*. Reporting requirements include annual reports, periodic reports and intermittent reports, as discussed in the following.

Annual Reports:

Annual reporting requirements include:

- Compliance and Performance Report to be submitted to IPART to be submitted by 1 September following the end of each financial year. This report is required to address *Operating Licence* obligations in respect of Water Quality, Water Quantity, Assets, Quality Management and Performance Monitoring (excluding the Environmental Indicators).
- Compliance and Performance Report to be submitted to IPART to be submitted by 1 October following the end of each financial year. This report is required to address *Operating Licence* obligations in respect of Environment and Performance Monitoring (including the Environmental Indicators).
- Details of response times to breaks and leaks report to be submitted to IPART to be submitted by 1 September following the end of each financial year.
- Report on audit recommendations to be submitted to IPART by 31 March following the relevant audit.

Sydney Water provided evidence that the reports had been submitted to and received by IPART, as follows:

- An email dated 1 September 2015 from Sydney Water to IPART advising submission of annual compliance and performance reports for the 2014/15 year required by 1 September 2015:³⁴²

“Attached is a letter of transmittal and the annual compliance and performance reports for 2014-15 required to IPART by 1 September 2015 under Sydney Water’s 2010-2015 Operating Licence.

In accordance with the Reporting Manual, the reports comprise of:

- *Statement of Compliance for 2014-15*
- *Schedule A – List on non-compliances*
- *Schedule B – System Performance Standards Report*
- *Schedule C – Performance Indicators Report (excluding environmental indicators – to be reported by 1 October)*
- *Schedule D – Water Efficiency Report (covering the requirement for a water conservation annual report)*
- *Schedule E – Priority Sewerage Program Annual Report*
- *Schedule F – Drinking Water Quality Monitoring Report for 4th Quarter ending 30 June 2015*
- *Schedule G – Recycled Water Quality Monitoring Report for 4th Quarter ending 30 June 2015*

³⁴¹ IPART, *Sydney Water Corporation Reporting Manual; Water – Reporting Manual*, July 2015.

³⁴² Email dated 1 September 2015 from Sydney Water to IPART regarding submission of annual compliance and performance reports.

-
- *Schedule H – State of the Assets Report 2015.”*
 - An email dated 1 September 2015 from IPART to Sydney Water confirming receipt of the annual compliance and performance reports for the 2014/15 year:³⁴³
 - An email dated 1 October 2015 from Sydney Water to IPART advising submission of annual compliance and performance reports for the 2014/15 year required by 1 October 2015:³⁴⁴

“Attached is a letter of transmittal along with the package of Sydney Water’s 2014-15 annual compliance and performance reports required to IPART by 1 October 2015 under the 2010-2015 Operating Licence.

In accordance with the Reporting Manual, the following reports are provided:

 - *Operating Licence Environment Report 2014-15, comprising of the Environment Plan Annual Report and*
 - *Environmental Indicators Report*
 - *Annual Report on the Implementation of the Five-Year Drinking Water Quality Management Plan 2010-2015, including:*
 - *Annexure 1: Drinking Water Management Manual*
 - *Annexure 2: Drinking Water Improvement Plan*
 - *Annual Report on Recycled Water Quality Management, including:*
 - *Annexure 1: Five year Recycled Water Quality Management Plan 2009-2014*
 - *Annexure 2: Four year schedule for review of scheme Recycled Water Quality Management Plans.*

Also provided for your reference is Sydney Water’s Environment Plan for 2015-2016, which is also posted on our website.”
 - An email dated 16 May 2016 from Sydney Water to IPART advising submission of the report on the status of audit recommendations identified in the 2014/15 Operational Audit,³⁴⁵ together with a letter from IPART advising deferment of the requirement for submission of this report from 31 March 2016 to 16 May 2016:³⁴⁶

Sydney Water provided copies of annual reporting in relation to the 2015/16 financial year; however, submission of these reports lies outside of the audit period as was not assessed.

Periodic Reports:

Periodic reporting requirements include:

- Public Water Quality Monitoring Reports to be published on the Sydney Water website (and made available at the Contact Centre) quarterly within four (4) weeks of the end of the relevant quarter.
- Fluoride monitoring reports are to be submitted to NSW Health within two (2) weeks of the end of each month.
- Reports on the monitoring of Drinking Water and Recycled Water are to be submitted to NSW Health quarterly with six (6) weeks of the end of the relevant quarter.

Sydney Water provided evidence that each of these reports had been submitted in accordance with the

³⁴³ Email dated 1 September 2015 from IPART to Sydney Water confirming receipt of the annual compliance and performance reports.

³⁴⁴ Email dated 1 October 2015 from Sydney Water to IPART regarding submission of annual compliance and performance reports.

³⁴⁵ Email dated 16 May 2016 from Sydney Water to IPART regarding submission of report on status of 2014/15 Operational Audit recommendations.

³⁴⁶ Letter dated 27 November 2015 from IPART to Sydney Water advising Deferral of Audit Recommendation Status (31 March) Reporting (IPART Reference: D15/28661).

requirements. For example:

- The Quarterly Water Quality Monitoring Report for the period 1 April 2016 to 30 June 2016 (Q4) was available on the Sydney Water website.³⁴⁷ Evidence was provided that all quarterly reports had been uploaded within four (4) weeks of the end of the quarter in 2015/16.³⁴⁸
- Email dated 11 May 2016 from Sydney Water to NSW Health advising that the third Quarterly Drinking Water Quality Monitoring Report to NSW Health had been placed on the shared secure drive.³⁴⁹

Intermittent Reports:

Intermittent reporting requirements include:

- Incident notifications, which are required immediately.
- Report outlining the approach and principles to developing a methodology for determining the Economic Level of Water Conservation (refer Table A.3.1 for further discussion).
- Report on the State of the Assets to be submitted to IPART by 1 September 2015.
- Report on significant changes to the various management systems or frameworks prior to such changes being implemented.

Sydney Water provided evidence that these reporting requirements had been met; for example:

- Evidence of incident reporting, including a screenshot of incident detail entry for Incident INC12442 on 24 June 2016³⁵⁰ and a situation report for an incident that occurred on 9 June 2016.³⁵¹
- The above-mentioned evidence in relation to the submission of 1 September Compliance and Performance reports, which includes the 2015 State of the Assets Report.

Publicly Available Documents:

The *Reporting Manual* requires that Sydney Water makes documents including the following available to the public on its website or upon request made to its Contact Centre:

- Quarterly Water Quality Monitoring Report;
- Water Conservation Report;
- Compliance Report on the Environmental Management System.

Reference to the Sydney Water website reveals that these reports are available and can be accessed from the Home page via the following links:³⁵²

- ↳ About us
 - ↳ Reports and Publications
 - ↳ Reports (which provides a list of available reports).

It is noted that the Water Conservation Report was previously entitled the “Water Efficiency Report”.

³⁴⁷ Quarterly Water Quality Monitoring Report available at: http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdgy/~edisp/dd_082222.pdf and is readily accessible from the website Home page.

³⁴⁸ Document: Screen capture_Oracle WebCenter Content manager_quarterly DW reports.jpg.

³⁴⁹ Email dated 11 May 2016 from Sydney Water to NSW Health regarding availability of Quarterly Drinking Water Quality Monitoring Report.

³⁵⁰ Document: Screen capture_detail of entry for SWIRL WQ incidents_INC12441_24Jun16.jpg.

³⁵¹ Sydney Water, Situation Report #8; *Nepean raw water quality and flooding of Georges River SPSs*, 9 June 2016.

³⁵² <http://www.sydneywater.com.au/SW/about-us/our-publications/reports-and-publications/index.htm>

NWI Reporting:

The Reporting Manual requires Sydney Water to report to IPART on the applicable National Water Initiative (NWI) Indicators by 1 September following the end of each financial year. The above-mentioned evidence in relation to the submission of 1 September Compliance and Performance reports includes reference to the Performance Indicators Report, which includes Sydney Water's report of performance against the NWI Indicators.


Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

Table A.7.2 Reporting (Sub-clause 8.2.2)

Sub-clause	Requirement	Compliance Grade
8.2.2	Sydney Water must maintain sufficient record systems that enable it to report accurately in accordance with clause 8.2.1.	 Full Compliance

Risk

Non-compliance with this clause poses a moderate level of risk in respect of Sydney Water's operational performance. The ability to accurately measure performance against specified indicators, and to otherwise report on performance is a key tool in assessing the effectiveness of a utility's operations.

Target for Full Compliance

Evidence that Sydney Water maintains sufficient records to enable it to report accurately in accordance with sub-clause 8.2.1 (ie. in accordance with the *Reporting Manual*).

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- IPART, *Sydney Water Corporation Reporting Manual; Water – Reporting Manual*, July 2015.
- Sydney Water, *Procedure; Preparation of the Quarterly Drinking Water Quality Report (QDWQR)* (Reference: MP0023), 9 November 2014.
- Sydney Water, *Operating Licence 2015-2020 Compliance and Performance Report; Performance Indicators Report 2015-16*, 1 September 2016.
- Sydney Water, *Performance Indicator Sheet; The number of non-residential customers affected by unplanned interruptions (IPART Indicator C12)*.
- Email dated 7 November 2016 from Sydney Water to IPART regarding Operating Licence 2015-16 Performance Indicators Report – Notification of Revised Data.
- Sydney Water, *Performance Indicator Sheet; The number of non-residential customers affected by unplanned interruptions (IPART Indicator C12)* (Updated).
- Sydney Water, *Performance Indicator Sheet; Average duration of unplanned interruptions experienced by non-residential customers (IPART Indicator C13)*.
- Interviews with Sydney Water staff, 26-28 September 2016.

Summary of reasons for grade

Sydney Water was able to demonstrate, based on a sample of reporting obligations (specifically the *Quarterly Drinking Water Quality Monitoring Report* and IPART Indicators C12 and C13), that it has sufficient record systems and processes in place to enable it to report accurately on its performance against the requirements specified in the *Reporting Manual*. Whilst Indicator C12 was incorrectly reported, this was due to the incorrect interpretation of the indicator definition, not a failure of the records systems.

Accordingly, it was assessed as having demonstrated full compliance with this obligation.

Discussion and notes

As discussed in Table A.7.1, Sydney Water provided evidence to demonstrate that it had complied with its reporting obligations as set out in the *Reporting Manual*.³⁵³ In order to assess whether Sydney Water maintains sufficient record systems that enable it to report accurately in accordance with those

³⁵³ IPART, *Sydney Water Corporation Reporting Manual; Water – Reporting Manual*, July 2015.

requirements, records systems that support reporting of the following have been assessed:

- the Quarterly Water Quality Monitoring Report (Public version); and
- Performance Indicators C12 and C13.

Quarterly Water Quality Monitoring Report (Public version):

Sydney Water advised that the Quarterly Water Quality Monitoring Report (Public version) is prepared in accordance with the procedure *Preparation of the Quarterly Drinking Water Quality Report (QDWQR)*.³⁵⁴ This document sets out in detail the process followed to prepare this report; it addresses report content, source of data and a detailed timeframe for preparation.

Information sources that are used to populate specific tables in the report are clearly defined. For example:

“Data presented in Table 8 ‘Nepean River’ is collected by Sydney Water at the N42 site at North Richmond. Data is extracted from Labware using client code ‘DRC1NMB’ and site code ‘N42’. This data is then copied to a spreadsheet used as a template for calculating statistics (for example S:\PROJECTS\0-1\PM000087 DWQ\Quarterly DW Quality Report(CCR)\2014-15_CCR Reports\Q 1 14-15\Q1 Data\Q1 NthRich\Q1 raw water North Richmond Storage all data.xls). Annual statistics are calculated by appending the quarterly dataset to previous data in the same spreadsheet.”

Review of the procedure indicates that information/data is drawn predominantly from the Sydney Water Business Intelligence System (BI) and the Labware monitoring database, however, some data is also sourced elsewhere (for example, information in relation to catchments, storages and the raw water delivery system are provided by WaterNSW).

Whilst these referenced sources have not been interrogated as part of this audit, it is apparent that they provide the data required to enable preparation of Quarterly Water Quality Monitoring Report. Accordingly, it was assessed that sufficient record systems are maintained to enable preparation of this report.

Performance Indicators:

Sydney Water reported its 2015/16 performance against the indicators specified in the *Reporting Manual* in its *Performance Indicators Report 2015-16*.³⁵⁵ Compilation of a sample of indicators has been reviewed as follows:

- *IPART Indicator C12 – Number of non-residential customers affected by an unplanned water interruption of greater than 1 hour duration.*

Sydney Water reported that 22,523 non-residential properties had been affected during 2015/16.

Sydney Water advised that:³⁵⁶

“Information for the performance indicator C12 is sourced from Sydney Water’s Enterprise Asset Management System (Maximo) and billing system (ACCESS) via the business intelligence environment (Business Objects 3.1 at time of reporting).”

Details in respect of the derivation and reporting of this indicator are set out in a *Performance Indicator Sheet*³⁵⁷ which sets out a definition of the indicator (in both regulatory and Sydney Water terms, which include definition of the relevant property types), identifies the data sources and describes the data collection process and the BI SQL query. The *Performance Indicator Sheet* also includes a screenshot

³⁵⁴ Sydney Water, *Procedure; Preparation of the Quarterly Drinking Water Quality Report (QDWQR)* (Reference: MP0023), 9 November 2014.

³⁵⁵ Sydney Water, *Operating Licence 2015-2020 Compliance and Performance Report; Performance Indicators Report 2015-16*, 1 September 2016.

³⁵⁶ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

³⁵⁷ Sydney Water, *Performance Indicator Sheet; The number of non-residential customers affected by unplanned interruptions (IPART Indicator C12)*.

showing the reported number (ie. 22,523 interruptions).

During the audit discussions, Sydney Water indicated that, for the purposes of calculating this indicator (which was first introduced in 2015/16), it had assumed that if a customer would be counted once if had experienced multiple interruptions. Reference to the Reporting Manual³⁵⁸ revealed that the indicator definition required that: *“If a property experiences more than one interruption then it should be counted for each event”*. An opportunity for improvement (**OFI-2015/16-03**) has been identified in respect of this issue.

Information subsequently provided by Sydney Water³⁵⁹ indicates that, when the correct definition is applied, a total of 26, 845 non-residential customers affected by an unplanned water interruption of greater than 1 hour duration. This represents an increase of 4,322 interruptions (19 percent).

Sydney Water also provided an updated version of the *Performance Indicator Sheet*,³⁶⁰ which sets out the correct definition and BI SQL query.

- *IPART Indicator C13 – The average duration of unplanned interruptions experienced by non-residential customers.*

Sydney Water reported that the average duration of unplanned interruptions experienced by non-residential properties during 2015/16 2:49 minutes.

Sydney Water advised that:³⁶¹

“Information for the performance indicator C13 is sourced from Sydney Water’s Enterprise Asset Management System (Maximo) and billing system (ACCESS) via the business intelligence environment (Business Objects 3.1 at time of reporting).”

Details in respect of the derivation and reporting of this indicator are again set out in a *Performance Indicator Sheet*³⁶² which sets out a definition of the indicator (in both regulatory and Sydney Water terms, which include definition of the relevant property types), identifies the data sources and describes the data collection process and the BI SQL query. The *Performance Indicator Sheet* also includes a screenshot showing the reported number (ie. 2.82 minutes (2:49 minutes)).

Whilst these referenced sources (Maximo and ACCESS) have not been interrogated as part of this audit, it is apparent that the data required to enable calculation of these indicator is effectively collated and/or determined. Whilst Indicator C12 was incorrectly reported, this was due to the incorrect interpretation of the indicator definition, not a failure of the records systems. Accordingly, it was assessed that sufficient record systems are maintained to enable calculation and reporting of these indicators.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

The following opportunity for improvement has been identified in respect of this sub-clause:

- **OFI-2015/16-03:** It is suggested that Sydney Water should ensure that it reviews and fully understands the definitions of its IPART performance indicators and seeks clarification from IPART in the event of any ambiguity.

³⁵⁸ IPART, *Sydney Water Corporation Reporting Manual; Water – Reporting Manual*, July 2015, page 48.

³⁵⁹ Email dated 7 November 2016 from Sydney Water to IPART regarding Operating Licence 2015-16 Performance Indicators Report – Notification of Revised Data.


³⁶⁰ Sydney Water, *Performance Indicator Sheet; The number of non-residential customers affected by unplanned interruptions (IPART Indicator C12)* (Updated).

³⁶¹ Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.

³⁶² Sydney Water, *Performance Indicator Sheet; Average duration of unplanned interruptions experienced by non-residential customers (IPART Indicator C13)*.

A.8 Section 9 – Memorandum of Understanding

Table A.8.1 NSW Health (Sub-clauses 9.1.1 and 9.1.2)

Sub-clause	Requirement	Compliance Grade
9.1.1	Sydney Water must maintain the memorandum of understanding with NSW Health entered into under section 35 of the Act.	 Full Compliance
9.1.2	The purpose of the memorandum of understanding referred to in clause 9.1.1 is to form the basis for co-operative relationships between the parties to the memorandum of understanding. In particular, the purpose of the memorandum of understanding referred to in clause 9.1.1 is to recognise the role of NSW Health in providing advice to the NSW Government in relation to Drinking Water quality standards and the supply of water which is safe to drink.	
Risk		Target for Full Compliance
Failure to comply with this obligation presents a moderate operational risk. NSW Health is a key stakeholder in respect of Sydney Water's operations, with obligations in respect of the protection of public health.		Evidence that Sydney Water has maintained the memorandum of understanding with NSW Health
Evidence sighted		
<ul style="list-style-type: none"> Sydney Water/NSW Health, <i>Memorandum of Understanding between the NSW Ministry of Health and Sydney Water Corporation</i>, signed 16 May 2012. Letter from NSW Health to IPART regarding Sydney Water's performance against Operating Licence during 2015/16, undated. Sydney Water/NSW Health, <i>Sydney Water and NSW Health Meeting: 22 September North Sydney</i>, 22 September 2016. Interviews with Sydney Water staff, 26-28 September 2016. 		
Summary of reasons for grade		
<p>Sydney Water demonstrated that it had maintained a Memorandum of Understanding (MoU) with NSW Health during the audit period. Concerns raised by NSW Health in respect of public messaging in relation to water quality were effectively resolved under the provisions of the MoU, thereby demonstrating the provisions were working effectively.</p> <p>Accordingly, it is assessed that Sydney Water is fully compliant with this obligation.</p> <p>Notwithstanding, two (2) opportunities for improvement in relation to internal communications and training have been identified for consideration by Sydney Water.</p>		

Discussion and notes

Sydney Water demonstrated that it had a Memorandum of Understanding (MoU) with NSW Health during the audit period.³⁶³ The MoU indicates that the MoU would remain in place for the term of Sydney Water's *Operating Licence*.

Review of the MoU reveals that, in addition to setting the context of the document, it addresses matters including Interpretation; Regulatory agency (NSW Health's role); Term; Liaison between Sydney Water and NSW Health; Dispute resolution; Amendment; Sydney Water's role and responsibilities; NSW Health's role and responsibilities; Emerging public health issues related to water or recycled water; Events of public significance; Data exchange; and Public education and information.

In comments provided to IPART in respect of Sydney Water's performance during the audit period,³⁶⁴ NSW Health indicated that:

"NSW Health is generally satisfied SWC has met its obligations under the Operating Licence and MoU but with one concern. While input regarding public messaging during incidents is readily altered based on NSW Health's advice, SWC's Communications Team did not alter public messaging at other times when it was requested. This occurred when SWC developed and launched, in cooperation with NSW Health and WaterNSW, a public online dashboard showing the performance of multiple barriers that ensure the safety of drinking water. In addition, the February to April 2016 edition of Waterwrap included statements that differed from agreed messages.

The operating licence requires adherence to the Framework for Management of Drinking Water Quality which must be implemented to the satisfaction of NSW Health. Element 8 describes community involvement and awareness. The MoU describes the role of NSW Health to ensure that public communications are accurate and appropriate. The MoU states that Sydney Water shall refrain from making public statements containing public health advice, unless such a statement is aligned with public health guidelines, NSW Health public health advice or endorsed or directed by NSW Health. The MoU also states NSW Health and Sydney Water shall jointly undertake public education relating to the health aspects of drinking and recycled water where necessary and agreed to by both parties."

NSW Health's concerns were addressed as part of the audit in order to assess Sydney Water's compliance with its obligations under the *Operating Licence*. Sydney Water advised as follows:

- Once NSW Health had raised its concerns with Sydney Water (and subsequently advised IPART), Sydney Water had sought to meet with NSW Health to discuss them. Whilst NSW Health first raised its concerns in early-July 2016, such meeting was not held until 15 August 2016 due to the relevant Sydney Water staff member (Manager, Education Engagement and Partnerships (ie. Communications team)) going on leave. An interim discussion was held during a meeting between Sydney Water (Water Quality team) and NSW Health on 11 August 2016.
- As outlined above, NSW Health's concerns related to public messaging in relation to water quality; in particular, it was concerned that changes to wording proposed by NSW Health had not been incorporated. The messaging involved included February-March 2016 edition of the Waterwrap newsletter and a video promoting Sydney Water approach to managing drinking water quality that was uploaded to the Sydney Water website on 1 July 2016 (strictly outside of the audit period, although the contributing action took place within the audit period).³⁶⁵
- Sydney Water personnel involved in the production/publication of the information did not realise that the messaging required NSW Health sign-off; they believed that NSW Health's request for changes to the proposed messaging were a matter for discussion and compromise, as opposed to NSW Health's position that the changes were to be taken as a direction for implementation.
- Action was taken to correct the messaging in the video (a revised version has been uploaded to the

³⁶³ Sydney Water/NSW Health, *Memorandum of Understanding between the NSW Ministry of Health and Sydney Water Corporation*, signed 16 May 2012.

³⁶⁴ Letter from NSW Health to IPART regarding Sydney Water's performance against Operating Licence during 2015/16, undated.

³⁶⁵ Copies of email correspondence related the messaging and requested changes were provided to the auditors.

Sydney Water website), and Sydney Water will work to ensure that messaging in the next edition of Waterwrap aligns with NSW Health's requirements.

- A further meeting was held with NSW Health on 22 September 2016,³⁶⁶ during which roles and requirements of each party were clarified and forward actions/protocols agreed.
- In summary, the issues arose due to a lack of internal awareness within Sydney Water, specifically within its communications team, in respect of NSW Health's role and requirements.

Subsequent email correspondence between IPART and NSW Health indicates that the issues raised in NSW Health's letter to IPART have been resolved to NSW Health's satisfaction.³⁶⁷

Given the action taken by Sydney Water in response to NSW Health raising its concerns, and NSW Health's subsequent advice that it considers the issues to have been resolved, the auditors are of the opinion that this constitutes evidence that the arrangements under the MoU are working effectively. It was specifically noted by NSW Health that, whilst it was following a process that may have resulted in the dispute resolution provisions of the MoU being invoked, those provisions had not been in fact been invoked.

Notwithstanding, the auditors are also of the opinion that there is a need for improvement in Sydney Water's internal communication arrangements, specifically in relation to knowledge and understanding of Sydney Water's obligations under the provisions of the MoU with NSW Health; this has been identified as an opportunity for improvement (**OFI-2015/16-04**).

It is also noted that a suggestion was made at the 22 September 2016 meeting between Sydney Water and NSW Health that: "*it may be useful for some members of the communications team to attend training on the Framework for Managing Water Quality in the Australian Drinking Water Guidelines.*" This suggestion has been reflected as an opportunity for improvement (**OFI-2015/16-05**).

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

The following opportunities for improvement have been identified in respect of this sub-clause:

- **OFI-2015.16-04:** Sydney Water may wish to consider implementing internal training to ensure that its communications team is aware of its obligations under the provisions of the MoU with NSW Health.
- **OFI-2015/16-05:** Sydney Water may wish to consider implementing training in respect of the Framework for Managing Water Quality, consistent with the *Australian Drinking Water Guidelines* for some members of the communications team.

³⁶⁶ Sydney Water/NSW Health, *Sydney Water and NSW Health Meeting: 22 September North Sydney*, 22 September 2016.

³⁶⁷ Emails dated 11 October 2016 from IPART to NSW Health and NSW Health to IPART (including email correspondence) regarding Sydney Water performance during the 2015/16 audit period.

Table A.8.2 Fire and Rescue NSW (Sub-clause 9.4.1)

Sub-clause	Requirement	Compliance Grade
9.4.1	Sydney Water must use its best endeavours to develop and enter into a memorandum of understanding with Fire and Rescue NSW (FRNSW) by 31 December 2015.	<div></div> <div>Full Compliance</div>
Risk		Target for Full Compliance
Failure to comply with this obligation presents a moderate operational risk. Fire and Rescue NSW is key consumer in respect of Sydney Water’s services, with obligations in respect of the community protection.		Evidence that Sydney Water has developed and entered into a Memorandum of Understanding with Fire and Rescue NSW by 31 December 2015.
Evidence sighted		
<div><div></div><div>Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.</div><div></div><div>Sydney Water/FRNSW, <i>Memorandum of Understanding between Sydney Water Corporation and Fire and Rescue NSW</i>, October 2015 (signed 1 December 2015).</div><div></div><div>Interviews with Sydney Water staff, 26-28 September 2016.</div></div>		
Summary of reasons for grade		
<p>Sydney Water demonstrated that it had developed and entered into a Memorandum of Understanding (MoU) with Fire and Rescue NSW prior to 31 December 2015. The MoU, dated October 2015, was formally signed by both parties on 1 December 2015.</p> <p>Accordingly, it is assessed that Sydney Water was fully compliant with this obligation.</p>		
Discussion and notes		
<p>Sydney Water demonstrated that it had developed and entered into a Memorandum of Understanding (MoU) with Fire and Rescue NSW prior to 31 December 2015. The MoU,³⁶⁸ dated October 2015, was formally signed by both parties on 1 December 2015.</p> <p>Review of the MoU reveals that it addresses matters including Principles and objectives of the MoU; Structures and Processes (including Strategic Liaison Group, Fire Fighting Working Group, Exchange of Information and Data, Confidentiality and Dispute Resolution); Term and Amendments; and Representatives (of the parties).</p>		
Recommendations		
There are no recommendations in respect of this sub-clause.		
Opportunities for improvement		
No opportunities for improvement have been identified in respect of this sub-clause.		

³⁶⁸ Sydney Water/FRNSW, *Memorandum of Understanding between Sydney Water Corporation and Fire and Rescue NSW*, October 2015 (signed 1 December 2015).

Table A.8.3 Fire and Rescue NSW (Sub-clause 9.4.4)

Sub-clause	Requirement	Compliance Grade
9.4.4	<p>The memorandum of understanding referred to in clause 9.4.1 must require:</p> <ul style="list-style-type: none"> a) the establishment of a working group, comprised of representatives from Sydney Water and FRNSW; and b) the working group to consider the following matters (at a minimum): <ul style="list-style-type: none"> i) arrangements regarding information sharing between Sydney Water and FRNSW; ii) agreed timelines and a format for Sydney Water to provide a report to FRNSW detailing the network performance with regard to availability of water for firefighting (taking into account the minimum available flow and pressure in localised areas of the network); iii) arrangements for Sydney Water to consult with FRNSW in the design of new assets and planning of system maintenance, where planning indicates that minimum available flow and pressure may unduly impact firefighting in the network section under consideration; and iv) other matters as agreed by both parties to the memorandum of understanding. 	<div style="background-color: green; width: 100px; height: 20px;"></div> <p>Full Compliance</p>

Risk	Target for Full Compliance
Failure to comply with this obligation presents a moderate operational risk. Fire and Rescue NSW is key consumer in respect of Sydney Water's services, with obligations in respect of the community protection. It is important that water supply services are adequate to enable Fire and Rescue to meet its obligations.	Evidence that the Memorandum of Understanding between Fire and Rescue NSW includes the specified requirements.

Evidence sighted

- Sydney Water response to 2016 Operational Audit Questionnaire, 1 September 2016.
- Sydney Water/FRNSW, *Memorandum of Understanding between Sydney Water Corporation and Fire and Rescue NSW*, October 2015 (signed 1 December 2015) [Sydney Water/FRNSW MoU].
- Sydney Water/FRNSW, *Firefighting Working Group Meeting Charter*, April 2016.
- FRNSW, *Minutes of Meeting; MoU between SWC and FRNSW*, 13 November 2015.
- MS Excel Workbook: *Firefighting working group summary actions V2 230916.xlsx*.
- Sydney Water, *Minutes and actions; Fire Fighting; Strategic Liaison Group Meeting 1*, 7 June 2016.
- Interviews with Sydney Water staff, 26-28 September 2016.

Summary of reasons for grade

Sydney Water demonstrated that the Memorandum of Understanding (MoU) requires the establishment of a working group, comprised of representatives from Sydney Water and FRNSW, and identifies the matters that must be considered by the working group. Furthermore, it was demonstrated that a Fire Fighting Working Group (FFWG) has been established and is operating effectively; it has developed a program of work which includes addressing the matters identified in the *Operating Licence*. Feedback indicates that implementation of the MoU and the establishment and operations of the FFWG has been of mutual benefit to both parties.

Accordingly, it is assessed that Sydney Water has demonstrated full compliance with this obligation.

Discussion and notes

Review of the Memorandum of Understanding (MoU) between Sydney Water and Fire and Rescue NSW (FRNSW)³⁶⁹ reveals that it requires the establishment and operation of a Fire Fighting Working Group (FFWG).³⁷⁰ Furthermore, the MoU requires the FFWG to consider a range of matters, including but not limited to:

- the exchange of information and data;³⁷¹
- the format and timing of a report to be provided by Sydney Water detailing its water network performance regarding water availability for firefighting;³⁷² and
- arrangements for Sydney Water to consult with FRNSW in the design of new assets and planning of system maintenance.³⁷³

Sydney Water and FRNSW have prepared a *Firefighting Working Group Meeting Charter*,³⁷⁴ which defines the scope and purpose of the Working Group, roles and responsibilities, membership, operating guidelines, authorities and meeting schedules. The Charter also outlines the relationship of the FFWG to the Strategic Leadership Group (SLG) (also required under the MoU), and indicates that the SLG is to meet annually.

Both the MoU and the Charter require the FFWG to meet quarterly, although Sydney Water advised³⁷⁵ that it has been meeting more regularly since its inception. Meeting frequency is expected to reduce over time (to the nominal quarterly requirement) once initial arrangements have been put in place and activities are well established.

Minutes of a FFWG meeting held on 13 November 2015 provided as evidence that the FFWG has been operating;³⁷⁶ these minutes demonstrate that the matters identified in the *Operating Licence* are being addressed. Sydney Water also advised that the FFWG had developed a “working program”,³⁷⁷ a copy of which was also provided; again this demonstrated that the identified matters are being addressed.

Minutes of the annual meeting of the SLG held on 7 June 2016 were also provided.³⁷⁸ These demonstrated the relationship between the SLG and the FFWG, with action items identified for the attention of the FFWG. They also revealed that the Sydney Water Customer Council is being engaged in

³⁶⁹ Sydney Water/FRNSW, *Memorandum of Understanding between Sydney Water Corporation and Fire and Rescue NSW*, October 2015 (signed 1 December 2015).

³⁷⁰ Sydney Water/FRNSW MoU, clause 4.2.1.

³⁷¹ Sydney Water/FRNSW MoU, clause 4.3.

³⁷² Sydney Water/FRNSW MoU, clause 4.2.6.

³⁷³ Sydney Water/FRNSW MoU, clause 4.2.5.

³⁷⁴ Sydney Water/FRNSW, *Firefighting Working Group Meeting Charter*, April 2016.

³⁷⁵ Personal comment during audit interviews.

³⁷⁶ FRNSW, *Minutes of Meeting: MoU between SWC and FRNSW*, 13 November 2015.

³⁷⁷ MS Excel Workbook: *Firefighting working group summary actions V2 230916.xlsx*.

³⁷⁸ Sydney Water, *Minutes and actions; Fire Fighting; Strategic Liaison Group Meeting 1*, 7 June 2016.

respect of the matters being addressed under the MoU.

Sydney Water advised³⁷⁹ that there had been positive feedback from both parties (Sydney Water and FRNSW) since the establishment of the MoU and FFWG. A clearer understanding of each party's perspective has been developed and the identified program of work will result in outputs of mutual benefit.

Recommendations

There are no recommendations in respect of this sub-clause.

Opportunities for improvement

No opportunities for improvement have been identified in respect of this sub-clause.

³⁷⁹ Personal comment during audit interviews.

D | Letter to IPART – Management Systems

Cobbitty Consulting Pty Ltd
ABN: 45 164 692 488

PO Box 561, Bayswater VIC 3153
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CobbittyConsulting
Engineering and Advisory Services

23 November 2016

Our reference: #14042
Your reference: D16/18827; 16/148

Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop NSW 1240

Attention: Ms Jessica Hanna
Senior Analyst, Water Licensing and Compliance

Dear Jessica

**2015/16 Operational Audit of Sydney Water Corporation
Assessment of Sydney Water Progress in Development of its Management Systems**

I refer to the requirement under the scope of the 2015/16 Operational Audit of Sydney Water to:

- provide a summary of the progress to date in development of the Asset and Quality Management Systems; and
- provide an opinion as to whether sufficient progress has been made to meet the future requirements of the *Operating Licence*.

Please find attached a brief report outlining our assessment. In summary, the auditors are of the view that Sydney Water has made sufficient progress to enable it to:

- have its Asset Management System developed by 30 June 2018, and certified as compliant with the requirements of ISO 55001 and fully implemented by 30 June 2019; and
- have its Quality Management System developed by 30 June 2017, and certified as compliant with the requirements of ISO 9001 and fully implemented by 30 June 2018.

Please contact me on telephone 0423 326 693 or via email at jim.sly@cobbittyconsulting.com.au if you have any queries.

Yours sincerely



Jim Sly
Director

2015/16 Operational Audit of Sydney Water Corporation

Assessment of Sydney Water Progress in Development of its Management Systems

1. Introduction

In conjunction with the 2015/16 Operational Audit of Sydney Water Corporation (Sydney Water), IPART requires the auditors to:

- provide a summary of the progress to date in development of the Asset Management System and Quality Management System, as required pursuant to *Sydney Water Corporation Operating Licence*; and
- provide an opinion as to whether sufficient progress has been made to meet the future requirements of the *Operating Licence* in respect of both the Asset Management System and Quality Management System.

This report sets out a brief assessment in respect of the above matters.

2. Asset Management System

2.1 Licence Requirements

Sub-clauses 4.1.1, 4.1.2 and 4.1.4 of the *Sydney Water Corporation Operating Licence* require that:

- 4.1.1 *By 30 June 2018, Sydney Water must develop a Management System that is consistent with the International Standard ISO 55001:2014 Asset Management System - Requirements (the **Asset Management System**).*
- 4.1.2 *Sydney Water must ensure that:*
 - a) *by 30 June 2019, the Asset Management System is certified by an appropriately qualified person to be consistent with the International Standard ISO 55001:2014 Asset Management System – Requirements; and*
 - b) *once the Asset Management System is certified, the certification is maintained during the remaining term of this Licence.*
- 4.1.4 *By 30 June 2019, Sydney Water must ensure that the Asset Management System is fully implemented and that all relevant activities are carried out in accordance with the Asset Management System.*

In summary, under the provisions of the *Operating Licence*, Sydney Water must develop an Asset Management System by 30 June 2018, and have it certified and fully implemented by 30 June 2019.

2.2 Auditor's Assessment

Sydney Water provided a verbal update, supported by a MS PowerPoint presentation,¹ in respect of its progress in developing and implementing its Asset Management System (AMS). Key points from the presentation include the following:

- Sydney Water has continued to develop its asset management practices as it transitions from its existing Asset Management framework into an Asset Management System consistent with ISO 55001:2014.
- Sydney Water has identified a series of tasks required to achieve certification to ISO 55000; these include:
 - Governance – ensuring that appropriate leadership arrangements are in place;
 - Review and improve the Asset Management Framework – ensuring that the structure of the system is appropriate;
 - Align business processes and outcomes – definition of key documentation under the Strategic Asset management Framework and ensuring that they are in place;
 - Strategic Asset Management Plan (SAMP) and Asset Management Manual – development of “how to” documentation;
 - Communications and Training – ensuring that the requirements of the QMS are embedded into the Sydney Water culture; and
 - Certification to ISO 55000 – formal certification of the AMS.

¹ Sydney Water, *Asset Mgmt Framework & ISO 55000 Alignment project*.

- Sydney Water is currently implementing an Asset Management Improvement Plan, which is aimed at addressing five principal areas: Customer Focussed Asset Solutions; Asset Knowledge Management; Risk Management; Service and Cost; and Standardisation.
- Sydney Water is participating in the Water Services Association of Australia (WSAA) 2016 “Aquamark” process benchmarking process to assess the level of maturity of its system.
- Sydney Water nominated the following timeline in respect of development and certification of its AMS:
 - Update and refreshment of key documentation under “Product and Asset Strategy Planning” December 2015 to June 2016;
 - Define/confirm key documents under other components of the Strategic Asset Management Framework December 2015 to December 2016;
 - Gap identification April 2016 to December 2016;
 - Asset Management Manual January 2017 to June 2017;
 - Staff communication and training January 2017 to June 2018;
 - ISO 55000 compliance July 2017 to March 2018;
 - Certification of AMS to ISO 55000 July 2018 to June 2019.

On the basis of the update provided by Sydney Water, the auditors are of the opinion that Sydney Water has made sufficient progress to have a fully developed Asset Management System in place by June 2018, and have it certified and fully implemented by 30 June 2019 as required under its *Operating Licence*.

3. Quality Management System

3.1 Licence Requirements

Sub-clauses 7.1.1, 7.1.2 and 7.1.3 of the *Sydney Water Corporation Operating Licence* require that:

- 7.1.1 *By 30 June 2017, Sydney Water must develop a Management System that is consistent with the Australian Standard AS/NZS ISO 9001:2008: Quality Management Systems – Requirements (the Quality Management System).*
- 7.1.2 *Sydney Water must ensure that:*
 - a) *by 30 June 2018, the Quality Management System is certified by an appropriately qualified person to be consistent with the Australian Standard AS/NZS ISO 9001:2008: Quality Management Systems – Requirements; and*
 - b) *once the Quality Management System is certified under clause 7.1.2(a), the certification is maintained during the remaining term of this Licence.*
- 7.1.3 *By 30 June 2018, Sydney Water must ensure that the Quality Management System is fully implemented and that all relevant activities are carried out in accordance with the Quality Management System.*

In summary, under the provisions of the *Operating Licence*, Sydney Water must develop a Quality Management System by 30 June 2017, and have it certified and fully implemented by 30 June 2018.

3.2 Auditor Assessment

Sydney Water provided a verbal update, supported by an MS PowerPoint presentation,² in respect of its progress in developing and implementing its Quality Management System (QMS). Key points from the presentation include the following:

- The QMS Project Business Case was approved by the Managing Director in December 2015.
- A Quality Management System Manager and Senior QMS Analyst have been recruited to drive the development and implementation of a QMS.
- Sydney Water has engaged BSI Group (ANZ) Pty Ltd as its management system certification and auditing partner for the next five years.
- Governance arrangements have been put in place to oversee and implement development and certification of the QMS. This comprises:
 - Sydney Water Executive Team – will provide leadership commitment;
 - Quality Assurance Risk Compliance (QARC) Steering Group – will provide management direction and decisions;
 - QMS Technical Working Group – meets monthly and will work across the business to help design, build and implement the system; and
 - Information Systems Support Group – will work across the business to review IT systems and platforms that support management systems.

² Sydney Water, *Enterprise-wide Quality Management System; IPART Audit*, September 2016.

- The scope of the QMS has been defined as follows:

“To plan, deliver, operate, manage, maintain and improve the systems, services and products for water, wastewater, recycled water and stormwater for Sydney Water customers throughout its area of operations.”
- The QMS will be developed as an enterprise wide umbrella framework that aligns with Sydney Water’s core business process model, Helix. The intent is to standardise, simplify, align and declutter current processes to provide a cohesive arrangement for management systems and frameworks for Sydney Water.
- The objective is to develop the QMS between April 2016 and March 2017 in preparation for implementation after the March 2017 external certification/surveillance audit timeline for existing management systems (which include the Environmental Management System).
- Next steps in the QMS development include development of a change management program; regular reporting via the established governance arrangements; and securing cross business commitment to the development process.
- Sydney Water nominated the following timeline in respect of development and certification of its QMS:

○ Business case approval	complete;
○ System definition	commenced April 2016;
○ Establish management System services contract	September 2016;
○ Complete QMS process development /QMS ready for implementation	March 2017;
○ Start communication and training	March 2017;
○ Implement and verify the QMS	March 2017 to March 2018
○ Establish QMS Steering Group	June 2017;
○ Certification of QMS to ISO 9001:2015	March 2018.
- Whilst the *Operating Licence* requires that Sydney Water develops a management system consistent with AS/NZS ISO 9001:2008, it will be seeking certification to ISO 9001:2015 (AS/NZS ISO 9001:2016), which has a more customer centric focus.

On the basis of the update provided by Sydney Water, the auditors are of the opinion that Sydney Water has made sufficient progress to have a fully developed Quality Management System in place by 30 June 2017, and have it certified and fully implemented by 30 June 2018 as required under its *Operating Licence*.

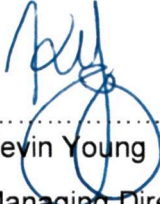
E | Sydney Water's statement of compliance


Statement of Compliance 2016
For 2015-16
Submitted by Sydney Water Corporation
ABN: 49 776 225 038

To: The Chief Executive Officer
Independent Pricing and Regulatory Tribunal of NSW
Level 15, 2-24 Rawson Place
SYDNEY NSW 2000

Sydney Water reports as follows:

1. This statement documents compliance during 2015-16 with all obligations to which Sydney Water is subject by virtue of its Operating Licence.
2. This report has been prepared by Sydney Water with all due care and skill to the best of our knowledge of conditions to which it is subject under the Sydney Water's Operating Licence and Reporting Manual.
3. Schedule A provides information on all obligations with which Sydney Water did not comply during 2015-16.
4. Other than the information provided in Schedule A, Sydney Water has complied with all conditions to which it is subject.
5. The compliance reports have been approved by the Managing Director and the Chairman of the Board of Directors of Sydney Water.

DATE: 25/8/16
Signed: 
Name: Kevin Young
Designation: Managing Director

DATE: 25/8/16
Signed: 
Name: Bruce Morgan
Designation: Chairman

Schedule A Non Compliances 2015-16

List obligations breached, including a brief description of each obligation

1.9 Pricing

Sydney Water must set the level of fees, charges, and other amounts payable for its Services subject to the terms of our Operating Licence, the *Sydney Water Act 1994* (the SW Act) and the maximum prices and methodologies for Services determined from time to time by IPART under the *Independent Pricing and Regulatory Tribunal Act 1992* (the IPART Act).

2014-15 MR 1 – Ministerial Requirement for Pricing

IPART's report on the 2014-15 audit of Sydney Water's Operating Licence made following recommendation on Clause 1.9 Pricing. The Minister endorsed IPART's recommendation in April 2016:

Sydney Water should complete, register and apply the Development Service Plan (DSP) for Hoxton Park. Sydney Water should ensure that it publically reports on its compliance with its Price determinations each year in its annual report. (By 30 June 2016).

i Date or period of non-compliance (including whether and how many customers have been affected)

1.9 Pricing

There has been an ongoing non-compliance since 2007 for the Hoxton Park scheme, which has continued during the 2015-16 reporting period.

2014-15 MR 1 – Ministerial Requirement for Pricing

Sydney Water has met the requirement to publicly report on compliance with pricing determinations in its Annual Report, however we have not met the required timing to register and apply a DSP for Hoxton Park by 30 June 2016. IPART has registered the DSP, effective from 29 August 2016.

ii Nature and extent of non-compliance

1.9 Pricing

Sydney Water has not complied with IPART's *Recycled water developer charges, Determination No.8, 2006* (the 2006 Determination) which sets a methodology for fixing the maximum prices that a Water Agency may charge for Recycled Water Developer Charges. As part of this methodology, Sydney Water must register a Development Servicing Plan (DSP) for any recycled water scheme where we wish to levy a developer charge. In 2015–16, recycled water capital contributions levied by Sydney Water for the Hoxton Park recycled water scheme were not based on the methodology stipulated in the 2006 Determination. We have also determined that the charge was less than the maximum price that would have been determined by that methodology. Sydney Water did not obtain approval from the Treasurer to set a price below the amount determined by the methodology.

Therefore, Sydney Water was non-compliant with Clause 1.9 of our Operating Licence and section 18(2) of the IPART Act in respect of these charges.

The non-compliance occurred as a result of Sydney Water collecting capital contributions for the Hoxton Park recycled water scheme without a registered Development Servicing Plan (DSP) in

place, and without seeking Treasurer approval to charge a price that was less than the maximum price that would have been determined by the methodology.

2014-15 MR 1 – Ministerial Requirement for Pricing

This requirement was notified to Sydney Water through Ministerial correspondence in April 2016. Although Sydney Water had already commenced the preparation of the DSP, we advised IPART and the Minister in May 2016 that the deadline was unachievable. This was due to the regulatory process requiring the DSP to be advertised 10 working days (2 weeks) prior to public exhibition and then placed on public display for 30 working days (6 weeks), before being sent to IPART for registration. Subsequent to public exhibition of the DSP in June/July, the DSP was registered by IPART and is effective from 29 August 2016.

iii Results of any monitoring (where applicable)

N/A

iv Reasons for non-compliance

1.9 Pricing

The non-compliance resulted from actions and decisions taken by Sydney Water's previous administration. These actions and decisions resulted in the ongoing non-compliance since 2007 for the Hoxton Park recycled water scheme.

At the time, Sydney Water's view was that we could levy capital contributions without preparing a DSP for this scheme. In March 2015, IPART notified Sydney Water that this view was incorrect and that we had failed to:

- prepare and register a DSP before levying developer charges (in accordance with the requirements of the 2006 Determination);
- seek the Treasurer's approval before fixing a price that was below the maximum price that would have been determined by the methodology set out in the 2006 Determination (in accordance with s18(2) of the IPART Act); and
- report on our non-compliance with price determinations in our annual report (in accordance with s18(4) of the IPART Act).

2014-15 MR 1 – Ministerial Requirement for Pricing

The deadline was unachievable due to the regulatory process requiring the DSP to be advertised 10 working days (2 weeks) prior to public exhibition and then placed on public display for 30 working days (6 weeks), leaving insufficient time to register the DSP by 30 June 2016.

v Remedial action taken

1.9 Pricing

Sydney Water is seeking to rectify the non-compliance on Pricing.

In our 2015 Annual Report, Sydney Water reported the non-compliance with the 2006 Determination for the Hoxton Park scheme. We will report the continued non-compliance in our 2016 Annual Report.

Sydney Water prepared a draft DSP for the scheme. This draft DSP was placed on public exhibition on 17 June 2016 in accordance with the 2006 Determination. In that draft DSP, Sydney Water has sought to set a developer charge for Hoxton Park below that calculated in accordance with the

2006 Determination. Sydney Water has approval from the NSW Treasurer to set this lower developer charge, in accordance with clause 18(2) of the IPART Act. We did this to ensure that Sydney Water set a charge that is the lowest cost to society to meet the requirements of the government's BASIX program. The final DSP has now been registered by IPART and is effective from 29 August 2016.

2014-15 MR 1 – Ministerial Requirement for Pricing

The DSP was placed on public exhibition from 17 June 2016 and has now been registered by IPART, effective from 29 August 2016.

vi Actual/anticipated date of full compliance

1.9 Pricing

The final DSP has now been registered by IPART in accordance with the 2006 Determination and is effective from 29 August 2016.

There will continue to be some instances of technical non-compliance as payments are received for the previously levied non-compliant charges for the Hoxton Park recycled water scheme. This is due to the timing between the issue of the Notice of Requirements (issued under s74 of the *Sydney Water Act 1994*), which provides invoice requirement for the payment of the capital contribution, the payment of that contribution, and the issue of the Certificate of Compliance (issued under s73 of the *Sydney Water Act*). Sydney Water is working towards limiting this non-compliance to 2016–17 by potentially reissuing outstanding Notice of Requirements with a compliant charge.

2014-15 MR 1 – Ministerial Requirement for Pricing

A DSP for the Hoxton Park recycled water scheme is now in place, effective from 29 August 2016. The Ministerial requirement to register and implement the DSP is now complete.

Schedule A Non Compliances 2015-16

List obligations breached, including a brief description of each obligation

5.2 Providing information

5.2.4 Sydney Water must advertise in a Sydney-based newspaper at least annually on:

- a) the types of account relief available for Customers experiencing financial hardship; and
- b) rights of Customers to claim rebates and the conditions that apply to those rights.

i Date or period of non-compliance (including whether and how many customers have been affected)

A brief delay in advertising in accordance with the requirement was experienced for 2015-16, resulting in the required advertisement being run on 27 July 2016, rather than by 30 June 2016 as planned. As such there was a period of non-compliance from 1 July 2016 to 27 July 2016.

However, information regarding the types of relief available for customers experiencing financial hardship and the rights of customers to claim rebates was included in the Sydney Water pamphlet 'Our Contract with you' posted to customers with their quarterly accounts in quarter 1 2015-16 and readily available from the Sydney Water website [Clause 5.2.3].

Additionally, in October 2015 we scheduled a series of advertisements to be placed in 'The Voice' newspaper. The paper is distributed by the Combined Pensioners and Superannuants Association of NSW and targets low income retirees. Advertisements were placed in four consecutive monthly issues of the paper, each with a different focus. These were:

November 2015 - Payment assistance options

December 2015/January 2016 - Water saving tips

February 2016 – How to check for leaks

March 2016 - Pensioner rebates, eligibility and how to apply

We also shared this information across various channels with many social advocacy stakeholders. Online newsletters included Community Resource Network and TRI community exchange. Stakeholders who placed this information on their website or distributed it amongst staff and service providers included NSW Council of Social Services (NCOSS), the Energy & Water Ombudsman NSW (EWON) and People with Disabilities Australia (PWD).

ii Nature and extent of non-compliance

The non-compliance resulted as the placement of the advertised material was to be aligned with the advertisement of pricing information. Due to unforeseen delays this did not occur prior to 30 June 2016 as planned. The delay was subsequently addressed with the non-compliance occurring for a brief period of 18 business days. During the period of non-compliance information regarding the types of relief available for customers experiencing financial hardship and the rights of customers to claim rebates was readily available from the Sydney Water website or by contacting Sydney Water.

iii Results of any monitoring (where applicable)

N/A

iv Reasons for non-compliance

The non-compliance resulted as the placement of the advertised material was to be aligned with the advertisement of pricing information. Due to unforeseen delays this did not occur prior to 30 June 2016 as planned. Changes have been made to the Sydney Water program of works to prevent recurrence of the problem.

v Remedial action taken

The advertisement was expedited to minimise the period of non-compliance. The Sydney Water program of works was immediately amended to include the advertisement at commencement of the calendar year rather than financial year. This will result in customers being advised about the types of relief available and their right to claim rebates at the start of the calendar year via the advertisement and again at the commencement of the financial year via the brochure 'Our Contract with you' posted with their bills annually.

vi Actual/anticipated date of full compliance

Compliance was achieved when the advertisement was placed in Sydney-based newspapers (Daily Telegraph, Sydney Morning Herald and Illawarra Mercury) covering Sydney Water's area of operations on Wednesday 27 July 2016 (refer attached evidence).

Monday to Friday) or visit sydneywater.com.au

Attachment 3 – Advertisement Illawarra Mercury 27 July 2016

The screenshot shows a web browser window with the URL <http://www.illawarramercury.com.au/classifieds/notices/>. The page features a navigation bar with links to Front Page, News, Sport, Opinion, Community, Life & Style, Entertainment, Classifieds, Multimedia, and a Search function. Below the navigation bar, there are links for ADULT SERVICES, AUTOMOTIVE, COUNTRY CARS, BUY & SELL, PUBLIC NOTICES AND BUSINESS OPPORTUNITIES, REAL ESTATE, and SERVICES. A search bar is also present.

The main content area displays a notice from Sydney Water titled "Notice of service rebates and financial assistance options". The notice is dated 27/07/2016 and is categorized under PUBLIC NOTICES. The notice details various rebates and financial assistance options available to Sydney Water customers, including:

- Water and wastewater service fault rebates:**
 - If your services are interrupted by planned or unplanned work for over 5 hours, we'll give you an automatic \$35 rebate.
 - If you experience three or more unplanned water service interruptions of over one hour in a year, we'll pay you your full water service charge less any concessions for the next year.
 - If your water pressure is lower than 15 metres head of pressure at the point of connection to our water main for a continuous period of 15 minutes unless as a result of a supply interruption, we'll give you an automatic \$45 rebate. We'll only pay this for one event each quarter.
 - If wastewater overflows onto your property because our wastewater system has failed, we'll give you a \$60 rebate.
 - If wastewater overflows onto your property more than once in a year because our wastewater system has failed, we'll pay your full wastewater service charge, less any concessions, for the next year.
 - If a problem in our water system prevents us from supplying clean water suitable for normal household purposes, we'll give you a \$35 rebate.
 - If NSW Health issues a boil water alert due to a Sydney Water fault, we'll pay you a rebate of \$45.
- Financial assistance options:**
 - If you're having difficulty paying your bill, contact us and we'll discuss payment options with you. This may include negotiating more time for you to pay or an amount you can afford on an agreed payment plan.
 - For residential customers you may be entitled to additional options such as payment assistance credits issued by an accredited agency or us. Concession arrangements are also available to holders of an eligible Pensioner Concession Card or Department of Veterans' Affairs Gold Card.

To find out more, contact us on 13 20 92 (8.30am to 5.30pm, Monday to Friday) or visit sydneywater.com.au.

NOTICE OF
27/07/2016 - PUBLIC NOTICES

MAJOR EVENT

Temporary Road Closure