



Catherine Hill Bay Water Utility

Operational Audit (Stage 1 – Interim Scheme)

#14080-10-001 Version 2.1

Independent Pricing and Regulatory Tribunal

April 2019

Document History

Catherine Hill Bay Water Utility

Operational Audit
(Stage 1 – Interim Scheme)

Independent Pricing and Regulatory Tribunal

This document has been issued and amended as follows:

Version	Date	Description	Created by	Checked by	Approved by
1.0	13 February 2019	Draft	Jim Sly	-	Jim Sly
2.0	15 February 2019	Final	Jim Sly	Dan Deere	Jim Sly
2.1	5 April 2019	Updated Final	Jim Sly	-	Jim Sly

Cobbitty Consulting Pty Ltd
ABN: 45 164 692 488

PO Box 561, Bayswater VIC 3153
Telephone: +61 (0) 423 326 693
Email: jim.sly@cobbittyconsulting.com.au

Cobbitty Consulting has prepared this document in accordance with the instructions of *Independent Pricing and Regulatory Tribunal* for its sole and specific use. Any other persons who use the information contained herein do so at their own risk.

© Cobbitty Consulting Pty Ltd, 2019

Contents

1. Executive Summary	1
1.1 Auditor Declaration	1
1.2 Major Findings	1
1.3 Recommendations	1
2. Introduction	3
2.1 Objectives	3
2.2 Licensee's Infrastructure, Systems and Procedures	3
2.3 Audit Method	4
2.4 Regulatory Regime	6
2.5 Quality Assurance Process	6
2.6 Audit Findings	6
3. Water Supply Infrastructure	7
3.1 Summary of Findings	7
3.2 Review of Actions	7
3.3 Opportunities for Improvement	7
4. Non-Potable Water Supply Infrastructure	8
4.1 Summary of Findings	8
4.2 Review of Actions	8
4.3 Opportunities for Improvement	8
5. Sewerage Infrastructure	9
5.1 Summary of Findings	9
5.2 Review of Actions	9
5.3 Opportunities for Improvement	9
6. General Obligations of a Network Operator	10
6.1 Summary of Findings	10
6.2 Review of Actions	10
6.3 Opportunities for Improvement	10
7. Schedule A to the Network Operator's Licence	11
7.1 Summary of Findings	11
7.2 Review of Actions	11
7.3 Opportunities for Improvement	11
8. Schedule B to the Network Operator's Licence	12
8.1 Summary of Findings	12
8.2 Review of Actions	12
8.3 Opportunities for Improvement	12

Appendix A	Detailed Audit Findings – Water Supply Infrastructure	13
Table A.1	Water Supply Infrastructure – WIC Reg Sched 1 cl.6(2)(a)	15
Table A.2	Water Supply Infrastructure – WIC Reg Sched 1 cl.6(3)(a)	20
Table A.3	Water Supply Infrastructure – WIC Reg Sched 1 cl.7(4)(a)	22
Table A.4	Water Supply Infrastructure – WIC Reg Sched 1 cl.7(5)(a)	25
Appendix B	Detailed Audit Findings – Non-Potable Water Supply Infrastructure	27
Table B.1	Non-Potable Water Supply Infrastructure – WIC Reg Sched 1 cl.10(a)	29
Appendix C	Detailed Audit Findings – Sewerage Infrastructure	31
Table C.1	Sewerage Infrastructure – WIC Reg Sched 1 cl.13(2)(a)	33
Table C.2	Sewerage Infrastructure – WIC Reg Sched 1 cl.13(3)(a)	34
Table C.3	Sewerage Infrastructure – WIC Reg Sched 1 cl.14(3)(a)	36
Table C.4	Sewerage Infrastructure – WIC Reg Sched 1 cl.14(4)(a)	39
Appendix D	Detailed Audit Findings – General Obligations of a Network Operator	41
Table D.1	General Obligations – WIC Reg Sched 1 cl. 1(2)(a), (b), (c) and (e)	43
Table D.2	General Obligations – WIC Reg Sched 1 cl.2(1)	47
Table D.3	General Obligations – WIC Reg Sched 1 cl.3(c)	49
Appendix E	Detailed Audit Findings – Schedule A to the Network Operator’s Licence	55
Table E.1	Schedule A to the Network Operator’s Licence – clause A1	57
Table E.2	Schedule A to the Network Operator’s Licence – clause A2	59
Table E.3	Schedule A to the Network Operator’s Licence – clause A3	62
Table E.4	Schedule A to the Network Operator’s Licence – clause A4	64
Table E.5	Schedule A to the Network Operator’s Licence – clause A6	66
Table E.6	Schedule A to the Network Operator’s Licence – clause A7	67
Table E.7	Schedule A to the Network Operator’s Licence – clause A8	69
Table E.8	Schedule A to the Network Operator’s Licence – clause A9	71
Appendix F	Detailed Audit Findings – Schedule B to the Network Operator’s Licence	73
Table F.1	Schedule B to the Network Operator’s Licence – clause B1	75
Table F.2	Schedule B to the Network Operator’s Licence – clause B2	79
Table F.3	Schedule B to the Network Operator’s Licence – clause B3	82
Table F.4	Schedule B to the Network Operator’s Licence – clause B4	86
Table F.5	Schedule B to the Network Operator’s Licence – clause B9	91
Table F.6	Schedule B to the Network Operator’s Licence – clause B10	93
Table F.7	Schedule B to the Network Operator’s Licence – clause B13	99

1. Executive Summary

1.1 Auditor Declaration

This report presents the findings of an Operational Audit of Catherine Hill Bay Water Utility Pty Ltd's compliance with the requirements of its Network Operator's Licence (Licence No: 16_035) and the relevant provisions of the *Water Industry Competition (General) Regulation 2008* as they relate to the drinking water, sewerage and recycled water schemes at Catherine Hill Bay.

The auditor confirms that:

- the auditor was provided with sufficient evidence on which to base the conclusions reached during the audit;
- the audit findings accurately reflect the professional opinion of the auditor;
- the auditor has conducted the audit, determined the audit findings and prepared this report in accordance with the requirements of the *WIC Act Audit Guidelines*¹ and the provisions of the Audit Deed; and
- the audit findings have not been unduly influenced by the Licensee and/or any of its associates and express the auditor's opinion as to whether the Licensee has met the Licence conditions and regulatory requirements as specified in the scope.

1.2 Major Findings

The Licensee, Catherine Hill Bay Water Utility Pty Ltd, was found to have designed, constructed operated and maintained the audited Stage 1 (Interim Scheme) drinking water, sewerage and recycled water schemes at Catherine Hill Bay in compliance with the assessed audit criteria, with the exception of the following:

- **Network Operator's Licence clause B10** – although a Licensee's Code of Conduct (draft *Code of Conduct*) that addresses the requisite matters has been established, it has not yet been formally agreed in writing by the two parties notwithstanding a letter of intent from Central Coast Council to do so. At the time of reporting, the draft *Code of Conduct* remains in place and IPART has accepted a Voluntary Undertaking from Catherine Hill Bay Water in respect of this matter.

1.3 Recommendations

The following recommendation has been made as a result of this audit:

- **REC-CHB1-2019.01:** It is recommended that Catherine Hill Bay Water takes action to ensure that it updates the draft *Code of Conduct* (as necessary) and agrees in writing a Licensee's Code of Conduct with Central Coast Council no later than 30 November 2019, as committed in the Voluntary Undertaking dated 8 October 2018 that has been accepted by IPART.

(This recommendation is a restatement of recommendation REC-CHB2-NIA.01 made in the Stage 2 Scheme New Infrastructure Audit Report).

¹ IPART, *Audit Guideline; Water Industry Competition Act 2006*, September 2018.

One (1) opportunity for improvement, which the Licensee may wish to consider, is identified in the body of the report.

2. Introduction

2.1 Objectives

This report presents the findings of an Operational Audit undertaken for the Independent Pricing and Regulatory Tribunal (IPART) under the provisions of the *Water Industry Competition Act 2006*.

The objective of the audit was to assess compliance of the Licensee, Catherine Hill Bay Water Utility Pty Ltd (Catherine Hill Bay Water or CHBWU), in meeting the requirements of the relevant legislation (the *Water Industry Competition Act 2006* and *Water Industry Competition (General) Regulation 2008*) and its Network Operator's Licence (Licence No: 16_035) as they relate to the Stage 1 (Interim Scheme) drinking water, sewerage and recycled water schemes at Catherine Hill Bay.

2.2 Licensee's Infrastructure, Systems and Procedures

The infrastructure, systems and procedures subject to audit are those related to the drinking water, sewerage and recycled water schemes (the Schemes) that service "The Beaches" land and housing development at Catherine Hill Bay, approximately 20 kilometres south of Newcastle (refer <http://www.solowater.com.au/schemes/>). The Water Industry Infrastructure comprises:

- Stage 1 (which was approved for and commenced commercial operation in October 2017),² including:
 - a potable (drinking) water network that draws water from an existing bulk potable water supply, with an inline chlorine monitoring and dosing system;
 - a pressure sewer collection network, together with an interim pump out tank (for disposal of sewage by road tanker); and
 - a non-potable (recycled) water network, which was initially charged with potable water via a cross connection from the potable water supply located downstream of the chlorine dosing point.
- Stage 2 (which was approved for and commenced commercial operation in December 2018),³ including:
 - a treatment plant for the production of recycled water from sewage;
 - facilities for the on-site storage of recycled water prior to distribution; and
 - on-site drinking water storage and chlorine dosing facility.

The Stage 1 (Interim Scheme) infrastructure was designed, constructed and brought into commercial operation within the audit period, and was subsequently operated and maintained during the remainder of the audit period. Accordingly, the Stage 1 phase of the development is the principal subject of this audit.

Design and construction of the Stage 2 Scheme infrastructure was commenced during, but was not completed until subsequent to the audit period; no operation or maintenance of the Stage 2 infrastructure was undertaken. Accordingly, only obligations related to design and construction of the Stage 2 phase of the development are the subject of this audit.

² Minister for Energy and Utilities, *Notice of approval to bring new infrastructure into commercial operation*, 27 October 2017.

³ Minister for Energy and Utilities, *Notice of approval to bring new infrastructure into commercial operation*, 13 December 2018 and Minister for Energy and Utilities, *Notice of approval to bring new infrastructure into commercial operation*, 18 January 2019.

It is noted that, until commercial operation of the Stage 2 Scheme infrastructure commenced (which was subsequent to the audit period), the non-potable (recycled) water network was charged with potable water. No recycled water was supplied to customers during the audit period.

Catherine Hill Bay Water Utility Pty Ltd (ACN 163 381 922) is the Licensee, holding Network Operator's Licence No: 16_035. As Licensee, Catherine Hill Bay Water owns and is responsible for the ongoing operation and maintenance of the drinking water network, sewerage network and the recycled water network in accordance with its management plans (Licence Plans).

Versions of the management plans in place during the audit period (i.e. in respect of the Stage 1 (Interim Scheme) infrastructure) included:

- Solo Water, *Infrastructure Operating Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-OPER-B-8297-SW) (Revision 1.0), 13 June 2017;
- Solo Water, *Drinking Water Quality Management Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-ENVM-B-3727-SW) (Revision 1.0), 13 June 2017; and
- Solo Water, *Sewage Management Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-ENVM-B-3728-SW) (Revision 1.0), 13 June 2017.

Versions of the management plans currently in place include:

- Solo Water, *Catherine Hill Bay Water Utility; Infrastructure Operating Plan; Stage 2* (reference: IMS-OPER-B-8297-SW) (Revision 2.1), 5 November 2018;
- Solo Water, *Catherine Hill Bay Water Utility; Drinking Water Quality Management Plan; Stage 2* (reference: IMS-ENVM-B-3727-SW) (Revision 2.0), 31 August 2018;
- Solo Water, *Catherine Hill Bay Water Utility; Recycled Water Quality Management Plan; Stage 2* (reference: IMS-ENVM-B-3727-SW) (Revision 1.1), 5 November 2018; and
- Solo Water, *Catherine Hill Bay Water Utility; Sewage Management Plan; Stage 2* (reference: IMS-ENVM-B-3728-SW) (Revision 2.1), 5 November 2018.

2.3 Audit Method

2.3.1 Audit Scope

The audit comprised an Operational Audit conducted pursuant to the *WIC Act Audit Guidelines*.⁴ The specific scope of the audit was as defined in IPART's letter to Catherine Hill Bay Water (reference D18/22801) dated 4 September 2018; the nominated scope addresses selected requirements of:

- the *Water Industry Competition (General) Regulation 2008*; and
- Network Operator's Licence No: 16_035.

The subject of the audit was principally the Stage 1 (Interim Scheme) infrastructure, as described in **Section 2.2**; however, it also assesses activities associated with design and construction of the Stage 2 Scheme infrastructure to the extent applicable during the audit period.

⁴ IPART, *Audit Guideline; Water Industry Competition Act 2006*, September 2018.

2.3.2 Audit Standard

The audit has been undertaken in accordance with the principles/guidance presented in:

- ISO 19011:2011 *Guidelines for auditing management systems*; and
- IPART, *Audit Guideline; Water Industry Competition Act 2006*, September 2018 (WIC Act Audit Guidelines).

2.3.3 Audit Steps

The audit has been undertaken generally in accordance with the procedure outlined in the *WIC Act Audit Guidelines*.

Following approval of an *Audit Proposal* by IPART, an *Audit Agenda* and *Information Request* were sent to both the Licensee and IPART prior to the audit fieldwork being undertaken. Audit fieldwork comprising a site inspection of existing infrastructure and a desktop audit of relevant documentation/records was undertaken on 24 January 2019. Some additional items of information and/or clarification were requested following the audit fieldwork and subsequently provided.

A draft audit report was prepared and submitted to the Licensee for review/comment, before being finalised and issued to both the Licensee and IPART.

The audit process involved seeking objective evidence that the Licensee had complied with the obligations identified for audit by IPART. Evidence was obtained through interview, review of relevant documentation and records, and site inspection.

2.3.4 Audit Team





The audit was conducted by Jim Sly and a peer/quality assurance review was undertaken by Dr Dan Deere. Both auditors hold relevant Lead Auditor accreditation on IPART's Technical Services and Water Licensing Panel.

Catherine Hill Bay Water was represented by Brad Irwin (Environmental Engineer/New Schemes Manager), Craig Heiningger (Water Utility Engineer /Operations Manager), Ronnie Paine (Water and Wastewater Systems Operator), Alan Irving (Site Manager) and Ross Pascoe (Site Supervisor). IPART representative Jamie Luke attended as an observer during the audit fieldwork.

2.3.5 Audit Grades

Audit grades have been awarded in accordance with guidance presented in the *WIC Act Audit Guidelines*. The compliance grades applicable for the purposes of this audit were as identified in **Table 2.1**.

Table 2.1 Audit Compliance Grades

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

2.4 Regulatory Regime

The Catherine Hill Bay Water schemes operate in accordance with the provisions of a Network Operator’s Licence (Licence No: 16_035) issued under the *Water Industry Competition Act 2006* (NSW). Other relevant regulatory instruments and standards/guidelines include:

- *Water Industry Competition (General) Regulation 2008 (NSW)*;
- IPART, *Audit Guideline; Water Industry Competition Act 2006*, September 2018;
- *Australian Drinking Water Guidelines 2011 (as amended August 2018)*;
- *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) 2006*;
- *Plumbing Code of Australia*;
- *Plumbing and Drainage Act 2011 (NSW)*; and
- NSW and national water industry and environmental regulations and codes of practice as applicable.

2.5 Quality Assurance Process

The quality of this audit report was assured through a professional review process. The report has been independently reviewed by a Lead Auditor who holds relevant accreditation on IPART’s Technical Services and Water Licensing Panel.

2.6 Audit Findings

Audit findings are summarised in the following **Sections 3 to 8**, and are presented in full detail in **Appendices A to F**.

3. Water Supply Infrastructure

3.1 Summary of Findings

There were no identified non-compliances in respect of the audited clauses of the *Water Industry Competition (General) Regulation 2008* related to *Water Supply Infrastructure* (refer to **Appendix A** for detailed audit findings).

3.2 Review of Actions

The Licensee has not made any suggestions for corrections or clarifications following issue of the draft report and prior to the final report being issued.

3.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of the audited *WIC Regulation* clauses related to the *Water Supply Infrastructure*:

4. Non-Potable Water Supply Infrastructure

4.1 Summary of Findings

There were no identified non-compliances in respect of the audited clauses of the *Water Industry Competition (General) Regulation 2008* related to *Non-Potable Water Supply Infrastructure* (refer to **Appendix B** for detailed audit findings).

4.2 Review of Actions

The Licensee has not made any suggestions for corrections or clarifications following issue of the draft report and prior to the final report being issued.

4.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of the audited *WIC Regulation* clauses related to the *Non-Potable Water Supply Infrastructure*.

5. Sewerage Infrastructure

5.1 Summary of Findings

There were no identified non-compliances in respect of the audited clauses of the *Water Industry Competition (General) Regulation 2008* related to *Sewerage Infrastructure* (refer to **Appendix C** for detailed audit findings).

5.2 Review of Actions

The Licensee has not made any suggestions for corrections or clarifications following issue of the draft report and prior to the final report being issued.

5.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of the audited *WIC Regulation* clauses related to the *Sewerage Infrastructure*.

6. General Obligations of a Network Operator

6.1 Summary of Findings

There were no identified non-compliances in respect of the audited clauses of the *Water Industry Competition (General) Regulation 2008* that address the *General Obligations of a Network Operator* (refer to **Appendix D** for detailed audit findings).

6.2 Review of Actions

The Licensee has not made any suggestions for corrections or clarifications following issue of the draft report and prior to the final report being issued.

6.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of the audited *WIC Regulation* clauses that address the *General Obligations of a Network Operator*.

7. Schedule A to the Network Operator's Licence

7.1 Summary of Findings

There were no identified non-compliances in respect of the audited clauses of *Schedule A to the Network Operator's Licence* (refer to **Appendix E** for detailed audit findings)

7.2 Review of Actions

The Licensee has not made any suggestions for corrections or clarifications following issue of the draft report and prior to the final report being issued.

7.3 Opportunities for Improvement

No opportunities for improvement have been identified in respect of the audited clauses of *Schedule A to the Network Operator's Licence*.

8. Schedule B to the Network Operator’s Licence

8.1 Summary of Findings

Catherine Hill Bay Water was found not to be fully compliant with the audited clauses of *Schedule B to the Network Operator’s Licence* (refer to **Appendix F** for detailed audit findings), as follows:

- **Network Operator’s Licence clause B10** – Non-compliant – non-material:

As reported in respect of the Stage 2 Scheme New Infrastructure Audit, although a Licensee’s Code of Conduct has not yet been formally agreed, a draft *Code of Conduct* has been established and Central Coast Council has provided a letter indicating its intent to enter into the proposed *Code of Conduct* with Catherine Hill Bay Water (in relation to the supply of bulk potable water to the Catherine Hill Bay Water schemes). Review of the draft *Code of Conduct* available at the time of reporting reveals that it addresses the requisite matters, and there is no evidence that the terms of the proposed *Code of Conduct* have been contravened.

However, as the proposed *Code of Conduct* has not yet been formalised (agreed in writing by the two parties), Catherine Hill Bay Water has not demonstrated full compliance with this obligation. Given that the draft *Code of Conduct* remains in place and IPART has accepted a Voluntary Undertaking from Catherine Hill Bay Water in respect of this matter, the non-compliance is not considered to be material.

To achieve full compliance with clause B10, Catherine Hill Bay Water should ensure that it updates the draft *Code of Conduct* (as necessary) and agrees in writing a Licensee’s Code of Conduct with Central Coast Council no later than 30 November 2019, as committed in the Voluntary Undertaking dated 8 October 2018 that has been accepted by IPART.

Detailed assessment in respect of this obligation is presented in **Table F.6**.

8.2 Review of Actions

The Licensee has not made any suggestions for corrections or clarifications following issue of the draft report and prior to the final report being issued.

8.3 Opportunities for Improvement


The following opportunity for improvement has been identified in respect of the audited clauses of *Schedule B to the Network Operator’s Licence*.

- **OFI-CHB1-2019.01:** It is suggested that Catherine Hill Bay Water develops and implements a procedure to ensure that any changes in insurance arrangements are identified and specifically notified to IPART in accordance with the *Reporting Manual*.

Appendix A Detailed Audit Findings – Water Supply Infrastructure

Detailed audit findings in respect of the obligations related to *Water Supply Infrastructure* are presented in this Appendix.

Table A.1 Water Supply Infrastructure – WIC Reg Sched 1 cl.6(2)(a)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.6(2)(a)	The network operator must ensure that the infrastructure operating plan is fully implemented and kept under regular review and all of the network operator’s activities are carried out in accordance with that plan.	 Compliant
Risk This requirement reflects a high operational risk. Implementation of the <i>Infrastructure Operating Plan</i> ensures the effective (safe and reliable) delivery of agreed levels of service.		Target for Full Compliance Evidence that the <i>Infrastructure Operating Plan</i> is fully implemented and the Licensee’s activities are carried out in accordance with that <i>Plan</i> ; evidence that the <i>Plan</i> is kept under regular review.
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Site inspection of infrastructure at Catherine Hill Bay on 24 January 2019. ▪ Solo Water, <i>Infrastructure Operating Plan; Catherine Hill Bay Water Utility Interim Scheme</i> (reference: IMS-OPER-B-8297-SW) (Revision 1.0), 13 June 2017. ▪ Solo Water, <i>Catherine Hill Bay Water Utility; Infrastructure Operating Plan; Stage 2</i> (reference: IMS-OPER-B-8297-SW) (Revision 2.1), 5 November 2018. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)</i> (Revision 2.0), 17 August 2017. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)</i> (Version 2.0), 25 November 2018. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme)</i> (Version 2.0), 16 August 2017. ▪ Solo Water, <i>Operator’s Manual; Catherine Hill Bay Water Utility; Interim Scheme</i> (IMS-OPER-B-8298-SW) (Revision 1.1), 6 July 2017. ▪ Operations Workflow Checklists covering the period 1 January 2018 to 31 July 2018. ▪ Inspection Reports, as referenced. ▪ MS Excel workbook: <i>IMS-CONT-G-1681-SW - CHB Workorder Log.xlsx</i> (last update 21 January 2019). ▪ MS Excel workbook: <i>IMS-CONT-G-1674-SW - CHB Faults and Issues Register.xlsx</i> (last update 21 January 2019). ▪ Training Records, as referenced. ▪ Toolbox Meeting Records, as referenced. ▪ Internal email dated 9 April 2018 (re: <i>Monthly IMS Documents Update - March 2018</i>). ▪ Internal email dated 4 May 2018 (re: <i>Monthly IMS Documents Update - April 2018</i>). ▪ Solo, <i>CHB Regulatory & Formal Requirements</i> (IMS-CONT-G-1677-SW) (Issue No: 1.0), April 2017 [updated 16 October 2018]. 		

Summary of reasons for grade

Catherine Hill Bay Water demonstrated that, during the audit period, it had fully implemented and carried out its activities in accordance with the arrangements detailed in the *Infrastructure Operating Plan*. This was evident from the New Infrastructure Audits previously conducted in respect of both the Stage 1 and Stage 2 infrastructure, and the demonstrated effective operation of the infrastructure and implementation of maintenance practices.

Catherine Hill Bay Water also demonstrated that it has kept the *Infrastructure Operating Plan* under regular review, at this stage principally through its ongoing development, and that arrangements are in place to ensure that it continues to do so.

Accordingly, Catherine Hill Bay Water is assessed to have demonstrated compliance with this obligation.

Discussion and notes

Note:

For the purposes of this audit, the following discussion addresses the implementation of the Infrastructure Operating Plan as it relates to both water supply (WIC Reg Sched 1 cl.6(2)(a)) and sewerage (WIC Reg Sched 1 cl.13(2)(a)) infrastructure. The discussion is not repeated in Table C.1.

Overview:

The auditor checked for evidence that the *Infrastructure Operating Plan* was being fully implemented and kept under regular review and that all of the Network Operator's activities are carried out in accordance with that *Plan*.

As reported in Section 2.2, the Stage 1 (Interim Scheme) infrastructure was designed, constructed and brought into commercial operation within the audit period, and was subsequently operated and maintained during the remainder of the audit period. Design and construction of the Stage 2 Scheme infrastructure was commenced during, but was not completed until subsequent to the audit period; no operation or maintenance of the Stage 2 infrastructure was undertaken.

Design and Construction:

As noted above, the Stage 1 (Interim Scheme) infrastructure was designed, constructed and brought into commercial operation during the audit period. This infrastructure was assessed by conduct of a New Infrastructure Audit⁵ to have been designed and constructed in accordance with the arrangements set out in the *Infrastructure Operating Plan* prior to being into commercial operation.

Design and construction of the Stage 2 Scheme infrastructure was commenced (but not completed) during the audit period. This infrastructure was also assessed to have been designed and constructed in accordance with the arrangements set out in the *Infrastructure Operating Plan* by conduct of a further New Infrastructure Audit,⁶ albeit conducted subsequent to the audit period.

Operation and Maintenance:

Operation and maintenance of the infrastructure during the audit period was undertaken in accordance with the general principles/strategy outlined in the *Infrastructure Operating Plan*. More specific guidance was provided in the *Operator's Manual*⁷ and documented procedures, which were reviewed as part of the Stage 1 (Interim Scheme) Licence Plan Audit⁸ and New Infrastructure Audit.

The adopted operation and maintenance regime involves monitoring of system performance via the SCADA system; daily inspections and minor maintenance; and preventative, corrective, breakdown and

⁵ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, tables A.4 and A.6.

⁶ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, tables A.4 and A.6.

⁷ Solo Water, *Operator's Manual; Catherine Hill Bay Water Utility; Interim Scheme* (IMS-OPER-B-8298-SW) (Revision 1.1), 6 July 2017.

⁸ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme)* (Version 2.0), 16 August 2017.

major periodic maintenance as required. Evidence that this regime was implemented during the audit period included (for example):

- The SCADA system was reviewed during the audit site inspection. Observations made in respect of chlorine residual and Pressure Sewer Unit (PSU) monitoring are detailed in Table D.1 and Table C.3 respectively.
- *Operations Workflow Checklists*, each of which records inspections undertaken during a working week, were provided for the period 1 January 2018 to the end of the audit period. These checklists record inspections made on either a daily or weekly basis in respect of the SCADA system (Interim Site/Chlorine Skid, Interim Site/Sewage Tank, Bulk Water Pumping Station and Pressure Sewer Network/PSUs); SCADA Trending (Interim Site, Bulk Water Pumping Station and Pressure Sewer Network/PSUs); and Field Checks (Interim Site/Chlorine Skid, Interim Site/Sewage Tank, Potable Water/Recycled Water Network, Pressure Sewer Network, Bulk Water Pumping Station and Bulk Water Main). Review of a sample confirmed that they had been appropriately completed.
- Inspection Reports, including:
 - *Inspection & Maintenance Report of Backflow Prevention Device* – record of inspection undertaken by Catherine Hill Bay Water at 3 Bunkhouse Lane on 1 June 2017.
 - *Maintenance Schedule – Safety Shower, Eye and Face Wash Station* – records of inspections/tests undertaken by Catherine Hill Bay Water on 22 August 2017, 29 November 2017, 20 February 2018, 29 May 2018 and 17 July 2018.
 - *Hydrant Test Report – Yearly Test* – record of test undertaken by Total Fire Solutions on a sample of hydrants on 17 August 2017.
 - *Test Tagging* – list of test tagging of electrical equipment undertaken by Weiley electrical on 29 May 2017 and 5 December 2017.
 - *Emergency Lighting Test* – record of test undertaken by Weiley Electrical at the Bulk Water Pumping Station on 5 December 2017.
- *CHB Workorder Log*⁹ – which details all work orders executed during the audit period and subsequently, commencing 29 June 2017 (i.e. well before the commencement of commercial operation). Records included (for example):
 - Work Order No: 19 – Preventative maintenance: Sewer Network Odour Filter Inspection, which was raised on 8 January 2018 and completed on 22 May 2018.
 - Work Order No: 28 – Corrective maintenance: Lot 2057 – Stormwater ingress into sewer through gravity drain and into PSU38, which was raised on 18 January 2018 and completed on 28 February 2018.
 - Work Order No: 49 – Breakdown maintenance: PSU51 – Fail to stop Fault Pump #1 – Check level/pump and rectify, which was raised and completed on 7 March 2018.
- *CHB Faults and Issues Register*¹⁰ – which documents all faults and issues, including timelines, details of the means by which the fault was identified, a description of the fault/issue, whether or not the fault resulted in an outage to customers, and details of the corrective action and any preventative actions taken.

Standard Job Plans are in place for routine maintenance activities; these include provision for recording that the activity has been completed. Samples of Job Plans addressing (for example) *Sewer Network system – Odour Filter Inspection* (Job Plan/Procedure 56-CHB12/0001), *Interim Site – Chlorine Dosing System Inspection* (Job Plan/Procedure 56-CHB99/0001), and *Recycled Water – Valve Exercise* (Job Plan/Procedure 56-CHB11/0003) were provided for review. In each case they detail the risk control measures to be implemented and the main activities required in undertaking the task.

⁹ MS Excel workbook: *IMS-CONT-G-1681-SW - CHB Workorder Log.xlsx* (last update 21 January 2019).

¹⁰ MS Excel workbook: *IMS-CONT-G-1674-SW - CHB Faults and Issues Register.xlsx* (last update 21 January 2019).

On the basis of the above assessment and observations made during the audit site inspection, it was apparent that the infrastructure had been/was being operated in accordance with the arrangements documented in the *Infrastructure Operating Plan*.

Capability and Training:

The technical capacity of the Catherine Hill Bay Water personnel engaged in the design, construction, operation and maintenance of the infrastructure is discussed in detail in Table F.1.

As evidence that ongoing training had been implemented during the audit period, Catherine Hill Bay Water provided training records in respect of the following:

- Training in respect of the Interim *Operator's Manual* and associated reference documents undertaken by Alan Irving (Site Manager) and Ross Pascoe (Site Supervisor) on 27 June 2017.
- Training in respect of a series of Standard Operating Procedures and Reactive/Incident Based Procedures (listed in the training record) undertaken by Alan Irving and Ross Pascoe on 28 June 2017.
- Training in respect of the Solo Water/Catherine Hill Bay Water Integrated Management System, including the *Infrastructure Operating Plan*, *Drinking Water Quality Management Plan*, *Sewage Management Plan*, *Operator's Manual*, and Incident Response and supporting procedures/processes undertaken by Ronnie Paine (Water and Wastewater Systems Operator) on 5/6 December 2019, i.e. immediately after he commenced employment with Solo Water/Catherine Hill Bay Water on 4 December 2017.

The training regime includes the conduct of Toolbox Meetings at approximately monthly intervals. Records of meeting held on 9 January 2018, 20 February 2018, 5 April 2018, 24 May 2018 and 4 July 2018 were provided as evidence. Identified key topics for discussion included (for example): Review of Actions; SCADA Updates; IMS Documentation Update; Compliance System Requirements; Internal Audit; Asset Management; WWTP Construction/FO Installation Update; Call Out Roster; Training; Meter Reading; and LOTO (Lock Out Tag Out) Procedures.

Catherine Hill Bay Water also provided evidence that personnel had been notified on a monthly basis of any changes to or new Solo Water Integrated Management System (IMS) documents. Documents of specific interest were highlighted in the notification.^{11,12}

Regular Review of Infrastructure Operating Plan:

Catherine Hill Bay Water demonstrated that the *Infrastructure Operating Plan* is kept under regular review. The “Document Status” table indicates that the document has undergone several revisions during its development phase, including update (subsequent to the audit period) to incorporate the recycled water plant and reflect the Stage 2 Scheme arrangements.

Within the *Infrastructure Operating Plan*,¹³ it is noted that:

“This plan will be regularly reviewed and updated as part of Solo Water’s ongoing commitment to continual improvement in accordance with the IMS document management procedures detailed within the Quality Management Plan (IMS-QUAL-B-8401).”

Details of the responsibilities for review and the review process are also clearly documented.

The review process is managed through the Solo Group Citrix Document Control Platform. The *CHB Regulatory & Formal Requirements Register*¹⁴ indicates that *Infrastructure Operating Plan* is to be reviewed annually.

¹¹ Internal email dated 9 April 2018 (re: *Monthly IMS Documents Update - March 2018*).

¹² Internal email dated 4 May 2018 (re: *Monthly IMS Documents Update - April 2018*).

¹³ *Infrastructure Operating Plan*, section 8.

¹⁴ Solo, *CHB Regulatory & Formal Requirements* (IMS-CONT-G-1677-SW) (Issue No: 1.0), April 2017 [updated 16 October 2018], *Network Operator Reporting* worksheet, items 14 and 35.

On this basis, it is apparent that Catherine Hill Bay Water has arrangements in place to ensure that the *Infrastructure Operating Plan* is kept under regular review.


Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

Table A.2 Water Supply Infrastructure – WIC Reg Sched 1 cl.6(3)(a)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.6(3)(a)	<p>If the Minister or IPART so demands, or if any significant change is made to its infrastructure operating plan, the licensee must provide the Minister or IPART with a report, prepared by an approved auditor in such manner and form as the Minister or IPART may direct:</p> <p>(i) as to the adequacy of the plan, and</p> <p>(ii) as to the condition of its infrastructure, having regard to the purpose for which it is licensed</p>	 Compliant
Risk	<p>This requirement reflects a high operational risk. It is essential that the adequacy of significant changes to the <i>Infrastructure Operating Plan</i> is assessed, and that IPART (as the Regulator) is advised as to the adequacy of the amended Plan and the condition of the infrastructure.</p>	Target for Full Compliance
		<p>Evidence that, in the event of a significant change to the <i>Infrastructure Operating Plan</i>, the Licensee has provided a copy of the amended Plan and a report as to the adequacy of the amended Plan and the condition of the infrastructure to IPART.</p>
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Solo Water, <i>Infrastructure Operating Plan; Catherine Hill Bay Water Utility Interim Scheme</i> (reference: IMS-OPER-B-8297-SW) (Revision 1.0), 13 June 2017. ▪ Solo Water, <i>Catherine Hill Bay Water Utility; Infrastructure Operating Plan; Stage 2</i> (reference: IMS-OPER-B-8297-SW) (Revision 2.1), 5 November 2018. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)</i>, 16 August 2017. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)</i> (Revision 2.0), 17 August 2017. ▪ Email dated 17 August 2017 from Cobbitty Consulting to IPART (re: <i>Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits</i>), including attachments. 		
Summary of reasons for grade		
<p>Catherine Hill Bay Water advised (and demonstrated) that there were no changes to the <i>Infrastructure Operating Plan</i> during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit. Accordingly, there was no requirement for compliance with this obligation during the audit period.</p>		

Discussion and notes

As reported in Section 2.2, Version 1.0, dated 13 June 2017 of the *Infrastructure Operating Plan* was in place during the audit period. Assessment of the adequacy of this version of the *Infrastructure Operating Plan* was the subject of a Licence Plan Audit undertaken in respect of the Stage 1 (Interim Scheme) arrangements in July/August 2017.¹⁵ The condition of the infrastructure was assessed in part by the Licence Plan Audit, but more specifically in the New Infrastructure Audit¹⁶ that was conducted concurrently.

Copies of both the Licence Plan Audit Report and New Infrastructure Audit Report were submitted to IPART on 17 August 2017,¹⁷ i.e. prior to the infrastructure being approved for, and brought into, commercial operation.

It is noted that there had been a previous versions of the *Infrastructure Operating Plan*, of which Revision B had been the subject of a previous (initial) Licence Plan Audit.

No further changes were made to the *Infrastructure Operating Plan* during the audit period; however, it was subsequently updated to address arrangements in respect of the Stage 2 Scheme arrangement. An assessment of the adequacy of Version 2.1, dated 5 November 2018 of the *Infrastructure Operating Plan* was the subject of a further Licence Plan Audit undertaken in October/November 2018.¹⁸

Given that there were no changes to the *Infrastructure Operating Plan* during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit, there was no requirement for compliance with this obligation.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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


¹⁵ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)*, 16 August 2017.

¹⁶ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme) (Revision 2.0)*, 17 August 2017.

¹⁷ Email dated 17 August 2017 from Cobbitty Consulting to IPART (re: *Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits*), including attachments.

¹⁸ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 2 Scheme) (Version 2.0)*, November 2018.

Table A.3 Water Supply Infrastructure – WIC Reg Sched 1 cl.7(4)(a)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.7(4)(a)	The network operator must ensure that its water quality plan is fully implemented and kept under regular review and the network operator’s activities are carried out in accordance with that plan.	 Compliant
Risk This requirement reflects a high operational risk. Implementation of the <i>Water Quality Plan</i> ensures that the water supplied complies with the specified quality requirement. Regular review ensures that the <i>Plan</i> remains current and reflects the current circumstances of the scheme.		Target for Full Compliance Evidence that the <i>Water Quality Plan</i> is fully implemented and the Licensee’s activities are carried out in accordance with that <i>Plan</i> ; evidence that the <i>Plan</i> is kept under regular review.
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Site inspection of infrastructure at Catherine Hill Bay on 24 January 2019. ▪ Solo Water, <i>Drinking Water Quality Management Plan; Catherine Hill Bay Water Utility Interim Scheme</i> (reference: IMS-ENVM-B-3727-SW) (Revision 1.0), 13 June 2017. ▪ Solo Water, <i>Catherine Hill Bay Water Utility; Drinking Water Quality Management Plan; Stage 2</i> (reference: IMS-ENVM-B-3727-SW) (Revision 2.0), 31 August 2018. ▪ Solo Water, <i>Catherine Hill Bay Water Utility; Recycled Water Quality Management Plan; Stage 2</i> (reference: IMS-ENVM-B-3727-SW) (Revision 1.1), 5 November 2018. ▪ Solo, <i>CCP Residual Chlorination Management Procedure</i> (IMS-GNRL-D-8331-SW) (Issue No: 1.1), August 2016. ▪ Solo, <i>CCP Residual Chlorination Management Procedure</i> (IMS-GNRL-D-8331-SW) (Issue No: 1.1), August 2016. ▪ MS Excel workbook: <i>IMS-CONT-G-1675-SW - CHB Free Chlorine Field Verification.xlsx</i> (last update 14 January 2019). ▪ Solo, <i>Water Quality Monitoring Procedure</i> (IMS-OPER-D-8305-SW) (Issue No: 1.0), June 2017. ▪ MS Excel workbook: <i>IMS-CONT-G-1680-SW - CHB Water Quality Monitoring.xlsx</i> (last update 21 January 2019). ▪ Laboratory test certificates, as referenced. ▪ Solo Water, <i>Catherine Hill Bay Water Utility; Quarterly Report – Internal</i>, June 2018 ▪ Catherine Hill Bay/Solo Water, <i>Scheduled Compliance Audit Report</i>, January 2018. ▪ Solo, <i>CHB Regulatory & Formal Requirements</i> (IMS-CONT-G-1677-SW) (Issue No: 1.0), April 2017 [updated 16 October 2018]. 		

Summary of reasons for grade

Catherine Hill Bay Water demonstrated that it had fully implemented and carried out its activities in accordance with the arrangements detailed in the *Drinking Water Quality Management Plan*, noting that during the audit period the recycled water network was charged with potable water. This was evident principally from the implementation of the documented water quality monitoring arrangements.

Catherine Hill Bay Water also demonstrated that it has kept the *Drinking Water Quality Management Plan* under regular review, at this stage principally through its ongoing development, and that arrangements are in place to ensure that it continues to do so.

Accordingly, Catherine Hill Bay Water is assessed to have demonstrated compliance with this obligation.

Discussion and notes

Overview:

The auditor checked for evidence that the *Drinking Water Quality Management Plan* was being fully implemented and kept under regular review and that all of the Network Operator's activities are carried out in accordance with the *Plan*. Under the Stage 1 (Interim Scheme) arrangements that were in operation during the audit period, the recycled network was charged with potable water.

Operational Monitoring:

Under the Stage 1 (Interim Scheme) arrangements, operational monitoring (which was undertaken by Catherine Hill Bay Water personnel) comprised:

- Online monitoring (via the SCADA system) of free chlorine residual at the chlorine dosing skid; and
- Field monitoring of free chlorine residual at identified locations within the drinking water and recycled water networks.

Review of set points in the SCADA system confirmed that they were consistent with the operational and critical limits documented in *CCP Residual Chlorination Management Procedure*.¹⁹ Records of field monitoring test results, as recorded in the *CHB Free Chlorine Field Verification Register*,²⁰ confirmed that monitoring had been undertaken in accordance with the requirements.

A review of SCADA data and field monitoring test result is documented in Table D.1.

Verification Monitoring:

Under the Stage 1 (Interim Scheme) arrangements, verification monitoring (undertaken by a service provider) comprised:²¹

- Laboratory testing of samples for *E. coli* and Total Coliforms;
- Field monitoring (using calibrated hand held equipment) of samples for pH, Turbidity, Total Dissolved Solids, Free Chlorine and Total Chlorine; and
- Six-monthly detailed laboratory analysis of samples for a more extensive range of parameters.

Sampling details and test requirements are documented in the *CHB Water Quality Monitoring Register*.²² Catherine Hill Bay Water demonstrated that verification monitoring had been undertaken as planned by providing a portfolio of laboratory test certificates. For example, the test certificate dated 13 June 2018 for Work Order: WN1802405 provided results for testing of samples taken on 7 June 2018. A check confirmed that results had been correctly transposed into the *CHB Water Quality Monitoring Register* for record management and review purposes.

¹⁹ Solo, *CCP Residual Chlorination Management Procedure* (IMS-GNRL-D-8331-SW) (Issue No: 1.1), August 2016.

²⁰ MS Excel workbook: *IMS-CONT-G-1675-SW - CHB Free Chlorine Field Verification.xlsx* (last update 14 January 2019).

²¹ Solo, *Water Quality Monitoring Procedure* (IMS-OPER-D-8305-SW) (Issue No: 1.0), June 2017.

²² MS Excel workbook: *IMS-CONT-G-1680-SW - CHB Water Quality Monitoring.xlsx* (last update 21 January 2019).

Test certificate dated 3 January 2018 for Work Order: WN1705741 (samples taken 21 December 2017) and test certificate dated 26 June 2018 for Work Order: WN1802414 (samples taken 21 June 2018) confirmed that six-monthly sampling and testing had been undertaken.

A review of verification monitoring test result is documented in Table D.1.

Reporting and Review:

The *Drinking Water Quality Management Plan*²³ requires the preparation of quarterly internal reports which provide the basis for short-term and long-term review of performance and analysis of results.

Catherine Hill Bay Water provided copies of reports prepared for December 2017, March 2018 and June 2018.²⁴ In each case the reports addressed Levels of Service; Network Operator's Licence (compliance and performance indicators); Water Quality, Operations (community contacts and customer complaints, general operations and sewage disposal); Quality, Safety and Environment; and Maintenance.

Catherine Hill Bay Water also provided the report on an internal audit conducted in January 2018,²⁵ together with a Corrective Action Request (CAR No: 0674) arising from that audit. The completed record indicated that a *Daily Job Activity Sheet* and a *CHB Free Chlorine Sampling Form* had been developed in response to the Corrective Action Request; the action was completed by 9 April 2018.

Catherine Hill Bay Water also demonstrated that it had prepared and submitted Annual Compliance Reports to IPART. The report submitted in respect of 2016/17 was a "Nil Report", i.e. it did not engage in any activities authorised under its WIC Act Licence during the reporting period; the report in respect of 2017/18 was submitted subsequent to the audit period.

Regular Review of Water Quality Management Plan:

Catherine Hill Bay Water demonstrated that the *Drinking Water Quality Management Plan* is kept under regular review. The "Document Status" table indicates that the document has undergone several revisions during its development phase, including update (subsequent to the audit period) to incorporate the recycled water plant and reflect the Stage 2 scheme arrangements, at which time the *Recycled Water Quality Management Plan* was also developed.

Within the *Drinking Water Quality Management Plan*,²⁶ it is noted that:

"Documentation within the IMS [which includes the management plans] is reviewed regularly in accordance with the Document Control Procedure (MS-DOCC-D-2420) as outlined within the Solo Group Quality Management Plan (IMS-QUAL-B-8401)."

The review process is managed through the Solo Group Citrix Document Control Platform. The *CHB Regulatory & Formal Requirements Register*²⁷ indicates that *Infrastructure Operating Plan* is to be reviewed annually.

On this basis, it is apparent that Catherine Hill Bay Water has arrangements in place to ensure that the *Drinking Water Quality Management Plan* is kept under regular review.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

²³ *Drinking Water Quality Management Plan*, sections 2.10 and 2.11.


²⁴ Solo Water, *Catherine Hill Bay Water Utility; Quarterly Report – Internal*, June 2018 (for example).

²⁵ Catherine Hill Bay/Solo Water, *Scheduled Compliance Audit Report*, January 2018.

²⁶ *Drinking Water Quality Management Plan*, section 2.10.1.

²⁷ Solo, *CHB Regulatory & Formal Requirements (IMS-CONT-G-1677-SW)* (Issue No: 1.0), April 2017 [updated 16 October 2018], *Network Operator Reporting* worksheet, item 18.

Table A.4 Water Supply Infrastructure – WIC Reg Sched 1 cl.7(5)(a)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.7(5)(a)	If the Minister or IPART so demands, or if any significant change is made to its water quality plan, the licensee must provide the Minister or IPART with a report, prepared by an approved auditor in such manner and form as the Minister or IPART may direct, as to the adequacy of the plan.	 Compliant

Risk

This requirement reflects a high operational risk. It is essential that the adequacy of significant changes to the *Water Quality Plan* is assessed, and that IPART (as the Regulator) is advised as to the adequacy of the amended Plan

Target for Full Compliance

Evidence that, in the event of a significant change to the *Water Quality Plan*, the Licensee has provided a copy of the amended Plan and a report as to the adequacy of the amended Plan and the condition of the infrastructure to IPART.

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Solo Water, *Drinking Water Quality Management Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-ENVM-B-3727-SW) (Revision 1.0), 13 June 2017.
- Solo Water, *Catherine Hill Bay Water Utility; Drinking Water Quality Management Plan; Stage 2* (reference: IMS-ENVM-B-3727-SW) (Revision 2.0), 31 August 2018.
- Solo Water, *Catherine Hill Bay Water Utility; Recycled Water Quality Management Plan; Stage 2* (reference: IMS-ENVM-B-3727-SW) (Revision 1.1), 5 November 2018.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)*, 16 August 2017.
- Email dated 17 August 2017 from Cobbitty Consulting to IPART (re: *Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits*), including attachments.

Summary of reasons for grade

Catherine Hill Bay Water advised (and demonstrated) that there were no changes to the *Drinking Water Quality Management Plan* during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit. Accordingly, there was no requirement for compliance with this obligation during the audit period.

Discussion and notes

As reported in Section 2.2, Version 1.0, dated 13 June 2017 of the *Drinking Water Quality Management Plan* was in place during the audit period. Assessment of the adequacy of this version of the *Drinking Water Quality Management Plan* was the subject of a Licence Plan Audit undertaken in respect of the Stage 1 (Interim Scheme) arrangements in July/August 2017.²⁸

A copy of the Licence Plan Audit Report was submitted to IPART on 17 August 2017,²⁹ i.e. prior to the infrastructure being approved for, and brought into, commercial operation.

²⁸ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)*, 16 August 2017.

²⁹ Email dated 17 August 2017 from Cobbitty Consulting to IPART (re: *Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits*), including attachments.

It is noted that there had been a previous versions of the *Drinking Water Quality Management Plan*, of which Revision B had been the subject of a previous (initial) Licence Plan Audit.

No further changes were made to the *Drinking Water Quality Management Plan* during the audit period; however, it was subsequently updated and a *Recycled Water Quality Management Plan* was prepared to address arrangements in respect of the Stage 2 Scheme arrangement. An assessment of the adequacy of Version 2.0, dated 31 August 2018 of the *Drinking Water Quality Management Plan* and Version 2.1, dated 5 November 2018 of the *Recycled Water Quality Management Plan* was the subject of a further Licence Plan Audit undertaken in October/November 2018.³⁰

Given that there were no changes to the *Drinking Water Quality Management Plan* during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit, there was no requirement for compliance with this obligation.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement


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

³⁰ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 2 Scheme)* (Version 2.0), November 2018.

Appendix B Detailed Audit Findings – Non-Potable Water Supply Infrastructure

Detailed audit findings in respect of the obligations related to *Non-Potable Water Supply Infrastructure* are presented in this Appendix.

Table B.1 Non-Potable Water Supply Infrastructure – WIC Reg Sched 1 cl.10(a)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.10(a)	The network operator under a Licence for water infrastructure to supply non-potable water for a particular purpose must ensure that the water supplied is fit for that purpose.	 Compliant
Risk This requirement reflects a high operational risk. It is essential from a safety viewpoint that water supplied for a particular purpose is fit for that purpose.		Target for Full Compliance Evidence that the water supplied is fit for purpose.
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Site inspection of infrastructure at Catherine Hill Bay on 24 January 2019. ▪ Solo Water, <i>Drinking Water Quality Management Plan; Catherine Hill Bay Water Utility Interim Scheme</i> (reference: IMS-ENVM-B-3727-SW) (Revision 1.0), 13 June 2017. ▪ Solo Water, <i>Process Flow Diagram; Interim Potable System</i> (Rev 3), 11 May 2017. ▪ NSW Government, <i>Network Operator’s Licence No: 16_035</i> (as issued on 22 March 2016). 		
Summary of reasons for grade		
The non-potable (recycled) water network was supplied with potable (drinking) water compliant with the <i>Australian Drinking Water Guidelines</i> (ADWG) for the time that it was operational during the audit period. Review of a sample of SCADA trend data and test results from ongoing operational and verification monitoring samples taken from the recycled water network confirmed that the water was ADWG compliant and therefore fit for the nominated purposes.		
Accordingly, Catherine Hill Bay Water is assessed to have demonstrated compliance with this obligation.		
Discussion and notes		
The <i>Process Flow Diagram; Interim Potable System</i> , ³¹ which is included in the <i>Drinking Water Quality Management Plan</i> , ³² indicates that water supplied via the recycled water network is used for toilet flushing, laundry washing machine cold water, irrigation and outdoor cleaning and washdown. These uses are consistent with the “Authorised purposes” nominated in the Licence. ³³		
Under the Stage 1 (Interim Scheme) arrangements under which the recycled water scheme was operated during the audit period, the network was charged with potable water. As reported in detail in Table D.1, review of a sample of SCADA trend data and water quality operational and verification monitoring test results confirmed that there were no reportable incidents in which the specified water quality had been compromised during the audit period.		
Accordingly, it is assessed that the potable water supplied into the recycled water network was ADWG compliant and therefore fit for the nominated purposes.		

³¹ Solo Water, *Process Flow Diagram; Interim Potable System* (Rev 3), 11 May 2017.

³² *Drinking Water Quality Management Plan*, appendix B.

³³ NSW Government, *Network Operator’s Licence No: 16_035* (as issued on 22 March 2016), table 1.3.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

Appendix C Detailed Audit Findings – Sewerage Infrastructure

Detailed audit findings in respect of the obligations related to *Sewerage Infrastructure* are presented in this Appendix.

Table C.1 Sewerage Infrastructure – WIC Reg Sched 1 cl.13(2)(a)



Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.13(2)(a)	The network operator must ensure that the infrastructure operating plan is fully implemented and kept under regular review and all of the network operator’s activities are carried out in accordance with that plan.	 Compliant
Risk This requirement reflects a high operational risk. Implementation of the <i>Infrastructure Operating Plan</i> ensures the effective (safe and reliable) delivery of agreed levels of service. Regular review ensures that the <i>Plan</i> remains current and reflects the current circumstances of the scheme.		Target for Full Compliance Evidence that the <i>Infrastructure Operating Plan</i> is fully implemented and the Licensee’s activities are carried out in accordance with that <i>Plan</i> ; evidence that the <i>Plan</i> is kept under regular review.
Evidence sighted <ul style="list-style-type: none"> Refer to list of evidence in Table A.1. 		
Summary of reasons for grade [As reported in Table A.1] Catherine Hill Bay Water demonstrated that, during the audit period it had fully implemented and carried out its activities in accordance with the arrangements detailed in the <i>Infrastructure Operating Plan</i> . This was evident from the New Infrastructure Audits previously conducted in respect of both the Stage 1 and Stage 2 infrastructure, and the demonstrated effective operation of the infrastructure and implementation of maintenance practices. Catherine Hill Bay Water also demonstrated that it has kept the <i>Infrastructure Operating Plan</i> under regular review, at this stage principally through its ongoing development, and that arrangements are in place to ensure that it continues to do so. Accordingly, Catherine Hill Bay Water is assessed to have demonstrated compliance with this obligation.		
Discussion and notes <u>Note:</u> For the purposes of this audit, discussion regarding implementation of the <i>Infrastructure Operating Plan</i> as it relates to both water supply (WIC Reg Sched 1 cl.6(2)(a)) and sewerage (WIC Reg Sched 1 cl.13(2)(a)) infrastructure is presented in Table A.1. The discussion is not repeated here. For discussion in respect of this obligation, please refer to Table A.1.		
Recommendations There are no recommendations in respect of this obligation.		
Opportunities for improvement No opportunities for improvement have been identified in respect of this obligation.		

Table C.2 Sewerage Infrastructure – WIC Reg Sched 1 cl.13(3)(a)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.13(3)(a)	<p>If the Minister or IPART so demands, or if any significant change is made to its infrastructure operating plan, the licensee must provide the Minister or IPART with a report, prepared by an approved auditor in such manner and form as the Minister or IPART may direct:</p> <p>(i) as to the adequacy of the plan, and</p> <p>(ii) as to the condition of its infrastructure, having regard to the purpose for which it is licensed.</p>	 Compliant
Risk	Target for Full Compliance	
<p>This requirement reflects a high operational risk. It is essential that the adequacy of significant changes to the <i>Infrastructure Operating Plan</i> is assessed, and that IPART (as the Regulator) is advised as to the adequacy of the amended Plan and the condition of the infrastructure.</p>	<p>Evidence that, in the event of a significant change to the <i>Infrastructure Operating Plan</i>, the Licensee has provided a copy of the amended Plan and a report as to the adequacy of the amended Plan and the condition of the infrastructure to IPART.</p>	
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Solo Water, <i>Infrastructure Operating Plan; Catherine Hill Bay Water Utility Interim Scheme</i> (reference: IMS-OPER-B-8297-SW) (Revision 1.0), 13 June 2017. ▪ Solo Water, <i>Catherine Hill Bay Water Utility; Infrastructure Operating Plan; Stage 2</i> (reference: IMS-OPER-B-8297-SW) (Revision 2.1), 5 November 2018. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)</i>, 16 August 2017. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)</i> (Revision 2.0), 17 August 2017. ▪ Email dated 17 August 2017 from Cobbitty Consulting to IPART (re: <i>Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits</i>), including attachments. 		
Summary of reasons for grade		
[As reported in Table A.2]		
<p>Catherine Hill Bay Water advised (and demonstrated) that there were no changes to the <i>Infrastructure Operating Plan</i> during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit. Accordingly, there was no requirement for compliance with this obligation during the audit period.</p>		

Discussion and notes

[As reported in Table A.2]

As reported in Section 2.2, Version 1.0, dated 13 June 2017 of the *Infrastructure Operating Plan* was in place during the audit period. Assessment of the adequacy of this version of the *Infrastructure Operating Plan* was the subject of a Licence Plan Audit undertaken in respect of the Stage 1 (Interim Scheme) arrangements in July/August 2017.³⁴ The condition of the infrastructure was assessed in part by the Licence Plan Audit, but more specifically in the New Infrastructure Audit³⁵ that was conducted concurrently.

Copies of both the Licence Plan Audit Report and New Infrastructure Audit Report were submitted to IPART on 17 August 2017,³⁶ i.e. prior to the infrastructure being approved for, and brought into, commercial operation.

It is noted that there had been a previous versions of the *Infrastructure Operating Plan*, of which Revision B had been the subject of a previous (initial) Licence Plan Audit.

No further changes were made to the *Infrastructure Operating Plan* during the audit period; however, it was subsequently updated to address arrangements in respect of the Stage 2 Scheme arrangement. An assessment of the adequacy of Version 2.1, dated 5 November 2018 of the *Infrastructure Operating Plan* was the subject of a further Licence Plan Audit undertaken in October/November 2018.³⁷

Given that there were no changes to the *Infrastructure Operating Plan* during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit, there was no requirement for compliance with this obligation.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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


³⁴ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)*, 16 August 2017.

³⁵ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme) (Revision 2.0)*, 17 August 2017.

³⁶ Email dated 17 August 2017 from Cobbitty Consulting to IPART (re: *Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits*), including attachments.

³⁷ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 2 Scheme) (Version 2.0)*, November 2018.

Table C.3 Sewerage Infrastructure – WIC Reg Sched 1 cl.14(3)(a)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.14(3)(a)	The Licensee must ensure that its sewage management plan is fully implemented and kept under regular review and, in particular, that all of its activities are carried out in accordance with that plan.	 Compliant

Risk	Target for Full Compliance
This represents high operational risk. Implementation of the <i>Sewage Management Plan</i> ensures the effective (safe and reliable) operation of the sewerage infrastructure without detrimental effect to the environment.	Evidence that the <i>Sewage Management Plan</i> is fully implemented and the Licensee’s activities are carried out in accordance with that Plan; evidence that the Plan is kept under regular review.

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Site inspection of infrastructure at Catherine Hill Bay on 24 January 2019.
- Solo Water, *Sewage Management Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-ENVM-B-3728-SW) (Revision 1.0), 13 June 2017.
- Solo Water, *Catherine Hill Bay Water Utility; Sewage Management Plan; Stage 2* (reference: IMS-ENVM-B-3728-SW) (Revision 2.1), 5 November 2018.
- MS Excel workbook: *IMS-CONT-G-1676-SW - CHB Pump Out Records.xlsx* (last update 22 February 2019).
- Solo, *CHB Regulatory & Formal Requirements* (IMS-CONT-G-1677-SW) (Issue No: 1.0), April 2017 [updated 16 October 2018].

Summary of reasons for grade

Catherine Hill Bay Water demonstrated that, during the audit period it had fully implemented and carried out its activities in accordance with the arrangements detailed in the *Sewage Management Plan*. This was evident from the effective implementation of arrangements in relation to the monitoring and management of operation of the pressure sewer units, the management of sewage disposal and the containment of potential odour and noise emissions.

Catherine Hill Bay Water also demonstrated that it has kept the *Sewage Management Plan* under regular review, at this stage principally through its ongoing development, and that arrangements are in place to ensure that it continues to do so.

Accordingly, Catherine Hill Bay Water is assessed to have demonstrated compliance with this obligation.

Discussion and notes

Overview:

The auditor checked for evidence that the *Sewage Management Plan* was being fully implemented and kept under regular review and that all of the Network Operator’s activities are carried out in accordance with the *Plan*. Implementation of a sample of the arrangements detailed in the *Sewage Management Plan* was reviewed for the purposes of this assessment.

Operational Monitoring:

SCADA records for Pressure Sewer Unit PSU056 located at Lot 2036 – 57 Sunnyspot Boulevard were reviewed online. The SCADA display provided details of the relevant set points and current well status. Operating levels were set to ensure that available storage within the well in the event of pump or other system failure is maximised.

The SCADA trend plot clearly showed sewage level within the well and operation of the two pumpsets, which alternates to maintain equal performance. Catherine Hill Bay Water noted that spare pumpsets and PSU control units are held in the store; these were sighted during the site inspections.

Sewage Disposal:

Under the Stage 1 (Interim Scheme) arrangements under which the infrastructure was operated during the audit period, all sewage was disposed of off-site. At the time of the audit, which is now operating under the Stage 2 Scheme arrangements, online monitoring of the Sewage Pump Out Tanks is no longer available and could not be reviewed via the SCADA system.

Notwithstanding, detailed records of sewage pump out/disposal during the audit period had been maintained in the *CHB Pump Out Records Register*.³⁸ These records included details of the date of disposal; tanker supplier (typically Solo Industrial Services, with which Catherine Hill Bay Water has an ongoing agreement for the provision of this service); tanker receipt number; volume removed; disposal location; whether or not there had been rainfall and the amount; and relevant comments. Comments relate to (for example) the number of pump outs/tanker loads on days with multiple pump outs and rainfall.

It is noted that:

- Any pump outs from PSUs were identified, although those recorded occurred subsequent to the audit period; and
- The latest entry, which occurred subsequent to the commencement of operation of the Stage 2 Scheme infrastructure (i.e. operation of the treatment plant), was for the disposal of waste activated sludge (WAS). This will remain a predominant waste disposal requirement under the new operating arrangements.
- Both WAS and recycled water was disposed during the treatment plant commissioning process.

Odour Management:

Although no longer in operation at the time of the audit site inspection, the Pump Out Tanks remain on site. Carbon filters, which were observed at the time of the Stage 1 (Interim Scheme) New Infrastructure Audit, remained in place. Carbon filters are also in place on all air valves in the pressure sewer network.

Inspection of a PSU, the cover of which was removed, revealed effective sealing against odour emission. The sealed PSU also prevents the emission of noise from the pumpsets accommodated therein.

Regular Review of Sewage Management Plan:

Catherine Hill Bay Water demonstrated that the *Sewage Management Plan* is kept under regular review. The “Document Status” table indicates that the document has undergone several revisions during its development phase, including update (subsequent to the audit period) to incorporate the recycled water plant and reflect the Stage 2 scheme arrangements.

Within the *Sewage Management Plan*,³⁹ it is noted that:

“Documentation within the IMS [which includes the management plans] is reviewed regularly in accordance with the Document Control Procedure (MS-DOCC-D-2420) as outlined within the Solo Group Quality Management Plan (IMS-QUAL-B-8401).”

³⁸ MS Excel workbook: *IMS-CONT-G-1676-SW - CHB Pump Out Records.xlsx* (last update 22 February 2019).

³⁹ *Sewage Management Plan*, section 2.10.1.

The review process is managed through the Solo Group Citrix Document Control Platform. The *CHB Regulatory & Formal Requirements Register*⁴⁰ indicates that *Sewage Management Plan* is to be reviewed annually.

On this basis, it is apparent that Catherine Hill Bay Water has arrangements in place to ensure that the *Sewage Management Plan* is kept under regular review.

Recommendations


There are no recommendations in respect of this obligation.

Opportunities for improvement

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

⁴⁰ Solo, *CHB Regulatory & Formal Requirements* (IMS-CONT-G-1677-SW) (Issue No: 1.0), April 2017 [updated 16 October 2018], *Network Operator Reporting* worksheet, item 39.

Table C.4 Sewerage Infrastructure – WIC Reg Sched 1 cl.14(4)(a)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.14(4)(a)	If the Minister or IPART so demands, or if any significant change is made to its sewage management plan, the licensee must provide the Minister or IPART with a report, prepared by an approved auditor in such manner and form as the Minister or IPART may direct, as to the adequacy of the plan.	 Compliant
Risk	This requirement reflects a high operational risk. It is essential that the adequacy of significant changes to the <i>Sewage Management Plan</i> is assessed, and that IPART (as the Regulator) is advised as to the adequacy of the amended Plan.	Target for Full Compliance
		Evidence that, in the event of a significant change to the <i>Sewage Management Plan</i> , the Licensee has provided a copy of the amended Plan and a report as to the adequacy of the amended Plan and the condition of the infrastructure to IPART.
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Solo Water, <i>Sewage Management Plan; Catherine Hill Bay Water Utility Interim Scheme</i> (reference: IMS-ENVM-B-3728-SW) (Revision 1.0), 13 June 2017. ▪ Solo Water, <i>Catherine Hill Bay Water Utility; Sewage Management Plan; Stage 2</i> (reference: IMS-ENVM-B-3728-SW) (Revision 2.1), 5 November 2018. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)</i>, 16 August 2017. ▪ Email dated 17 August 2017 from Cobbitty Consulting to IPART (re: <i>Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits</i>), including attachments. 		
Summary of reasons for grade		
Catherine Hill Bay Water advised (and demonstrated) that there were no changes to the <i>Sewage Management Plan</i> during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit. Accordingly, there was no requirement for compliance with this obligation during the audit period.		
Discussion and notes		
As reported in Section 2.2, Version 1.0, dated 13 June 2017 of the <i>Sewage Management Plan</i> was in place during the audit period. Assessment of the adequacy of this version of the <i>Sewage Management Plan</i> was the subject of a Licence Plan Audit undertaken in respect of the Stage 1 (Interim Scheme) arrangements in July/August 2017. ⁴¹		
A copy of the Licence Plan Audit Report was submitted to IPART on 17 August 2017, ⁴² i.e. prior to the infrastructure being approved for, and brought into, commercial operation.		
It is noted that there had been a previous versions of the <i>Sewage Management Plan</i> , of which Revision B had been the subject of a previous (initial) Licence Plan Audit.		
No further changes were made to the <i>Sewage Management Plan</i> during the audit period; however, it was subsequently updated to address arrangements in respect of the Stage 2 Scheme arrangement. An		

⁴¹ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)*, 16 August 2017.

⁴² Email dated 17 August 2017 from Cobbitty Consulting to IPART (re: *Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits*), including attachments.

assessment of the adequacy of Version 2.1, dated 5 November 2018 of the *Sewage Management Plan* was the subject of a further Licence Plan Audit undertaken in October/November 2018.⁴³

Given that there were no changes to the *Sewage Management Plan* during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit, there was no requirement for compliance with this obligation.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement


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

⁴³ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 2 Scheme)* (Version 2.0), November 2018.

Appendix D Detailed Audit Findings – General Obligations of a Network Operator

Detailed audit findings in respect of the *General Obligations of a Network Operator* are presented in this Appendix.

Table D.1 General Obligations – WIC Reg Sched 1 cl. 1(2)(a), (b), (c) and (e)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.1(2)(a), (b), (c) and (e)	<p>[1(2)(a)] A network operator must immediately notify IPART of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.</p> <p>[1(2)(b)] A network operator must immediately notify the Minister administering the <i>Public Health Act 2010 (NSW)</i> and the <i>Public Health Regulation 2012 (NSW)</i> of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.</p> <p>[1(2)(c)] A network operator must immediately notify the Minister administering Part 2 of the <i>Water Industry Competition Act 2006 (NSW)</i> of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.</p> <p>[1(2)(e)] A network operator must immediately notify any licensed network operator or public water utility whose infrastructure is connected to the licensed network operator's infrastructure of any incident in the conduct of its activities that threatens, or could threaten, water quality, public health or safety.</p>	 Compliant
Risk	Target for Full Compliance	
<p>This requirement reflects a high operational risk. It is essential that relevant stakeholders are made aware of incidents that threaten, or could threaten, water quality, public health or safety.</p>	<p>In the event that a notifiable incident has occurred, evidence that the Licensee provided the required notifications.</p>	
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Site inspection of infrastructure at Catherine Hill Bay on 24 January 2019. ▪ Solo Water, <i>Drinking Water Quality Management Plan; Catherine Hill Bay Water Utility Interim Scheme</i> (reference: IMS-ENVM-B-3727-SW) (Revision 1.0), 13 June 2017. ▪ Solo, <i>CCP Free Chlorine Management Procedure</i> (IMS-OPER-D-8331-SW) (Issue No: 1.1), August 2017. ▪ Solo, <i>Water Quality Monitoring Procedure</i> (IMS-OPER-D-8305-SW) (Issue No: 1.1), August 2017. ▪ Solo, <i>CCP Free Chlorine Management Procedure</i> (IMS-OPER-D-8331-SW) (Issue No: 1.1), August 2017. ▪ MS Excel workbook: <i>IMS-CONT-G-1675-SW - CHB Free Chlorine Field Verification.xlsx</i> (last update 14 January 2019). ▪ MS Excel workbook: <i>IMS-CONT-G-1680-SW - CHB Water Quality Monitoring.xlsx</i> (last update 21 January 2019). ▪ MS Excel workbook: <i>IMS-CONT-G-1674-SW - CHB Faults and Issues Register.xlsx</i> (last update 21 January 2019). 		

Summary of reasons for grade

Catherine Hill Bay Water advised that no notifiable incidents had occurred during the audit period. Review of a sample of SCADA trend data and test results from ongoing operational and verification monitoring samples taken from both the drinking water and recycled water networks revealed no evidence to the contrary.

Accordingly, it is assessed that there was “No Requirement” in respect of these obligations during the audit period.

Discussion and notes

The auditor questioned whether there had been any incidents arising from the conduct of the network operator’s activities during the audit period that threatened, or could have threatened, water quality, public health or safety and, if so, whether IPART, the Minister administering the *Public Health Act 2010 (NSW)* and the *Public Health Regulation 2012 (NSW)*, the Minister administering Part 2 of the *Water Industry Competition Act 2006 (NSW)* and any connected network operator, retail supplier or public water utility had been notified as required.

Catherine Hill Bay Water advised that there had been no such incidents during the audit period.

As reported in Table A.3, under the Stage 1 (Interim Scheme) arrangements that were in operation, and under which the recycled network was charged with potable water, during the latter part of the audit period:

- Operational monitoring (undertaken by Catherine Hill Bay Water personnel) comprised:
 - Online monitoring (via the SCADA system) of free chlorine residual at the chlorine dosing skid; and
 - Field monitoring of free chlorine residual at identified locations within the drinking water and recycled water networks.
- Verification monitoring (undertaken by a service provider) comprised:
 - Laboratory testing of samples for *E. coli* and Total Coliforms;⁴⁴
 - Field monitoring (using calibrated hand-held equipment) of samples for pH, Turbidity, Total Dissolved Solids, Free Chlorine and Total Chlorine;⁴⁴ and
 - Six-monthly detailed laboratory analysis of samples for a more extensive range of parameters.

A sample of monitoring results were reviewed to confirm Catherine Hill Bay Water’s advice, as follows:

- Online monitoring (via the SCADA system) of free chlorine residual at the chlorine dosing skid – an online review of the SCADA trend for March 2018 revealed no exceedances of the set limits, i.e. the chlorine level did not fall outside the critical limits of 0.5 to 4.5 mg/L.⁴⁵
- Field monitoring of free chlorine residual – review of field test results, as recorded in the *CHB Free Chlorine Field Verification Register*,⁴⁶ for the 4-month period April-July 2018 revealed a minimum reading of 0.5 mg/L and a maximum of 2.2 mg/L. Whilst the upper operational limit of 2.0 mg/L was exceeded on several occasions, maximum values were well below the upper critical limit of 4.5 mg/L.
- Laboratory monitoring for *E. coli* and Total Coliforms – review of test results, as recorded in the *CHB Water Quality Monitoring Register*,⁴⁷ for the whole of the audit period subsequent to the commencement of commercial operation revealed that:

⁴⁴ Sampling frequency based on number of connected properties.

⁴⁵ Solo, *CCP Free Chlorine Management Procedure (IMS-OPER-D-8331-SW)* (Issue No: 1.1), August 2017.

⁴⁶ MS Excel workbook: *IMS-CONT-G-1675-SW - CHB Free Chlorine Field Verification.xlsx* (last update 14 January 2019).

⁴⁷ MS Excel workbook: *IMS-CONT-G-1680-SW - CHB Water Quality Monitoring.xlsx* (last update 21 January 2019).

-
- all samples from both the potable and recycled water networks tested for *E. coli* returned results of <1 MPN/100 mL (i.e. none detected); and
 - all samples from both the potable and recycled water networks tested for Total Coliforms returned results of <1 MPN/100 mL (i.e. none detected), with the exception of one recycled water sample taken on 12 April 2018 which returned a result of 25 MPN/100 mL. The records indicate that sample point, which is located at a low point, was inspected for soil ingress and cleaned; internal email correspondence in respect of this result indicates that it was likely a false result, having given consideration to other test results for the same day.
- Field verification monitoring on the nominated parameters (noted above) – review of test results, as recorded in the *CHB Water Quality Monitoring Register*,⁴⁷ for the whole of the audit period subsequent to the commencement of commercial operation revealed that:
- the operational limit for pH had been exceeded on two (2) occasions, reaching a maximum of 8.7 pH units; the exceedances were detected in both the potable and recycled water networks on one occasion and the potable water network only on the second occasion. Although these results exceeded the guideline range of 6.5-8.5 pH units, they were not of concern from a public health perspective; and
 - the free chlorine in the recycled water network was less than the lower limit on one occasion (0.13 mg/L compared with the adopted lower limit of 0.2 mg/L⁴⁸ for a sample taken on 21 December 2017). The record indicates that the main was flushed in accordance with the relevant procedure to recover adequate residual.
- It was noted that free chlorine test results for all other samples taken on that date were well within the required limits, including a potable water sample taken at the same (adjacent) location. Note that the recycled water network was charged with potable water under the operational arrangements in place at the time.
- More specific detail is provided in the *CHB Faults and Issues Register*,⁴⁹ which indicates that:
- the primary cause of the detected low free chlorine residual was high residence time due to low demand in the recycled water main;
 - *E.coli* and Total Coliform test results for the same sample returned results of <1 MPN/100 mL (i.e. none detected),⁵⁰ which indicated that there was no evidence of contamination;
 - the excursion was managed in accordance with the *Free Chlorine Field Verification Monitoring Procedure*; it was not considered (by Catherine Hill Bay Water) to be a notifiable event;
 - pursuant to the *Procedure*, the recycled water main was flushed and a sample taken for retesting;
 - subsequent sampling on 22 September 2017 (i.e. the following day) confirmed that the free chlorine had returned to normal.
- The auditor agrees that this short term excursion did not warrant notification from a public health perspective.
- Six-monthly detailed laboratory analysis of samples for a more extensive range of parameters – review of test results, as recorded in the *CHB Water Quality Monitoring Register*,⁴⁷ for the whole of the audit period subsequent to the commencement of commercial operation revealed that no results warranted action.

This assessment confirms Catherine Hill Bay Water’s advice that there were no reportable incidents during the audit period.

⁴⁸ Solo, *Free Chlorine Field Verification Monitoring Procedure* (IMS-OPER-D-8301-SW) (Issue No: 1.0), June 2017.

⁴⁹ MS Excel workbook: *IMS-CONT-G-1674-SW - CHB Faults and Issues Register.xlsx* (last update 21 January 2019).

⁵⁰ This observation is consistent with the results recorded in *CHB Water Quality Monitoring Register*.


Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

Table D.2 General Obligations – WIC Reg Sched 1 cl.2(1)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.2(1)	A network operator must not bring any new water or sewerage infrastructure into commercial operation without the written approval of the Minister.	 Compliant
<p>Risk</p> <p>This requirement reflects a high operational risk. The Minister’s written approval is only provided when the Licensee has demonstrated that the infrastructure complies and can be operated in accordance with the relevant requirements. Accordingly, the absence of the Minister’s written approval may mean that the infrastructure has not been so assessed.</p>		<p>Target for Full Compliance</p> <p>Evidence that the written approval of the Minister was obtained prior to bringing new water or sewerage infrastructure into service.</p>
<p>Evidence sighted</p> <ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Site inspection of infrastructure at Catherine Hill Bay on 24 January 2019. ▪ Solo Water, <i>Infrastructure Operating Plan; Catherine Hill Bay Water Utility Interim Scheme</i> (reference: IMS-OPER-B-8297-SW) (Revision 1.0), 13 June 2017. ▪ NSW Government, <i>Notice of approval to bring new infrastructure into commercial operation</i>, 27 October 2017 (for infrastructure operated by Catherine Hill Bay Water Utility under Licence No: 16_035). 		
<p>Summary of reasons for grade</p> <p>Catherine Hill Bay Water advised that the Stage 1 (Interim Scheme) water and sewerage infrastructure at Catherine Hill Bay had been brought into commercial operation during the audit period and demonstrated that commercial operation of such infrastructure had not commenced until after the Minister had granted written approval to do so. Accordingly, Catherine Hill Bay Water is assessed as being compliant with this obligation.</p>		
<p>Discussion and notes</p> <p>Catherine Hill Bay Water advised that the Stage 1 (Interim Scheme) infrastructure, which comprised the following, was brought into commercial operation on 30 October 2017, i.e. during the audit period:</p> <ul style="list-style-type: none"> ▪ a potable (drinking) water network that draws water from an existing bulk potable water supply, with an inline chlorine monitoring and dosing system; ▪ a pressure sewer collection network, together with an interim pump out tank (for disposal of sewage by road tanker); and ▪ a non-potable (recycled) water network, which was initially charged with potable water via a cross connection from the potable water supply located downstream of the chlorine dosing point. <p>The Minister had granted approval for the Stage 1 (Interim Scheme) infrastructure to be brought into commercial operation on 27 October 2017.⁵¹ The Minister’s approval was granted in respect of:</p>		

⁵¹ NSW Government, *Notice of approval to bring new infrastructure into commercial operation*, 27 October 2017 (for infrastructure operated by Catherine Hill Bay Water Utility under Licence No: 16_035).

“... all new infrastructure which:

- a) is infrastructure to which CHBWU's network operator's licence (licence no. 16_035) (Licence) applies;*
- b) existed as at 4 July 2017; and*
- c) is of the kind described in each of Table 1.2, Table 2.2 and Table 3.2 of the Licence.”*

Based on observations made by the auditor when undertaking the New Infrastructure Audit (site inspection conducted on 4 July 2017), the Stage 1 (Interim Scheme) infrastructure that was brought into commercial operation was consistent with the approval.

Although construction of the Stage 2 Scheme infrastructure (as described in Section 2.2) had commenced during the audit period, construction had not been completed and the infrastructure (which was the subject of a New Infrastructure Audit conducted in October 2018 and subsequently approved for commercial operation on 13 December 2018) had not been brought into commercial operation.

Consequently, it was apparent that Catherine Hill Bay Water had not brought any new infrastructure into commercial operation without the written approval of the Minister.


Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

Table D.3 General Obligations – WIC Reg Sched 1 cl.3(c)

Clause	Requirement	Compliance Grade
WIC Reg Sched 1 cl.3(c)	The water or sewerage infrastructure is properly designed and constructed, operated in a safe and reliable manner and maintained in a proper condition, having regard to any publicly available standards or codes relating to its design, construction, operation and maintenance.	 Compliant

Risk

This requirement reflects a high operational risk. Proper design and construction, safe and reliable operation, and maintenance of infrastructure in proper condition is essential to the effective (safe and reliable) delivery of agreed levels of service.

Target for Full Compliance

Evidence that the Licensee has procedures in place for ensuring that practices are kept up to date with changes to such standards or codes.

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Site inspection of infrastructure at Catherine Hill Bay on 24 January 2019.
- Solo Water, *Infrastructure Operating Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-OPER-B-8297-SW) (Revision 1.0), 13 June 2017.
- Solo Water, *Drinking Water Quality Management Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-ENVM-B-3727-SW) (Revision 1.0), 13 June 2017; and
- Solo Water, *Sewage Management Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-ENVM-B-3728-SW) (Revision 1.0), 13 June 2017.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018.
- Solo Water, *Operator’s Manual; Catherine Hill Bay Water Utility; Interim Scheme* (IMS-OPER-B-8298-SW) (Revision 1.1), 6 July 2017.
- Solo, *Water Quality Monitoring Procedure* (IMS-OPER-D-8305-SW) (Issue No: 1.1), August 2017.
- Solo, *Safety, Environment and Quality Regulatory Compliance Register* (sighted during previous Catherine Hill Bay Water audits).

Summary of reasons for grade

The Stage 1 (Interim Scheme) infrastructure that was commercially operated during the audit period had been assessed to have been designed and constructed having regard for relevant publicly available standards and codes. Stage 2 Scheme infrastructure that was designed and constructed during the audit period was also subsequently assessed to have been designed and constructed having regard for relevant publicly available standards and codes.

On the basis of observations made during the audit site inspections it was apparent that, during the audit period, the infrastructure had continued to be operated in a safe and reliable condition and maintained in proper condition having regard for publicly available standards and codes, as well as standard industry practice.

Catherine Hill Bay Water has arrangements in place for ensuring that it uses up-to-date versions of codes and standards relevant to activities. This process is managed using a compliance register and the Solo Water/Catherine Hill Bay Water document management platform.

Accordingly, Catherine Hill Bay Water is assessed to have demonstrated compliance with this obligation.

Discussion and notes

Overview:

The auditors checked for evidence that the water (in this case drinking water and recycled water) and sewerage infrastructure was properly designed and constructed, operated in a safe and reliable manner and maintained in a proper condition, having regard to any publicly available standards or codes relating to its design, construction, operation and maintenance. These aspects were assessed in the following.

Design and Construction of Infrastructure:

As reported in Table D.2, the Stage 1 (Interim Scheme) infrastructure was designed, constructed and brought into commercial operation during the audit period. This infrastructure was assessed by conduct of a New Infrastructure Audit⁵² to have been properly designed and constructed having regard to any publicly available standards or codes prior to being into commercial operation.

Design and construction of the Stage 2 Scheme infrastructure was commenced (but not completed) during the audit period. This infrastructure was also assessed to have been properly designed and constructed having regard to any publicly available standards or codes by conduct of a further New Infrastructure Audit,⁵³ albeit conducted subsequent to the audit period.

Operation and Maintenance of Infrastructure:

Operation and maintenance of the infrastructure during the audit period was undertaken in accordance with the arrangements documented in the *Infrastructure Operating Plan*, *Drinking Water Quality Management Plan* and *Sewage Management Plan*, the guidance and principles outlined in the *Operator's Manual*,⁵⁴ and the more specific guidance provided in the relevant operation and maintenance procedures.

The abovementioned documentation reveals references to relevant codes and standards, where applicable, to design, construction, operation or maintenance of the infrastructure. For example:

- The *Infrastructure Operating Plan* references the following codes published by the Water Services Association of Australia (WSAA):
 - Water Supply Code of Australia, WSA 03-2002, Hunter Water Edition;
 - Sewerage Code of Australia, WSA 02-2002 Version 2.3; and
 - Pressure Sewer Code of Australia, WSA 07-2007.
- The *Operator's Manual* references:
 - the above listed WSAA codes; and
 - AS 3565.4 *Meters for cold and heated drinking and non-drinking water supplies; Part 4: In-service compliance testing*.
- The *Water Quality Monitoring Procedure*⁵⁵ references:
 - the *Australian Drinking Water Guidelines (ADWG)*; and
 - the *NSW Health Drinking Water Monitoring Program*.

⁵² Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.5.

⁵³ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.5.

⁵⁴ Solo Water, *Operator's Manual; Catherine Hill Bay Water Utility; Interim Scheme (IMS-OPER-B-8298-SW)* (Revision 1.1), 6 July 2017.

⁵⁵ Solo, *Water Quality Monitoring Procedure (IMS-OPER-D-8305-SW)* (Issue No: 1.1), August 2017.

Compliance with standard industry practice, knowledge of which is gained through relevant training and experience, is also essential to the safe and reliable operation and maintenance of infrastructure. As reported in more detail in Table F.1, Catherine Hill Bay Water personnel responsible for operation and maintenance of the infrastructure have extensive relevant industry experience.

On the basis of observations made during the audit site inspection it was apparent that the infrastructure had been/was being operated in a safe and reliable manner and maintained in a proper condition. Furthermore, on the basis of the auditor's experience, it appeared that such operation and maintenance had been/was being undertaken having regard to relevant publicly available standards and/or codes, including those identified above.

Inspection of visible components of the recycled water reticulation network revealed that (for example) valve covers and property connection installations were appropriately colour coded and/or labelled (refer Figures D.3.1 to D.3.4).

Currency of Standards and Codes:

Catherine Hill Bay Water maintains a *Safety, Environment and Quality Regulatory Compliance Register*,⁵⁶ which identifies all relevant codes and standards. Currency of standards and codes is managed through the Solo Group Citrix Document Control Platform.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

⁵⁶ Solo, *Safety, Environment and Quality Regulatory Compliance Register* (sighted during previous Catherine Hill Bay Water audits).



Figure D.3.1 Colour coded valve covers – surround coloured lilac for recycled water with embossed labelling “RECYCLED”; cover and surround coloured orange for pressure sewer.



Figure D.3.2 Colour coded valve and hydrant covers –covers and surrounds coloured yellow for potable (drinking) water.



Figure D.3.3 Property connection installations with lilac sleeved risers and meter on recycled water connections.




Figure D.3.4 Recycled water tap within a customer's property – lilac coloured tap with key (handle) removed and recycled water signage in place.

Appendix E Detailed Audit Findings – Schedule A to the Network Operator’s Licence

Detailed audit findings in respect of the obligations under *Schedule A to the Network Operator’s Licence* are presented in this Appendix.

Table E.1 **Schedule A to the Network Operator’s Licence – clause A1**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.A1	<p>If a party to an Agreement proposes to:</p> <ul style="list-style-type: none"> a) terminate the Agreement; b) novate the Agreement; c) assign or transfer any of its rights or obligations under the Agreement to any other person; or d) alter the Agreement in any way that materially reduces the Licensee's technical, financial or organisational capacity to, <p>the Licensee must provide IPART with written notice as soon as practicable, but no later than 3 months, before the time when the proposed action is to occur. The written notice must include details of how the service provided under the Agreement will be provided subsequent to the proposed termination, novation, assignment, transfer or alteration.</p>	 Compliant
Risk	<p>This presents a significant operational and commercial risk. It is essential that Catherine Hill Bay Water maintains adequate technical, financial and organisational capacity to carry out the activities authorised by this Licence and is able to demonstrate that it does so.</p>	Target for Full Compliance
<p>Evidence that, in the event that a party to an Agreement proposes to terminate the Agreement, novate the Agreement, assign or transfer any of its rights or obligations under the Agreement, or alter the Agreement in any way that materially impacts the Licensee's technical, financial or organisational capacity, the Licensee has notified IPART at least 3 months before the time when the proposed action is to occur.</p>		
Evidence sighted	<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ <i>Deed of Financial Capacity and Guarantee</i>, provided by Rico Enterprises Pty Ltd as trustee for Rico Family Trust (Guarantor) to Catherine Hill Bay Water Utility Pty Ltd (CHBWU), dated 1 February 2016. ▪ <i>NSW Government, Network Operator’s Licence No: 16_035 (as issued on 22 March 2016).</i> 	
Summary of reasons for grade	<p>Catherine Hill Bay Water advised that it has a <i>Deed of Financial Capacity and Guarantee</i> executed in its favour, which constitutes an Agreement for the purposes of this obligation. Catherine Hill Bay Water also indicated that, at the time of the audit, it has not and does not propose to terminate the <i>Deed</i>, novate the <i>Deed</i>, assign or transfer any of its rights or obligations under the <i>Deed</i>, or alter the <i>Deed</i> in any way that materially impacts its technical, financial or organisational capacity to undertake the activities authorised by the Licence, and there was no evidence to the contrary.</p>	
<p>Accordingly, Catherine Hill Bay Water is assessed as being compliant with this obligation.</p>		

Discussion and notes

Catherine Hill Bay Water advised that it holds a *Deed of Financial Capacity and Guarantee*,⁵⁷ which constitutes an Agreement for the purposes of this obligation. The *Deed* details that its purpose is to:

“... ensure that the Minister is satisfied of the financial capacity and the continuing financial capacity of CHBWU for the purposes of:

- (a) section 7 of the *IPART Application* if CHBWU is an Applicant;
- (b) section 10(4)(a) of the *WIC Act* if CHBWU is an Applicant; or
- (c) section 10(4)(a) of the *WIC Act* if CHBWU is a Licensed Network Operator.”

The *Deed* further notes that:

“The Guarantor’s total aggregate liability for all Claims under this *Deed* is limited to \$2,500,000 during the Term.”

and that the “Term End Date” is:

“the later of:

- 1 the date that is 60 months after the date on which the Minister grants the Network Operator Licence to CHBWU; and
- 2 such other date as the Minister may specify following a review of the financial position of CHBWU (such review to be completed three months prior to the date referred to in paragraph 1).”

In assessing compliance with this obligation, it is noted that:

- Catherine Hill Bay Water advised that the aggregate liability under the *Deed* is consistent with the Minister’s requirement (which is greater than nominated by *IPART*).
- The Term End Date has not yet been reached. Given that the Network Operator’s Licence was granted on 22 March 2016,⁵⁸ the Term End Date will be 22 March 2021 or later (if otherwise specified by the Minister).
- Catherine Hill Bay Water indicated that, at the time of the audit, it has not and does not propose to terminate the *Deed*, novate the *Deed*, assign or transfer any of its rights or obligations under the *Deed*, or alter the *Deed* in any way that materially impacts its technical, financial or organisational capacity to undertake the activities authorised by the Licence. There was no evidence to the contrary.

Recommendations

There are no recommendations in respect of this obligation.


Opportunities for improvement

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

⁵⁷ *Deed of Financial Capacity and Guarantee*, provided by Rico Enterprises Pty Ltd as trustee for Rico Family Trust (Guarantor) to Catherine Hill Bay Water Utility Pty Ltd (CHBWU), dated 1 February 2016.

⁵⁸ NSW Government, *Network Operator’s Licence No: 16_035* (as issued on 22 March 2016).

Table E.2 **Schedule A to the Network Operator’s Licence – clause A2**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.A2	The Licensee is to implement environmental mitigation measures substantially consistent with the environmental risk mitigation measures identified in the Review of Environmental Factors (REF) in carrying out any activities authorised under clause S1 and S3 of this Licence.	 Compliant

Risk	Target for Full Compliance
Failure to implement appropriate mitigation measures represents high risk that the environment may not be appropriately protected during construction and the subsequent operation and maintenance of the infrastructure.	Evidence that the Licensee has implemented environmental mitigation measures substantially consistent with the environmental risk mitigation measures identified in the Review of Environmental Factors (REF).

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Site inspection of infrastructure at Catherine Hill Bay on 24 January 2019.
- NSW Government, *Network Operator’s Licence No: 16_035* (as issued on 22 March 2016).
- Planit Consulting, *Review of Environmental Factors; Sewage Treatment Plant & Sewage Reticulation Network; Catherine Hill Bay Scheme Stages 1 & 2* (Revision E), 29 July 2015.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018.

Summary of reasons for grade

Catherine Hill Bay Water demonstrated that it has documented arrangements and implemented environmental mitigation measures during both construction and the subsequent operation and maintenance of the sewerage and recycled water infrastructure, i.e. in carrying out any activities authorised under clause S1 and S3 of this Licence. Accordingly, Catherine Hill Bay Water is assessed as being compliant with this obligation.

Discussion and notes

Authorised activities to which this obligation applies include:⁵⁹

- Clause S1 – construction, operation and maintenance of Water Industry Infrastructure for the purposes of supplying non-potable water; such infrastructure may include a treatment plant for the production of non-potable water, a reticulation network for non-potable water and other associated infrastructure.
- Clause S3 – construction, operation and maintenance of Water Industry Infrastructure for the purposes of providing sewerage services; such infrastructure may include a treatment plant for the treatment of sewage, a reticulation network for the collection of sewage and other associated infrastructure.

⁵⁹ NSW Government, *Network Operator’s Licence No: 16_035* (as issued on 22 March 2016).

The REF^{60,61} identifies mitigation and control measures in relation to soils, odour, traffic, noise, ground water, surface water, flora and fauna, Aboriginal heritage, visual amenity, bushfire, non-Aboriginal heritage and waste. It also identifies the management plans that were to be prepared in respect of environmental management and ensuring public health, which include:

- Environmental Management:
 - Construction Environmental Management Plan;
 - Operation Environmental Management Plan;
 - Emergency Response Plan; and
 - Recycled Water Management Plan.
- Public Health:
 - Recycled Water Management Plan; and
 - Drinking Water Quality Management Plan.

Of these management plans, the Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP) are predominant in respect of the implementation of environmental mitigation measures. In each case they document the arrangements in respect of the implementation, monitoring and review of the relevant mitigation measures.

As further reported in Table E.3, Catherine Hill Bay Water prepared a CEMP in respect of the scheme development, which was approved by IPART.

As further reported in Table E.4, Catherine Hill Bay Water prepared:

- A CEMP Implementation Report in respect of both the Stage 1 (Interim Scheme) and Stage 2 Scheme construction activities, both of which have been approved by IPART. Although the report in respect of the Stage 2 Scheme was prepared and approved subsequent to the audit period, some of the construction activity to which it relates was undertaken during the audit period.
- OEMPs which detail arrangements for the ongoing implementation of environmental management measures under the Stage 1 (Interim Scheme) and Stage 2 Scheme developments respectively. Both reports have been approved by IPART, although for the purposes of this audit it is noted that the Stage 2 Scheme OEMP was prepared and approved subsequent to the audit period.

The approval of the CEMP and OEMPs indicates that appropriate arrangements were in place for the implementation of environmental mitigation measures, whilst approval of the CEMP Implementation Reports indicates that the measures were effectively implemented.

Furthermore, site observations made during both the Stage 1 (Interim Scheme) and Stage 2 Scheme New Infrastructure Audits confirmed that mitigation measures were being implemented; samples of those measures were discussed in the respective audit reports.^{62,63} Observations made during the site inspection conducted as part of this audit confirmed that such measures remained in place (to the extent applicable).

Recommendations

There are no recommendations in respect of this obligation.

⁶⁰ Planit Consulting, *Review of Environmental Factors; Sewage Treatment Plant & Sewage Reticulation Network; Catherine Hill Bay Scheme Stages 1 & 2* (Revision E), 29 July 2015, section 9.1.

⁶¹ Whilst the Licence references the REF “prepared for IPART by Planet Consulting Pty Ltd August 2016”, the latest version is Revision e dated 29 July 2016.


⁶² Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.5.

⁶³ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.5.

Opportunities for improvement

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

Table E.3 **Schedule A to the Network Operator’s Licence – clause A3**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.A3	<p>Licensee must not commence, or authorise the commencement of, construction of any water industry infrastructure which is:</p> <p>a) described in Clause S1 and Table 1.2; and</p> <p>b) described in Clause S3 and Table 3.2.</p> <p>(Relevant Recycling Infrastructure)</p> <p>until after the Licensee has provided IPART with a Construction Environmental Management Plan (CEMP), and IPART has provided written approval of the CEMP to the Licensee.</p>	 Compliant
Risk	<p>This represents moderate risk that environment may not be appropriately protected during construction of the infrastructure.</p>	Target for Full Compliance
		<p>Evidence that the Licensee has provided IPART with a Construction Environmental Management Plan (CEMP) and that IPART has provided written approval prior to commencing construction of the identified infrastructure.</p>
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)</i> (Revision 2.0), 17 August 2017. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)</i> (Version 2.0), 25 November 2018. ▪ Letter (reference: D16/18237) dated 22 July 2016 from IPART to Catherine Hill Bay Water (re: <i>Notification of Approval of Construction Environmental Management Plan and Recycled Water Off-Site Disposal Plan for Catherine Hill Bay Water Utility Pty Ltd (CHBWU)</i>). ▪ Planit Consulting, <i>Construction and Environment Management Plan; Wastewater Treatment Plant and Reticulation Network; Catherine Hill Bay Scheme Stages 1&2; 85 & 95 Flowers Drive, 6 Keene Street & 12 Montefiore Street, Catherine Hill Bay</i> (Version 3), June 2016. 		
Summary of reasons for grade		
<p>Catherine Hill Bay Water provided evidence that IPART had approved, in writing, the <i>Construction Environmental Management Plan</i> in relation to the construction of the non-potable (recycled) water and sewerage infrastructure as required pursuant to this obligation. Construction of the infrastructure had not commenced prior to IPART’s approval.</p>		
<p>Accordingly, Catherine Hill Bay Water is assessed to have demonstrated compliance with this obligation.</p>		

Discussion and notes

Compliance with this obligation has previously been assessed as part of the New Infrastructure Audits conducted in respect of the Stage 1 (Interim Scheme)⁶⁴ and Stage 2 Scheme⁶⁵ infrastructure. The following discussion is reflective of the findings of those audits.

Catherine Hill Bay Water provided evidence that IPART has approved, in writing, a *Construction Environmental Management Plan* in relation to the construction of infrastructure at Catherine Hill Bay (referenced as the *CEMP (prepared by Planit Consulting, V3 dated June 2016)*).⁶⁶ By inference, it is also apparent that Catherine Hill Bay Water had submitted the *Construction Environmental Management Plan (CEMP)*⁶⁷ to IPART for review.

The CEMP is required in relation to construction of the non-potable water (clause S1 and table 1.2 of the Licence) and sewerage (clause S3 and table 3.2 of the Licence) infrastructure. It is understood that the intent of this requirement relates more specifically to the proposed treatment plant, construction of which had not commenced at the time of the Stage 1 (Interim Scheme) New Infrastructure Audit conducted in July 2017. Given that IPART's approval of the CEMP was provided in July 2016, it is apparent that construction of the infrastructure had not commenced prior to IPART's approval.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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


⁶⁴ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.10.

⁶⁵ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.10.

⁶⁶ Letter dated 22 July 2016 from IPART to Catherine Hill Bay Water (re: *Notification of Approval of Construction Environmental Management Plan and Recycled Water Off-Site Disposal Plan for Catherine Hill Bay Water Utility Pty Ltd (CHBWU)*).

⁶⁷ Planit Consulting, *Construction and Environment Management Plan; Wastewater Treatment Plant and Reticulation Network; Catherine Hill Bay Scheme Stages 1 & 2; 85 & 95 Flowers Drive, 6 Keene Street & 12 Montefiore Street, Catherine Hill Bay* (Version 3), June 2016.

Table E.4 Schedule A to the Network Operator’s Licence – clause A4

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.A4	<p>In addition to any requirements imposed by or under the Act or the Regulation, the Licensee must not commence commercial operation of, or authorise commercial operation of, the Relevant Recycling Infrastructure until the Licensee has provided:</p> <p>a) a report addressing how the environmental mitigation measures identified in the CEMP have been implemented during the design and construction of the Relevant Recycling Infrastructure (Report); and</p> <p>b) an Operational Environmental Management Plan (OEMP),</p> <p>to IPART, and IPART has provided written approval of the Report and the OEMP to the Licensee.</p>	 Compliant
Risk	<p>This represents moderate risk to the environment. It is important that measures to protect the environment are implemented both during construction and the subsequent operation and maintenance of the infrastructure.</p>	Target for Full Compliance
		<p>Evidence that the Licensee has provided a Report and an Operational Environmental Management Plan (OEMP) to IPART and IPART has provided written approval of them.</p>
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Planit Consulting, <i>Construction and Environment Management Plan; Wastewater Treatment Plant and Reticulation Network; Catherine Hill Bay Scheme Stages 1 & 2; 85 & 95 Flowers Drive, 6 Keene Street & 12 Montefiore Street, Catherine Hill Bay</i> (Version 3), June 2016. ▪ Solo Water, <i>Licence Condition A4 a) CEMP Implementation Report</i>, 29 September 2017 (report in letter format). ▪ Solo Water, <i>Operation Environmental Management Plan; Catherine Hill Bay Water Utility; Interim Scheme</i> (Revision 1.1), 18 October 2017. ▪ Letter (reference: D17/29037) dated 26 October 2017 from IPART to Solo Water/Catherine Hill Bay Water (re: <i>Notification of approval of a Construction Environmental Management Plan (CEMP) Implementation Report and Operational Environmental Management Plan (OEMP) for Catherine Hill Bay Water Utility Pty Ltd (CHBWU)</i>). 		
Summary of reasons for grade		
<p>Catherine Hill Bay Water provided evidence that it has submitted both a <i>CEMP Implementation Report</i> and an <i>Operational Environmental Management Plan (OEMP)</i> in respect of the Stage 1 (Interim Scheme) infrastructure that was brought into commercial operation during the audit period. It also provided evidence that IPART had subsequently approved both documents.</p>		
<p>Accordingly, it is assessed that Catherine Hill Bay Water has demonstrated compliance with this obligation.</p>		

Discussion and notes

Commercial operation of Stage 1 (Interim Scheme) recycled water and sewerage infrastructure, i.e. “Relevant Recycling Infrastructure” as defined under clause A3 of the Licence, commenced during the audit period. This infrastructure comprised of reticulation infrastructure as described in the Licence; it did not include the treatment plant and associated infrastructure.

Catherine Hill Bay Water advised that it had submitted the following to IPART in relation to Stage 1 (Interim Scheme) recycled water and sewerage infrastructure:

- a report on the implementation of the *Construction Environmental Management Plan (CEMP)*,⁶⁸ i.e. a *CEMP Implementation Report*,⁶⁹ dated 29 September 2017; and
- an *Operation Environmental Management Plan (OEMP)*,⁷⁰ dated 18 October 2017.

Catherine Hill Bay Water provided evidence that IPART has approved, in writing, both the *CEMP Implementation Report* and *Operational Environmental Management Plan*.⁷¹ IPART’s letter specifically referenced the abovementioned reports, which is taken as evidence that Catherine Hill Bay Water had submitted the reports to IPART for review.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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


⁶⁸ Planit Consulting, *Construction and Environment Management Plan; Wastewater Treatment Plant and Reticulation Network; Catherine Hill Bay Scheme Stages 1 & 2; 85 & 95 Flowers Drive, 6 Keene Street & 12 Montefiore Street, Catherine Hill Bay* (Version 3), June 2016.

⁶⁹ Solo Water, *Licence Condition A4 a) CEMP Implementation Report*, 29 September 2017 (report in letter format).

⁷⁰ Solo Water, *Operation Environmental Management Plan; Catherine Hill Bay Water Utility; Interim Scheme* (Revision 1.1), 18 October 2017.


⁷¹ Letter (reference: D17/29037) dated 26 October 2017 from IPART to Solo Water/Catherine Hill Bay Water (re: *Notification of approval of a Construction Environmental Management Plan (CEMP) Implementation Report and Operational Environmental Management Plan (OEMP) for Catherine Hill Bay Water Utility Pty Ltd (CHBWU)*).

Table E.5 Schedule A to the Network Operator’s Licence – clause A6

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.A6	If the Licensee proposes to vary its environmental mitigation measures referred to in clause A2, it must first notify IPART in accordance with the Reporting Manual. The Licensee must not vary its environmental mitigation measures without the prior written approval of IPART.	 No Requirement
Risk This presents a high operational risk. It is essential the environmental measures remain appropriate to all activities authorised under clauses S1 and S3 of this Licence.		Target for Full Compliance Evidence that, if the Licensee has proposed to vary its environmental mitigation measures referred to in clause A2, it has first notified IPART and has not varied its environmental mitigation measures without the prior written approval of IPART.
Evidence sighted <ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Site inspection of infrastructure at Catherine Hill Bay on 24 January 2019. ▪ Planit Consulting, <i>Review of Environmental Factors; Sewage Treatment Plant & Sewage Reticulation Network; Catherine Hill Bay Scheme Stages 1 & 2</i> (Revision E), 29 July 2015. 		
Summary of reasons for grade Catherine Hill Bay Water advised that it had not varied, or proposed to vary, the environmental mitigation measures identified in the Review of Environmental Factors (REF) either during the audit period or subsequently. No evidence to the contrary was identified during the audit. Accordingly, there has been no requirement for Catherine Hill Bay Water to notify IPART or obtain IPART’s approval pursuant to this obligation.		
Discussion and notes Catherine Hill Bay Water advised that it had not varied, or proposed to vary, the environmental mitigation measures identified in the Review of Environmental Factors (REF) ⁷² either during the audit period or subsequently. As reported in Table E.2 (refer also to Table E.3 and Table E.4), there was evidence that the mitigation measures, the arrangements on respect of which have been detailed in the relevant Construction Environmental Management Plans (CEMPs) and Operational Environmental Management Plans (OEMPs), have been and continue to be implemented. There was no evidence to indicate that the mitigation measures had been varied. Accordingly, there was no requirement to comply with this obligation during the audit period.		
Recommendations There are no recommendations in respect of this obligation.		
Opportunities for improvement No opportunities for improvement have been identified in respect of this obligation.		

⁷² Planit Consulting, *Review of Environmental Factors; Sewage Treatment Plant & Sewage Reticulation Network; Catherine Hill Bay Scheme Stages 1 & 2* (Revision E), 29 July 2015.

Table E.6 **Schedule A to the Network Operator’s Licence – clause A7**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.A7	<p>As at the date of this Licence, the Licensee must have an unconditional bank guarantee executed in its favour which is:</p> <p>a) for a value of \$2.5 million (two million and five hundred thousand dollars); and</p> <p>b) for a term of at least five years from the day of the grant of this Licence (and such further term as directed in writing by the Minister),</p> <p>and provide a certified copy of the bank guarantee to the Minister or IPART on request.</p>	 Compliant
Risk	<p>This presents a significant commercial risk. It is essential that Catherine Hill Bay Water has sufficient financial support to ensure that it remains financially able to continue operating the network in an effective (safe and reliable) manner.</p>	Target for Full Compliance
		<p>Evidence that the Licensee has an unconditional bank guarantee, consistent with the requirements of this obligation, executed in its favour.</p>
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Bank Guarantee (Reference No: G531447) provided by the Commonwealth Bank of Australia on 5 February 2016. ▪ Bank Guarantee (Reference No: G533162) provided by the Commonwealth Bank of Australia on 29 February 2016. ▪ NSW Government, <i>Network Operator’s Licence No: 16_035</i> (as issued on 22 March 2016). 		
Summary of reasons for grade		
<p>Catherine Hill Bay Water demonstrated that it holds Bank Guarantees (unconditional undertakings) totalling \$2.5 million executed in its favour. Furthermore, the Expiry Date of the Bank Guarantees exceeds minimum term for which they must be in place.</p>		
<p>Accordingly, Catherine Hill Bay Water is assessed as being compliant with this obligation.</p>		
Discussion and notes		
<p>Catherine Hill Bay Water provided copies of two (2) Bank Guarantees (unconditional undertakings) provided by the Commonwealth Bank of Australia in favour of Catherine Hill Bay Water Utility Pty Ltd, as follows:</p>		
<ul style="list-style-type: none"> ▪ Reference No: G531447 dated 5 February 2016 – guaranteed amount \$500,000; and ▪ Reference No: G533162 dated 29 February 2016 – guaranteed amount \$2,000,000. 		
<p>It is understood that this Licence obligation is covered by two (2) bank guarantees due to a change in the required value of the unconditional guarantee subsequent to the first Bank Guarantee being obtained (and prior to the Licence being granted).</p>		

The nominated Expiry Date of both Guarantees is 31 January 2023. The date of issue of Catherine Hill Bay Water’s Network Operator’s Licence (Licence No: 16_035) was 22 March 2016,⁷³ which means that the minimum term of five years for which the Bank Guarantees must remain in place expires on 22 March 2021 (there is no indication that any further term has been directed by the Minister). The term of the Bank Guarantees is therefore consistent with the requirements of this obligation.

Recommendations


There are no recommendations in respect of this obligation.

Opportunities for improvement

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

⁷³ NSW Government, *Network Operator’s Licence No: 16_035* (as issued on 22 March 2016).

Table E.7 **Schedule A to the Network Operator’s Licence – clause A8**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.A8	<p>Licensee must not commence, or authorise the commencement of, construction of any water industry infrastructure described in clause S1.1 and Table 1.2 paragraph (1) until:</p> <p>(a) the Licensee has provided IPART a report prepared by a suitably qualified environmental consultant on the Licensee's proposed strategy of tankering out excess non-potable water as set out in its REF. The report should include:</p> <ul style="list-style-type: none"> i) modelling of truck movements during significant wet weather events or periods in the 10 year period prior to the grant of this Licence at times when irrigation would not have been undertaken; ii) an estimation of the costs of trucking during those wet weather events or periods; iii) identification of Appropriate Facilities that have the capacity to accept excess recycled water (including during wet weather periods); iv) evidence of agreements with the Appropriate Facilities setting arrangements for accepting excess non-potable water; and v) confirmation that the configuration and size of the non-potable water storage tanks (as described in the REF) is adequate for the activities authorised by the Licence or, if the configuration or size of the non-potable water storage tanks is not considered adequate, advice as to any changes required to the configuration or size of the non-potable water storage tanks; and <p>(b) IPART has provided written approval of the report.</p>	 Compliant

Risk

This represents a low environmental risk. Notwithstanding, it is important that arrangements are in place for the disposal of excess recycled water in the event that the volume of recycled water produced exceeds demand.

Target for Full Compliance

Evidence that the Licensee has provided a report outlining its strategy for tankering out excess potable water to IPART and IPART has provided written approval of such report.

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018.
- Cardno, *Catherine Hill Bay; Recycled Water Off-Site Disposal* (Version 3), 10 June 2016).

-
- Letter (reference: D16/18237) dated 22 July 2016 from IPART to Catherine Hill Bay Water (re: *Notification of Approval of Construction Environmental Management Plan and Recycled Water Off-Site Disposal Plan for Catherine Hill Bay Water Utility Pty Ltd (CHBWU)*).
-

Summary of reasons for grade

Catherine Hill Bay Water provided evidence that IPART had approved a report that outlines its strategy for tankering out excess non-potable water. Such approval was provided prior to the commencement of construction of the nominated infrastructure.

Accordingly, Catherine Hill Bay Water is assessed to be compliant with this obligation.

Discussion and notes

Compliance with this obligation has previously been assessed as part of the New Infrastructure Audits conducted in respect of the Stage 1 (Interim Scheme)⁷⁴ and Stage 2 Scheme⁷⁵ infrastructure. The following discussion is reflective of the findings of those audits (to the extent applicable).

Catherine Hill Bay Water provided evidence that IPART has approved, in writing, a report (referenced as the *Recycled Water Off-Site Disposal Plan (prepared by CARDNO, V3 dated 10 June 2016)*)⁷⁶ which outlines Catherine Hill Bay Water's strategy for tankering out excess non-potable water.⁷⁷ By inference, it is also apparent that Catherine Hill Bay Water had submitted such report to IPART for review.

Construction of infrastructure described in clause S1.1 and Table 1.2 paragraph (1), i.e. a treatment plant for non-potable water and associated infrastructure had not commenced at the time of the New Infrastructure Audit conducted in July 2017. Given that IPART's approval of the strategy for off-site disposal of excess non-potable water was provided in July 2016, it is apparent that construction of the infrastructure had not commenced prior to IPART's approval.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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


⁷⁴ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.12.

⁷⁵ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.12.

⁷⁶ Cardno, *Catherine Hill Bay; Recycled Water Off-Site Disposal* (Version 3), 10 June 2016).

⁷⁷ Letter dated 22 July 2016 from IPART to Catherine Hill Bay Water (re: *Notification of Approval of Construction Environmental Management Plan and Recycled Water Off-Site Disposal Plan for Catherine Hill Bay Water Utility Pty Ltd (CHBWU)*).

Table E.8 **Schedule A to the Network Operator’s Licence – clause A9**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.A9	Before the Licensee brings the Water Industry Infrastructure described in Table 3.2 into commercial operation, the Licensee must provide written evidence of the following to IPART: a) details of Appropriate Facilities that have the capacity to accept excess sewage; and b) evidence of agreements with the Appropriate Facilities setting out the arrangements for accepting excess sewage, and the Licensee must obtain IPART's written approval.	 Compliant

Risk	Target for Full Compliance
This represents a high risk as it is essential that all sewage collected by the licensed sewerage infrastructure can be disposed of without detrimental impact to the environment.	Evidence that the Licensee has provided IPART with written evidence in relation to the disposal of excess sewage.

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018.
- Solo Water, *Catherine Hill Bay Water Utility; Sewage Management Plan; Stage 2* (reference: IMS-ENVM-B-3728-SW) (Revision 2.1), 5 November 2018.
- Solo Resource Recovery, *Terms of Service Agreement*, 15 February 2016 (in relation to liquid waste removal).
- *Tankering Agreement* between Hunter Water Corporation and Solo Resource Recovery, dated 30 October 2015.
- *Tankering Agreement* between Hunter Water Corporation and Solo Resource Recovery, dated 30 October 2018.
- Email chain of communication between IPART and Catherine Hill Bay Water with entries dated 22 November 2016, 16 May 2017 and 17 May 2017 (re: *CHB - IPART acknowledgement of Operational environmental management plan* [although relating to the requirements of Licence clause A9]).
- Letter (reference: D17/15821) dated 11 August 2017 from IPART to Catherine Hill Bay Water (re: *Notification of Approval – Condition A9 of Catherine Hill Bay Water Utility Pty Ltd’s Network Operator’s Licence No: 16_035*).

Summary of reasons for grade

Catherine Hill Bay Water demonstrated that it had arrangements in place in respect of the disposal of “excess sewage”; that it had provided details of such arrangements to IPART for review; and that IPART had provided written approval of those arrangements. It is noted that these arrangements included contractual agreements with Solo Resource Recovery and, in turn, Hunter Water.

Accordingly, Catherine Hill Bay Water is assessed to have demonstrated compliance with this obligation.

Discussion and notes

Compliance with this obligation has previously been assessed as part of the New Infrastructure Audits conducted in respect of the Stage 1 (Interim Scheme)⁷⁸ and Stage 2 Scheme⁷⁹ infrastructure. The following discussion draws on the findings of those audits.

As reported in Table D.2, the Stage 1 (Interim Scheme) infrastructure, which includes infrastructure described in Table 3.2 of the Licence, was brought into commercial operation on 30 October 2017. The Stage 2 Scheme infrastructure was not brought into commercial operation until December 2018, i.e. subsequent to the audit period.

Under the Stage 1 (Interim Scheme) arrangements, all sewage was disposed of off-site. Under the Stage 2 Scheme arrangements, whereby the sewage treatment plant is now operational and producing recycled water, excess sewage will be only be disposed of off-site during periods of abnormal operation or emergency conditions. Under normal operation, all sewage will be treated for re-use as recycled water.⁸⁰

Catherine Hill Bay Water has a *Service Agreement*⁸¹ with Solo Resource Recovery (parent company of Solo Water/Catherine Hill Bay Water) in relation to the transport and disposal of sewage. Solo Resource Recovery, in turn, has a *Tankering Agreement*^{82,83} with Hunter Water for the disposal of sewage into its system. Under the *Tankering Agreement*, Solo Resource Recovery “*may discharge a maximum of 150 kL per day of waste type unless given prior approval by the Corporation [Hunter Water]*”.

When assessing compliance with this obligation for the Stage 1 (Interim Scheme) New Infrastructure Audit, the auditor sighted various items of correspondence between Catherine Hill Bay Water and IPART,⁸⁴ including the provision of calculations to demonstrate that under the ultimate development of the Catherine Hill Bay schemes (which is understood to equate to 470 ET (allotments)), all sewage flows will be accommodated by the proposed treatment plant. As all flows will be accommodated by the plant, Catherine Hill Bay Water contends that there will be no excess sewage flows. Notwithstanding, it will retain the capacity to discharge sewage by tanker (subject to disposal agreement being renewed in the longer term).⁸⁵

IPART provided written approval⁸⁶ of Catherine Hill Bay Water’s arrangements for the disposal of excess sewage as required pursuant to this obligation in August 2017, i.e. prior to the commencement of commercial operation of any infrastructure described in Table 3.2 of the Licence.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

⁷⁸ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.13.

⁷⁹ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.13.

⁸⁰ *Sewage Management Plan*, section 1.3.

⁸¹ Solo Resource Recovery, *Terms of Service Agreement*, 15 February 2016 (in relation to liquid waste removal).

⁸² *Tankering Agreement* between Hunter Water Corporation and Solo Resource Recovery, dated 30 October 2015.

⁸³ The *Tankering Agreement* that was applicable during the audit period was valid until 30 October 2018; this was subsequently renewed for a further three (3) year period ending 30 October 2021.

⁸⁴ Email chain of communication between IPART and Catherine Hill Bay Water with entries dated 22 November 2016, 16 May 2017 and 17 May 2017 (re: *CHB - IPART acknowledgement of Operational environmental management plan* [although relating to the requirements of Licence clause A9]).


⁸⁵ As noted above, the disposal agreement (*Tankering Agreement* with Hunter Water) has recently been renewed for a period of three (3) years.

⁸⁶ Letter dated (reference: D17/15821) 11 August 2017 from IPART to Catherine Hill Bay Water (re: *Notification of Approval – Condition A9 of Catherine Hill Bay Water Utility Pty Ltd’s Network Operator’s Licence No: 16_035*).

Appendix F Detailed Audit Findings – Schedule B to the Network Operator’s Licence

Detailed audit findings in respect of the obligations under *Schedule B to the Network Operator’s Licence* are presented in this Appendix.

Table F.1 **Schedule B to the Network Operator’s Licence – clause B1**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.B1	The Licensee must have the technical, financial and organisational capacity to carry out the activities authorised by this Licence. If the Licensee ceases to have this capacity, it must report this to IPART immediately in accordance with the Reporting Manual.	 Compliant
Risk	This presents a high operational risk. Without the technical, financial and organisational capacity to carry out the activities authorised by the Licence, the Licensee may be unable to meet its obligations under the Licence, specifically the safe and effective delivery of agreed levels of service.	<p>Target for Full Compliance</p> <p>Evidence that the Licensee has the technical, financial and organisational capacity to carry out the activities authorised by the Licence.</p> <p>Documentation of procedures for identifying, and reporting to IPART, if the Licensee ceases to have the technical, financial and organisational capacity to carry out the activities authorised by the Licence.</p>
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Solo Water, <i>Infrastructure Operating Plan; Catherine Hill Bay Water Utility Interim Scheme</i> (reference: IMS-OPER-B-8297-SW) (Revision 1.0), 13 June 2017 [applicable during the audit period, but subsequently updated]. ▪ Solo Water, <i>Catherine Hill Bay Water Utility; Infrastructure Operating Plan; Stage 2</i> (reference: IMS-OPER-B-8297-SW) (Revision 2.1), 5 November 2018 [updated subsequent to the audit period]. ▪ Solo, <i>Organisational Chart</i> (MS-OPER-G-8321-SW) (Issue No: 1.1), January 2018. ▪ Solo, <i>Planning and New Schemes Manager; Position Description</i> (IMS-HRPR-P-6233) (Issue No: 1.0), July 2017. ▪ Solo, <i>Water and Wastewater Utility Engineer; Position Description</i> (IMS-HRPR-P-6228) (Issue No: 1.0), March 2017. ▪ Solo, <i>Site Supervisor – Solo Water; Position Description</i> (IMS-HRPR-P-6146) (Issue No: 2.0), March 2016. ▪ Solo, <i>Water and Wastewater Systems Operator – Solo Water</i> (IMS HRPR-P-6234) (Issue No: 1.1), January 2018. ▪ Brad Irwin: Curriculum Vitae; Engineers Australia Membership Certificate; and NPER Certificate of Registration. ▪ Craig Heining: Curriculum Vitae; Qualification Certificates; and AWA Membership Certificate. ▪ Alan Irving: Curriculum Vitae; Plumbing Licence; and Training Cards as referenced. ▪ Ross Pascoe: Curriculum Vitae; Plumbing Licence; and Training Cards as referenced. ▪ Ronnie Paine, Curriculum Vitae; and Training Cards/Certification as referenced. ▪ <i>Service Agreement; For the Provision of Construction Services, Retail Services and O&M Services at the Catherine Hill Bay Development</i> between Catherine Hill Bay Water Utility Pty Ltd and Solo Water Pty Ltd, dated 5 February 2016. ▪ Solo, <i>CHB Regulatory & Formal Requirements</i> (IMS-CONT-G-1677-SW) (Issue No: 1.0), April 2017. 		

-
- Solo, *CHB Regulatory & Formal Requirements* (IMS-CONT-G-1677-SW) (Issue No: 1.0), April 2017 [updated 16 October 2018].
 - Solo, *IPART Reporting Procedure* (IMS-OPER-D-8324-SW) (Issue No: 1.1), March 2018.
-

Summary of reasons for grade

Catherine Hill Bay Water demonstrated that, principally through its parent company Solo Water (an Authorised Person under the Licence), it holds the technical capacity to carry out the activities authorised by the Licence (financial and organisational capacity were not assessed as part of this audit).

Catherine Hill Bay Water also demonstrated that it has in place procedures for identifying, and reporting to IPART, if it ceases to have the technical, financial or organisational capacity required to carry out the activities authorised by the Licence.

Accordingly, Catherine Hill Bay Water was assessed as being compliant with this obligation.

Discussion and notes

It is noted that the audit scope, as defined by IPART, required an assessment of technical capacity only.

Compliance with this obligation has previously been assessed as part of the New Infrastructure Audits conducted in respect of the Stage 1 (Interim Scheme)⁸⁷ and Stage 2 Scheme⁸⁸ infrastructure. The following discussion is reflective of the findings of those audits.

Technical Capacity:

The organisational structure in respect of the Catherine Hill Bay Water schemes is shown in the Solo Water (Catherine Hill Bay Water's parent company) *Organisational Chart*.⁸⁹ Roles and responsibilities are described in summary form in the *Infrastructure Operating Plan*.⁹⁰

More specific responsibilities associated with particular roles are presented in detailed position descriptions. Review of a sample of position descriptions revealed that they require appropriate skills and experience, as follows:

- Planning and New Schemes Manager – responsibilities include planning new schemes, project and operations management, people management and other company roles. Skills and experience requirements include an engineering degree; a minimum of 10 years water industry experience (specifically in respect of new schemes); knowledge of planning and approval processes; and experience in water and wastewater design, development, construction and operations.⁹¹
 - Water and Wastewater Utility Engineer (Operations Manager) – responsibilities include product development design and engineering, project and operations management, people management and other company roles. Skills and experience requirements include an engineering degree; a minimum of 10 years water industry operations experience; and experience in water and wastewater design, development, construction and operations.⁹²
 - Site Supervisor – responsibilities include site management and people management. Skills and experience requirements include a minimum of 2 years' experience in a similar supervisory role.⁹³
 - Water and Wastewater Systems Operator – responsibilities include site management and people management. Skills and experience requirements include trade or technical qualifications applicable
-

⁸⁷ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.1.

⁸⁸ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.1.

⁸⁹ Solo, *Organisational Chart* (MS-OPER-G-8321-SW) (Issue No: 1.1), January 2018.

⁹⁰ *Infrastructure Operating Plan*, section 4.1 (table 4.1).

⁹¹ Solo, *Planning and New Schemes Manager; Position Description* (IMS-HRPR-P-6233) (Issue No: 1.0), July 2017.

⁹² Solo, *Water and Wastewater Utility Engineer; Position Description* (IMS-HRPR-P-6228) (Issue No: 1.0), March 2017.

⁹³ Solo, *Site Supervisor – Solo Water; Position Description* (IMS-HRPR-P-6146) (Issue No: 2.0), March 2016.

to the water industry and a minimum of 5 years' experience in the water industry with a focus on operation and maintenance of water and wastewater systems.⁹⁴

Review of the curriculum vitae and other relevant documentation for the incumbents of a selection of the key positions is as follows:

- Planning and New Schemes Manager (Brad Irwin) – an Environmental Engineer with 15 years relevant water industry experience, including the investigation planning and design of water and wastewater systems and integrated water management. Evidence of Engineers Australia (Chartered Professional Engineer) membership and registration on the National Professional Engineers Register was also provided.⁹⁵
- Operations Manager (Craig Heiningger) – a civil engineer with 25 years relevant water industry experience including roles in the development of water and wastewater infrastructure and the operation and maintenance of treatment facilities and other water industry infrastructure. Qualifications include a Bachelor of Engineering (Civil), Certificate III in Industrial Instrumentation and a Water Board Gold Medal Award (UNSW); Craig is also a member of the Australian Water Association.⁹⁶
- Site Manager (Alan Irving) – a licensed plumber with almost 40 years' industry experience, including domestic and commercial maintenance and new work, and the construction of sewer and water reticulation infrastructure. Copies of Alan's relevant training cards were provided, including his Plumbing Licence (No: 23847); NSW Fair Trading Supervisor Certificate; Certificate III in Civil Construction (Tunnel Construction); Energy Safe Victoria Restricted Electrical Workers Licence; OH&S Industry Induction and Confined Spaces training.⁹⁷
- Site Supervisor (Ross Pascoe) – a licensed plumber with more than 35 years' experience including domestic and commercial plumbing, leading hand on commercial projects and site supervision in relation to water and sewer network construction and treatment plant construction and commissioning. Copies of Ross' relevant training cards were provided, including his Plumbing Licence (No: 26103); NSW Fair Trading Supervisor Certificate; Queensland Building and Construction Commission Plumbing Occupational Licence; WorkSafe Victoria Licence to Perform High Risk Work; Agricultural Chemical User Permit; Equipment Operator OHS Competency Qualification; and OH&S General Induction (WorkCover NSW).⁹⁸
- Water and Wastewater Systems Operator (Ronnie Payne) – an Environmental Engineer with 13 years' experience in commissioning, operation, maintenance and servicing of both large and small water treatment facilities throughout Australia and the Asia Pacific. Ronnie' multifaceted roles have included construction manager, commissioning engineer, process review engineer, operations team leader, site lead technical advisor, breakdown on-site maintenance specialist, and lead plant operator. Copies of Ronnie's Construction Induction card and certification in relation to confined space entry, working and rescue were provided.⁹⁹

On the basis of the sample of evidence reviewed and discussions with the abovementioned people during the audit fieldwork,¹⁰⁰ it is apparent that Catherine Hill Bay Water has the technical capacity to carry out the activities authorised by the Licence.

It is noted that Catherine Hill Bay Water's technical capacity is provided principally through Solo Water (parent company and an Authorised Person under the Licence), which has capacity in relation to planning

⁹⁴ Solo, *Water and Wastewater Systems Operator – Solo Water* (IMS HRPR-P-6234) (Issue No: 1.1), January 2018.

⁹⁵ Brad Irwin: Curriculum Vitae; Engineers Australia Membership Certificate; and NPER Certificate of Registration.

⁹⁶ Craig Heiningger: Curriculum Vitae; Qualification Certificates; and AWA Membership Certificate.⁹⁷ Alan Irving: Curriculum Vitae; Plumbing Licence; and Training Cards as referenced.

⁹⁷ Alan Irving: Curriculum Vitae; Plumbing Licence; and Training Cards as referenced.

⁹⁸ Ross Pascoe: Curriculum Vitae; Plumbing Licence; and Training Cards as referenced.

⁹⁹ Ronnie Paine, Curriculum Vitae; and Training Cards/Certification as referenced.

¹⁰⁰ Brad Irwin, Craig Heiningger, Alan Irving and Ross Pascoe participated in the Stage 1 audits conducted by Cobbitty Consulting/Water Futures; Brad Irwin, Craig Heiningger, Alan Irving and Ronnie Payne participated in the Stage 2 audits also conducted by Cobbitty Consulting/Water Futures.

and development of new schemes, operation, information management, finance and retail supply which are all required the effectively carry out the authorised activities. A *Service Agreement*¹⁰¹ between Catherine Hill Bay Water and Solo Water, which sets out details of the support arrangements, shows that services to be provided include Construction Services, Retail Services and O&M Services over an initial 25-year period commencing 5 February 2016.

Loss of Capacity:

Catherine Hill Bay Water outlines its arrangements for regularly monitoring and reviewing organisational capacity in the *Infrastructure Operating Plan*.¹⁰² Such reviews, which are to be undertaken in conjunction with any staffing or operational changes, are the responsibility of the Operations Manager (in consultation with the Solo Water Board).

In the event that Catherine Hill Bay Water identifies that it has ceased to have capacity to carry out the activities authorised by the Licence, it will notify IPART in accordance with the *Reporting Manual*. The reporting requirement is identified in the *CHB Regulatory & Formal Requirements Register*,^{103,104} the reporting process is outlined in the *IPART Reporting Procedure*.¹⁰⁵

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

¹⁰¹ *Service Agreement; For the Provision of Construction Services, Retail Services and O&M Services at the Catherine Hill Bay Development* between Catherine Hill Bay Water Utility Pty Ltd and Solo Water Pty Ltd, dated 5 February 2016.


¹⁰² *Infrastructure Operating Plan*, section 4.3.

¹⁰³ Solo, *CHB Regulatory & Formal Requirements* (IMS-CONT-G-1677-SW) (Issue No: 1.0), April 2017, *Network Operator* worksheet, item 96.

¹⁰⁴ Solo, *CHB Regulatory & Formal Requirements* (IMS-CONT-G-1677-SW) (Issue No: 1.0), April 2017 [updated 16 October 2018], *Network Operator Reporting* worksheet, item 53.

¹⁰⁵ Solo, *IPART Reporting Procedure* (IMS-OPER-D-8324-SW) (Issue No: 1.1), March 2018.

Table F.2 **Schedule B to the Network Operator’s Licence – clause B2**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.B2	<p>Before commencing to commercially operate the Specified Water Industry Infrastructure under this Licence, the Licensee must:</p> <ul style="list-style-type: none"> (a) obtain insurance that is appropriate for the size and nature of the activities authorised under this Licence; (b) provide a certificate of currency of the insurance obtained to IPART; and (c) demonstrate that the insurance obtained is appropriate for the size and nature of the activities authorised under the Licence by providing a report to IPART from an Insurance Expert that: <ul style="list-style-type: none"> (i) certifies that in an Insurance Expert’s opinion, the type and level of insurance obtained by the Licensee is appropriate for the size and nature of the activities authorised by the Licence; (ii) is in the form prescribed in the Reporting Manual. 	 Compliant
Risk	<p>This presents no significant risk to the operational safety of the scheme, however, may present commercial risk to the Licensee.</p>	Target for Full Compliance
		<p>Evidence that the Licensee has:</p> <ul style="list-style-type: none"> ▪ obtained insurance appropriate for the size and nature of the Licensed activities; ▪ provided copies of certificates of currency to IPART; and ▪ provided the requisite report from an Insurance Expert to IPART; <p>prior to the commencement of commercial operation.</p>
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)</i> (Revision 2.0), 17 August 2017. ▪ Cobbitty Consulting/Water Futures, <i>Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)</i> (Version 2.0), 25 November 2018. ▪ Email chain between Catherine Hill Bay Water and IPART with entries on 25 July 2017 and 26 July 2017 (re: <i>Catherine Hill Bay Application - Insurance Expert Report</i>). ▪ Email dated 31 July 2017 from IPART to Cobbitty Consulting (and Catherine Hill Bay Water) (re: <i>Catherine Hill Bay Water – Insurance</i>). ▪ Australian Insurance Solutions, <i>Catherine Hill Bay – Insurance Review</i>, 25 July 2017 (report in letter format). 		

Summary of reasons for grade

Catherine Hill Bay Water demonstrated that it had obtained insurance in respect of the activities authorised under the Licence (as applicable to the infrastructure that was brought into commercial operation during the audit period) and submitted an Insurance Expert's Report (including copies of insurance certificates of currency) that certified the appropriateness of that insurance to IPART for review.

Accordingly, Catherine Hill Bay Water is assessed to be compliant with the requirements of this obligation.

Discussion and notes

As reported in Table D.2, the Stage 1 (Interim Scheme) infrastructure was brought into commercial operation on 30 October 2017. The Stage 2 Scheme infrastructure was not brought into commercial operation until December 2018, i.e. subsequent to the audit period.

Assessment of compliance with this obligation for the purposes of the Stage 1 New Infrastructure Audit was based on advice from IPART that it was satisfied with Catherine Hill Bay Water's insurance arrangements.¹⁰⁶ More detailed assessment is as follows.

Catherine Hill Bay Water provided evidence¹⁰⁷ that it had submitted an Insurance Expert's report in respect of the adequacy of its insurance to IPART for review. Receipt of the report was acknowledged by IPART.¹⁰⁸

It is understood that the report had previously been submitted to IPART; however, it had not been presented in the required format and needed to be revised. IPART subsequently advised that:¹⁰⁹

"I received the insurance expert's report, and advise as follows:

- *It is in the correct form as per the Reporting Manual (App I);*
- *The insurances match the insurance requirements that were approved at assessment stage, in type and quantum;*
- *Relevant CoCs were provided for 'General Liability' and 'Professional Indemnity'.*

Therefore the insurance report is adequate."

Review of the Insurance Expert's Report (in relation to the Stage 1 (Interim Scheme) arrangements)¹¹⁰ for the purposes of this audit reveals that it:

- indicated that (at the time of preparing the report, i.e. July 2017), Catherine Hill Bay Water and Solo Water had in place insurance policies in respect of the following that are relevant to the activities authorised by the Licence:
 - General Liability; and
 - Professional Indemnity.
- included copies of each certificate of currency, both of which expired on 1 December 2017; and
- certified that:

"Australian Insurance Solutions certifies to IPART that in its opinion, the Licensee's Insurance Arrangements are appropriate for the size and nature of the activities authorised under the Licence."

¹⁰⁶ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.14.

¹⁰⁷ Email chain between Catherine Hill Bay Water and IPART with entries on 25 July 2017 and 26 July 2017 (re: *Catherine Hill Bay Application - Insurance Expert Report*).

¹⁰⁸ Email chain between Catherine Hill Bay Water and IPART with entries on 25 July 2017 and 26 July 2017 (re: *Catherine Hill Bay Application - Insurance Expert Report*).

¹⁰⁹ Email dated 31 July 2017 from IPART to Cobbitty Consulting (and Catherine Hill Bay Water) (re: *Catherine Hill Bay Water – Insurance*).

¹¹⁰ Australian Insurance Solutions, *Catherine Hill Bay – Insurance Review*, 25 July 2017.

and detailed the basis upon which the insurance expert had reached this opinion.

Although not reviewed in detail, the Insurance Expert’s Report appears to be in the required format, as prescribed in the *Reporting Manual*.

On the basis of the above assessment (including IPART’s advice), it is apparent that Catherine Hill Bay Water had obtained insurance appropriate for the size and nature of the Licensed activities in relation to the infrastructure that was brought into operation during the audit period; provided copies of certificates of currency to IPART; and provided the requisite report from an Insurance Expert to IPART.

It is noted that, subsequent to the audit period, Catherine Hill Bay Water has updated its insurance arrangements such that they remain appropriate for the size and nature of the activities authorised under the Licence under the Stage 2 Scheme arrangements. Compliance with this obligation for the purposes of the Stage 2 Scheme arrangements was assessed as part of the Stage 2 New Infrastructure Audit.¹¹¹

Recommendations


There are no recommendations in respect of these obligations.

Opportunities for improvement

No opportunities for improvement have been identified in respect of these obligations.

¹¹¹ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.14.

Table F.3 Schedule B to the Network Operator’s Licence – clause B3

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.B3 (specifically cl.B3.1, B3.2 and B3.3; audit of cl.B3.4 and B3.5 not required)	[B3.1] The Licensee must maintain insurance that is appropriate for the size and nature of the activities authorised under the Licence.	Clauses B3.1, B3.2, and B3.3:  Compliant
	[B3.2] The Licensee must provide a copy of each certificate of currency of the insurance maintained by the Licensee to IPART in accordance with the Reporting Manual.	
	[B3.3] If there is, or is to be, a change in: (a) the insurer, or underwriting panel in respect of an insurance policy held by the Licensee; or (b) the type, scope or limit on the amount of insurance policy held by the Licensee, in relation to the activities authorised under the Licence, the Licensee must provide a report to IPART in accordance with the Reporting Manual.	

Risk

This presents no significant risk to the operational safety of the scheme, however, may present commercial risk to the Licensee.

Target for Full Compliance

Evidence that the Licensee has:

- maintained insurance appropriate for the size and nature of the Licensed activities;
- provided copies of certificates of currency to IPART as required; and
- notified IPART of any changes to the insurance cover.

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Australian Insurance Solutions, *Catherine Hill Bay – Insurance Review*, 25 July 2017 (report in letter format).
- Australian Insurance Solutions, *Catherine Hill Bay – Insurance Expert’s Report – Operational Use*, 16 October 2018 (report in letter format).
- Document: *COI’s on Jan 18 for Dec 17 to Dec 18.pdf* (which includes insurance certificates of currency in respect of Contract Works – Material Damage; Industrial Special Risks; General Liability; Professional Indemnity; Commercial Motor Vehicle Insurance; and Management Liability – Statutory Liability).
- Letter dated 10 January 2018 from Australian Insurance Solutions to Solo Water (Catherine Hill Bay Water) (re: *Application to IPART for Licence Variation; Catherine Hill Bay Water Utility’s*), including attached certificates of currency.
- *Network Operator and Retail Supplier Licence Application Form* (Confidential version) for Variation to Network Operator’s Licence No: 16_035, dated 13 February 2018.
- IPART, *Network Operator’s Reporting Manual* (Issue No: 5), 1 June 2016.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018.

Summary of reasons for grade

Catherine Hill Bay Water demonstrated by the provision of insurance certificates of currency that it continued to maintain insurance appropriate for the size and nature of the activities authorised under the Licence during the audit period. Such insurance included General Liability and Professional Indemnity insurance, as deemed appropriate by an Insurance Expert.

Catherine Hill Bay Water demonstrated that certificates of currency were provided in support of the Insurance Expert's Report (prepared and submitted pursuant to clause B2 of the Licence), consistent with the requirements of the *Reporting Manual*. It also provided a certificate of currency to IPART that demonstrates a change to the insurer/underwriter providing Professional Indemnity cover.

Whilst Catherine Hill Bay Water did not provide specific notification to IPART in respect of the change, it is apparent that IPART had been provided with details of the change in insurance arrangements in support of Catherine Hill Bay Water's application for a variation to its Licence. Furthermore, Catherine Hill Bay Water has, subsequent to the audit period, provided an Insurance Expert's Report attesting to the adequacy/appropriateness of its insurance cover in relation to the Stage 2 Scheme arrangements.

Accordingly, it is assessed that Catherine Hill Bay Water has demonstrated compliance with its obligations under clauses B3.1, B3.2 and B3.3 of the Licence; however, an opportunity for improvement has been identified.

Discussion and notes

It is noted that the audit scope, as defined by IPART, did not require assessment of compliance with Licence clauses B3.4 or B3.5.

Clause B3.1 – Maintaining appropriate insurance:

As reported in Table F.2, Catherine Hill Bay Water provided a copy of an Insurance Expert's Report (in relation to the Stage 1 (Interim Scheme) arrangements)¹¹² which included certification that:

“Australian Insurance Solutions certifies to IPART that in its opinion, the Licensee's Insurance Arrangements are appropriate for the size and nature of the activities authorised under the Licence.”

It is noted that certificates of currency provided in support of the Insurance Expert's Report expired on 1 December 2017. Catherine Hill Bay Water also provided copies of insurance certificates of currency which demonstrated that General Liability and Professional Indemnity insurance cover with limits of liability consistent with those nominated in the Insurance Expert's Report had been in place for the period 1 December 2017 to 1 December 2018.¹¹³

It is therefore apparent that insurance cover consistent with that deemed by the Insurance Expert to be appropriate was maintained throughout the audit period.

Clause B3.2 – Provision of insurance certificates of currency:

The *Reporting Manual* (as was in place during the audit period) requires that insurance certificates of currency are provided to IPART:

- as evidence of policy in support of an Insurance Expert's Report, where required;¹¹⁴ and
- as evidence in the event of any change in insurance coverage.¹¹⁵

¹¹² Australian Insurance Solutions, *Catherine Hill Bay – Insurance Review*, 25 July 2017.

¹¹³ Document: *COI's on Jan 18 for Dec 17 to Dec 18.pdf* (which includes insurance certificates of currency in respect of Contract Works – Material Damage; Industrial Special Risks; General Liability; Professional Indemnity; Commercial Motor Vehicle Insurance; and Management Liability – Statutory Liability).

¹¹⁴ *Reporting Manual*, section 2.6.1 and appendix I.

¹¹⁵ *Reporting Manual*, section 2.6.2.

As reported in Table F.2, Catherine Hill Bay Water demonstrated that it had submitted a copy of an Insurance Expert's Report, which included copies of the relevant insurance certificates of currency, to IPART as required by the *Reporting Manual*.

As reported below, the insurer providing Professional Indemnity insurance cover was changed when policies were renewed in December 2017. Accordingly, there was a requirement to notify IPART (including provision of a revised certificate of currency) within 3 months of the change.

Catherine Hill Bay Water provided a copy of a letter from its Insurance Expert¹¹⁶ that had been submitted to IPART in support of (as an appendix to) Catherine Hill Bay Water's application for a variation to its Network Operator's Licence dated 13 February 2018.¹¹⁷ The application detailed the type and amount of insurance cover held by Solo Water/Catherine Hill Bay Water; these details were reiterated in the Insurance Expert's letter to which copies of the relevant insurance certificates of currency (which include details of the insurer/underwriter) were appended.

On this basis, it is deemed that Catherine Hill Bay Water had provided revised certificates of currency to IPART in accordance with the requirements. Accordingly, it is assessed that Catherine Hill Bay Water has demonstrated compliance with this obligation.

Clause B3.3 – Notification of changes to insurance arrangements:

Comparison of the insurance certificates of currency for Catherine Hill Bay Water's General Liability and Professional Indemnity insurance cover, which the Insurance Expert has assessed to be adequate for the Stage 1 (Interim Scheme) arrangements, for the period to 1 December 2017 and the period from 1 December 2017 to 1 December 2018 revealed the following:

- General Liability:
 - the insurer/underwriter remained unchanged;
 - the limit of liability remained unchanged; and
 - some extensions to the policy were identified in the later certificate of currency.
- Professional Indemnity:
 - there was a change in insurer/underwriter (from Stirling Insurance Limited to Epsilon Underwriting Agencies on behalf of Lloyds London);
 - the limit of liability remained unchanged; and
 - some extensions to the policy were identified in the later certificate of currency.

As there was a change to the insurer/underwriter providing Professional Indemnity cover, there was a requirement to report the change to IPART within 3 months of the change occurring. As reported above, Catherine Hill Bay Water provided a copy of a letter from its Insurance Expert that had been submitted to IPART in support of (as an appendix to) Catherine Hill Bay Water's application for a variation to its Network Operator's Licence dated 13 February 2018. The application detailed the type and amount of insurance cover held by Solo Water/Catherine Hill Bay Water; these details were reiterated in the Insurance Expert's letter to which copies of the relevant insurance certificates of currency (which include details of the insurer/underwriter) were appended.

Whilst this does not constitute notification to IPART specifically in respect of the change, it is apparent that IPART had been provided with details of the change in insurance arrangements.

Furthermore, it is noted that Catherine Hill Bay Water provided an Insurance Expert's Report (in relation to the Stage 2 Scheme arrangements)¹¹⁸ to IPART in October 2018, i.e. subsequent to the audit period.

¹¹⁶ Letter dated 10 January 2018 from Australian Insurance Solutions to Solo Water (Catherine Hill Bay Water) (re: *Application to IPART for Licence Variation; Catherine Hill Bay Water Utility's*), including attached certificates of currency.

¹¹⁷ *Network Operator and Retail Supplier Licence Application Form* (Confidential version) for Variation to Network Operator's Licence No: 16_035, dated 13 February 2018.

¹¹⁸ Australian Insurance Solutions, *Catherine Hill Bay – Insurance Expert's Report – Operational Use*, 16 October 2018.

As reported in respect of the Stage 2 New Infrastructure Audit,¹¹⁹ review of that Insurance Expert's Report revealed that Catherine Hill Bay Water now has a more extensive portfolio of insurance in place for the purposes of the Stage 2 Scheme arrangements.

Notwithstanding, as an opportunity for improvement (**OFI-CHB1-2019.01**), it is suggested that Catherine Hill Bay Water develops and implements a procedure to ensure that any changes in insurance arrangements are identified and specifically notified to IPART in accordance with the *Reporting Manual*.

Recommendations

There are no recommendations in respect of these obligations.


Opportunities for improvement

The following opportunity for improvement has been identified in respect of these obligations:

- **OFI-CHB1-2019.01:** It is suggested that Catherine Hill Bay Water develops and implements a procedure to ensure that any changes in insurance arrangements are identified and specifically notified to IPART in accordance with the *Reporting Manual*.
-

¹¹⁹ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.14.

Table F.4 **Schedule B to the Network Operator’s Licence – clause B4**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.B4	The Licensee must carry out activities authorised by the licence in compliance with any requirements of NSW Health that: <ul style="list-style-type: none"> (a) IPART has agreed to; and (b) are notified from time to time to the Licensee by IPART in writing. 	 Compliant

Risk

This potentially presents high operational risk. Compliance with agreed requirements of NSW Health is essential to ensuring that the activities authorised by the Licence are carried out in a manner that ensures public health and safety.

Target for Full Compliance

Evidence that the Licensee is carrying out its authorised activities in compliance with any requirements of NSW Health with which IPART has notified the Licensee that it must comply.

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018.
- Letter (reference: D16/9122) dated 15 April 2016 from IPART to Catherine Hill Bay Water (re: *Notification of Determination of Licence Application under Water Industry Competition Act 2006 (NSW)*).
- Email chain of communication between NSW Health and Catherine Hill Bay Water with entries dated 26 May 2017, 1 June 2017, 8 June 2017, 13 June 2017 and 19 June 2017 (re: *Draft Water Quality Monitoring Procedure and Incident Response and Notification Procedure*).
- Solo, *Catherine Hill Bay Water Utility; Interim Water Supply Risk Assessment (IMS-ENVM-G-3635-SW)* (Version 2.1), 6 June 2017.
- Solo, *Catherine Hill Bay Water Utility; Risk Register – Stage 2 (IMS-ENVM-G-3761-SW)* (Version 3.0), 17 July 2018.
- Letter (reference: D17/29411) dated 7 December 2017 from IPART to Catherine Hill Bay Water (re: *Notification of NSW Health Requirements under Licence Clause B4*).
- Solo Water, *Incident Response and Notification Management Plan* (Issue No: 3.1), November 2018.
- Email dated 9 January 2018 from Catherine Hill Bay Water to NSW Health (re: *NSW Health Notification Requirements - Solo Water WICA Licence*).
- Solo, *Customer Complaints Procedure (IMS-OPER-D-8313-SW)* (Issue No: 2.1), November 2018.

Summary of reasons for grade

Catherine Hill Bay Water demonstrated that it had, to the extent applicable, addressed the requirements of NSW Health, which IPART had agreed to and notified it in writing, to the satisfaction of NSW Health both during the audit period and subsequently. This includes requirements of which Catherine Hill Bay Water was notified at the time that its Licence was granted (April 2016) and subsequently (December 2017).

Accordingly, Catherine Hill Bay Water is assessed to be compliant with this obligation.

Discussion and notes

Compliance with this obligation has previously been assessed as part of the New Infrastructure Audits conducted in respect of the Stage 1 (Interim Scheme)¹²⁰ and Stage 2 Scheme¹²¹ infrastructure. The following discussion draws on the findings of those audits.

NSW Health requirements – as notified April 2016:

As reported in more detail for the Stage 1 (Interim Scheme) New Infrastructure Audit, when notifying Catherine Hill Bay Water of the Minister’s determination in respect of its Network Operator’s Licence application,¹²² IPART advised Catherine Hill Bay Water that it had agreed to, and was notifying Catherine Hill Bay Water of, the following requirements of NSW Health:

- “CHBWU must consult with NSW Health in developing its risk assessments for managing drinking water and non-potable water
- CHBWU should develop a mosquito risk assessment and management plan that addresses impacts of artificial wetlands planned for the non-potable water process, including the collective detention and storage areas in the wastewater and reverse osmosis brine transpiration areas, and
- CHBWU must consult with NSW Health in developing incident and emergency response protocols (as outlined in the Australian Drinking Water Guidelines (ADWG) and Australian Guidelines for Water Recycling (AGWR)).”

Catherine Hill Bay Water provided a copy of email correspondence¹²³ showing that NSW Health had provided comments in respect of documentation and Catherine Hill Bay Water had revised the documentation in response to those comments. It also showed that NSW Health had advised of its satisfaction with the documentation and the consultation process:

“Hunter New England Population Health acknowledges receipt of the finalised documents being:

- *Water Quality Monitoring Procedure*
- *Incident Response and Notification Plan*
- *CCP Free Chlorine Management Procedure*
- *Free Chlorine Field Verification Monitoring Procedure*
- *Adjusting CCP free chlorine set points at Chlorine skid*
- *Free Chlorine Sampling sites*
- *Risk Register – Interim Scheme - Drinking Water May 17*
- *CCP Sewage Pump Out Management Procedure*
- *Risk Register – Interim Scheme – Sewage May 17*

Thank you for engaging with this Office as part of the process in establishing appropriate protocols etcetera for the Catherine Hill Bay development.

From a health perspective, the documentation is to the satisfaction of this Office and we look forward to a continued relationship with regard to Catherine Hill Bay including any review of risk assessments and the like into the future.”

Catherine Hill Bay Water also demonstrated that NSW Health had participated in workshops for both the original Interim Scheme risk assessment (May 2016) and the 12-month review and update of the risk assessment (May 2017).¹²⁴

¹²⁰ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.15.

¹²¹ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.16.

¹²² Letter (reference: D16/9122) dated 15 April 2016 from IPART to Catherine Hill Bay Water (re: *Notification of Determination of Licence Application under Water Industry Competition Act 2006 (NSW)*).

¹²³ Email chain of communication between NSW Health and Catherine Hill Bay Water with entries dated 26 May 2017, 1 June 2017, 8 June 2017, 13 June 2017 and 19 June 2017 (re: *Draft Water Quality Monitoring Procedure and Incident Response and Notification Procedure*).

¹²⁴ Solo, *Catherine Hill Bay Water Utility; Interim Water Supply Risk Assessment (IMS-ENVM-G-3635-SW)* (Version 2.1), 6 June 2017, *Risk Register Drinking Water* worksheet.

It is noted that Catherine Hill Bay Water has not yet fully addressed the requirement in respect of a mosquito risk assessment and management plan; however, this is not yet required as wetlands do not form part of the non-potable water process under either Stage 1 or Stage 2 of the scheme development. Catherine Hill Bay Water advised that it has consulted with NSW Health in respect of this matter, and review of the *Risk Register – Stage 2*¹²⁵ reveals that “Vermin, mosquito or animal access to storage” was identified as a hazardous event and the associated risk assessed.

NSW Health requirements – as notified December 2017:

In a letter dated 7 December 2017,¹²⁶ IPART notified Catherine Hill Bay Water of the following requirements of NSW Health with which it is required to comply under this clause of the Licence:

“In accordance with clause B4, IPART has agreed to the following requirements of NSW Health:

1. *The licensee must consult with NSW Health during the:*
 - a) *detailed risk assessments for drinking and recycled water, as relevant*
 - b) *technology assessments for drinking and recycled water, as relevant*
 - c) *development of management plans for drinking and recycled water, as relevant, and*
 - d) *development of an incident notification protocol with NSW Health for drinking and recycled water, as relevant.*
2. *The licensee must:*
 - a) *provide NSW Health with a copy of the new infrastructure audit report when it is provided to IPART and/or the Minister*
 - b) *notify NSW Health when commencing commercial operation*
 - c) *consult with NSW Health during the development of (and any amendment of) a procedure for notifying NSW Health of health-related complaints, and*
 - d) *include a procedure for notifying NSW Health of health-related complaints, agreed to by NSW Health, in the retail supply management plan.”*

Compliance with each of these requirements is considered in the following:

▪ **Item 1(a) – Consultation during detailed risk assessments:**

Review of the *Risk Register – Stage 2*¹²⁷ indicates that, further to involvement in workshops for both the original Interim Scheme risk assessment in May 2016 and the 12-month review and update of the risk assessment in May 2017, NSW Health (represented by Philippe Porigneaux, Environmental Health Manager, NSW Health Hunter New England Population Health) participated in a major review of the risk assessment “to incorporate the MBR/AWTP, recycled water and onsite storages/booster systems” in July 2018.

As detailed in the Stage 2 Scheme New Infrastructure Audit Report, further consultation in respect of the scheme risk assessment, specifically in respect of the *Recycled Water Risk Assessment* and *Drinking Water Supply Risk Assessment* was undertaken subsequent to the audit period.

▪ **Item 1(b) – Consultation during technology assessments:**

Catherine Hill Bay Water has not undertaken a Technology Assessment, instead relying on an assessment of the treatment process as part of the Licence Plan Audit and site validation of plant performance, which was completed subsequent to the audit period. Accordingly, there was no requirement to consult with NSW Health in respect of this matter either during the audit period or subsequently (to date).

¹²⁵ Solo, *Catherine Hill Bay Water Utility; Risk Register – Stage 2* (IMS-ENVM-G-3761-SW) (Version 3.0), 17 July 2018, *Risk Register Recycled Water* worksheet.

¹²⁶ Letter (reference: D17/29411) dated 7 December 2017 from IPART to Catherine Hill Bay Water (re: *Notification of NSW Health Requirements under Licence Clause B4*).

¹²⁷ Solo, *Catherine Hill Bay Water Utility; Risk Register – Stage 2* (IMS-ENVM-G-3761-SW) (Version 3.0), 17 July 2018.

It is noted that, whilst the conduct of a Technology Assessment is encouraged, it remains voluntary under the *WICA Act Audit Guidelines*.

▪ Item 1(c) – *Consultation during development of management plans:*

Catherine Hill Bay Water’s management plans in relation to the Stage 1 (Interim Scheme) arrangement were developed prior to notification of this specific requirement by IPART in December 2017. Notwithstanding, Catherine Hill Bay Water had consulted with NSW Health pursuant to the requirements notified by IPART in April 2017 (as reported above).

Consultation with NSW Health during development of management plans in relation to the Stage 2 Scheme arrangements was undertaken subsequent to the audit period. Assessment of compliance with this requirement is detailed in the Stage 2 Scheme New Infrastructure Audit Report.

▪ Item 1(d) – *Consultation during development of incident notification protocol:*

Catherine Hill Bay Water initially developed its *Incident Response and Notification Protocol* prior to notification of this specific requirement by IPART in December 2017. Notwithstanding, Catherine Hill Bay Water demonstrated that it had provided Version 1.0 of its *Incident Response and Notification Protocol*¹²⁸ to NSW Health for comment.¹²⁹ The Protocol was subsequently updated in May 2017 (Version 1.1) and June 2017 (Version 1.2) in response to NSW Health’s comments.

As detailed in the Stage 2 Scheme New Infrastructure Audit Report, consultation during further development of the *Protocol* in relation to the Stage 2 Scheme arrangements was undertaken subsequent to the audit period.

▪ Item 2(a) – *Provision of copy of New Infrastructure Audit Report:*

The Stage 1 (Interim Scheme) New Infrastructure Audit Report was prepared and finalised prior to IPART notifying Catherine Hill Bay Water of this requirement in December 2017. Notwithstanding, Catherine Hill Bay Water retrospectively submitted a copy of the report to NSW Health.¹³⁰

The Stage 2 Scheme New Infrastructure Audit was not undertaken until after the audit period.

▪ Item 2(b) – *Notification when commencing commercial operation:*

Commercial operation of the Stage 1 (Interim Scheme) infrastructure commenced in October 2017, which was prior to IPART notifying Catherine Hill Bay Water of this requirement in December 2017. Notwithstanding, Catherine Hill Bay Water retrospectively advised NSW Health that it had commenced commercial operation of the Stage 1 infrastructure.¹³¹

Commercial operation of the Stage 2 Scheme infrastructure was not commenced until after the audit period.

▪ Item 2(c) – *Consultation during development/ amendment of a procedure for notification of health-related complaints:*

Catherine Hill Bay Water has referenced the *Incident Response and Notification Protocol* in relation to arrangements in respect of the notification of health-related complaints. As reported above, Catherine Hill Bay Water demonstrated that it consulted with NSW Health during development of the *Protocol*. The *Customer Complaints Procedure*¹³² identifies the need to notify NSW Health of any health-related complaints in accordance with the *Incident Response and Notification Protocol*.

¹²⁸ Solo Water, *Incident Response and Notification Management Plan* (Issue No: 1.0), April 2017.

¹²⁹ Email chain of communication between NSW Health and Catherine Hill Bay Water with entries dated 26 May 2017, 1 June 2017, 8 June 2017, 13 June 2017 and 19 June 2017 (re: *Draft Water Quality Monitoring Procedure and Incident Response and Notification Procedure*).

¹³⁰ Email dated 9 January 2018 from Catherine Hill Bay Water to NSW Health (re: *NSW Health Notification Requirements - Solo Water WICA Licence*).

¹³¹ Email dated 9 January 2018 from Catherine Hill Bay Water to NSW Health (re: *NSW Health Notification Requirements - Solo Water WICA Licence*).

¹³² Solo, *Customer Complaints Procedure* (IMS-OPER-D-8313-SW) (Issue No: 2.1), November 2018 [Issue No: 1.0, dated June 2017 and Issue No: 2.0, dated November 2017 were in place during the audit period].

As detailed in the Stage 2 Scheme New Infrastructure Audit Report, Catherine Hill Bay Water provided evidence that it submitted both the *Incident Response and Notification Protocol* and *Customer Complaints Procedure* to NSW Health for comment following update to include reference to NSW Health notification of all health related customer complaints subsequent to the audit period.

- Item 2(d) – *Inclusion of a procedure for notification of health-related complaints in the retail supply management plan:*
This requirement relates to the obligations of a Retail Supplier, and is therefore not applicable under the scope of this audit.

On the basis of this analysis, it is assessed that Catherine Hill Bay Water has complied with the requirements of NSW Health, as notified by IPART in writing, to the extent applicable during the audit period.


Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

Table F.5 Schedule B to the Network Operator’s Licence – clause B9

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.B9	Whenever the Licensee makes a significant amendment to a Plan, the Licensee must provide a copy of the amended Plan to IPART at the same time that it provides a copy to the approved auditor engaged to prepare a report as to the adequacy of the amended Plan, as required under the Regulation.	 No Requirement

Risk

This requirement reflects a minimal operational risk. Whilst it is essential that the adequacy of significant changes to a Plan is assessed, failure to provide a copy of the amended Plan to IPART presents a lesser risk.

Target for Full Compliance

Evidence that, in the event of a significant change to a Plan(s), the Licensee has provided a copy of the amended Plan(s) to IPART at the same time as it provides a copy to an approved auditor engaged to provide a report as to the adequacy of the amended Plan.

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Solo Water, *Infrastructure Operating Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-OPER-B-8297-SW) (Revision 1.0), 13 June 2017.
- Solo Water, *Drinking Water Quality Management Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-ENVM-B-3727-SW) (Revision 1.0), 13 June 2017.
- Solo Water, *Sewage Management Plan; Catherine Hill Bay Water Utility Interim Scheme* (reference: IMS-ENVM-B-3728-SW) (Revision 1.0), 13 June 2017.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)*, 16 August 2017.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 2 Scheme) (Version 2.0)*, November 2018.
- Email dated 6 June 2017 from Cobbitty Consulting to IPART (re: *Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits*), including attachment (*Audit Proposal*).
- Email dated 14 June 2017 from Cobbitty Consulting to IPART (re: *Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits*), including attachments (*Management Plans*).

Summary of reasons for grade

Catherine Hill Bay Water advised (and demonstrated) that there were no changes to the management plans during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit. Accordingly, there was no requirement for compliance with this obligation during the audit period.

Discussion and notes

As reported in Section 2.2 and Table A.2, Table A.4, Table C.2 and Table C.4 (as applicable), management plans in place during the audit period were as follows:

- *Infrastructure Operating Plan* – Revision 1.0, dated 13 June 2017;
- *Drinking Water Quality Management Plan* – Revision 1.0), dated 13 June 2017; and
- *Sewage Management Plan* – Revision 1.0, dated 13 June 2017.

Assessment of the adequacy of these plans was the subject of a Licence Plan Audit undertaken in respect of the Stage 1 (Interim Scheme) arrangements in July/August 2017.¹³³ Copies of the plans were provided to IPART by the auditor as part of the *Audit Proposal* approval process.^{134, 135}

It is noted that:

- There were previous versions of these management plans, which had been the subject of an initial Licence Plan Audit.
- A Water Quality Plan (non-potable water) (*Recycled Water Quality Management Plan*) was not prepared for the purposes of the Stage 1 (Interim Scheme) arrangement, under which the recycled water reticulation network was charged with potable water. The relevant requirements were otherwise addressed, principally in the *Drinking Water Quality Management Plan*.

No changes were made to the above referenced management plans during the audit period; however, they were subsequently updated and a *Recycled Water Quality Management Plan* was prepared to address arrangements in respect of the Stage 2 Scheme arrangement. An assessment of the adequacy of the revised management plans, details of which are identified in Section 2.2, was the subject of a further Licence Plan Audit undertaken in October/November 2018.¹³⁶

Given that there were no changes to the management plans during the audit period subsequent to completion of the Stage 1 (Interim Scheme) Licence Plan Audit, there was no requirement for compliance with this obligation.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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


¹³³ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 1 – Interim Scheme) (Version 2.0)*, 16 August 2017.

¹³⁴ Email dated 6 June 2017 from Cobbitty Consulting to IPART (re: *Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits*), including attachment (*Audit Proposal*).

¹³⁵ Email dated 14 June 2017 from Cobbitty Consulting to IPART (re: *Catherine Hill Bay Water - WICA Licence Plan and New Infrastructure Audits*), including attachments (Management Plans).

¹³⁶ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; Licence Plan Audit (Stage 2 Scheme) (Version 2.0)*, November 2018.

Table F.6 **Schedule B to the Network Operator’s Licence – clause B10**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.B10	<p>[B10.1] If a code of conduct has not been established under cl.25 of the Regulation, the Licensee must establish its own code of conduct (Licensee’s Code of Conduct) by the date specified by IPART in accordance with this clause B.10.</p> <p>[B10.2] The Licensee’s Code of Conduct must set out the respective responsibilities of:</p> <ul style="list-style-type: none"> (a) the Licensee; (b) each licensed network operator, licensed retail supplier and/or public water utility that: <ul style="list-style-type: none"> (i) supplies water or provides sewerage services by means of; or (ii) constructs, maintains or operates, any other water industry infrastructure in the Specified Area of Operations, <p>by, at a minimum, providing for:</p> <ul style="list-style-type: none"> A who is responsible for repairing, replacing or maintaining any pipes, pumps, valves, storages or other infrastructure connecting the Specified Water Industry Infrastructure to the water industry infrastructure; B who is responsible for water quality; C who is liable in the event of unavailability of water; D who is liable in the event of failure of the Specified Water Industry Infrastructure; E the fees and charges payable in respect of the use of the Specified Water Industry Infrastructure; and F who is responsible for handling customer complaints. <p>[B10.3] Before the Licensee brings the Specified Water Industry infrastructure into commercial operation or by a later date specified by IPART (if any), the Licensee’s Code of Conduct must be agreed in writing between the Licensee and other licensed network operators, licensed retail suppliers and/or public water utilities referred to in clause B10.2.</p> <p>[B10.4] <i>[Not applicable]</i></p> <p>[B10.5] The Licensee must not contravene the Licensee’s Code of Conduct to the extent that it makes the Licensee responsible or liable for the matters set out in it.</p>	 <p>Non-compliant (non-material)</p>

Risk

This presents a high operational risk. In the absence of a clear definition of responsibilities, there is no guarantee that the licensed services will continue to be delivered in a safe and effective manner.

Target for Full Compliance

Evidence that, in the event that a code of conduct has not been established under cl 25 of the Regulation, there is an agreement setting out the respective responsibilities of the Licensee and the party(ies) that are responsible for connected infrastructure.

Evidence sighted

- Interviews with Catherine Hill Bay Water personnel on 24 January 2019.
- Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018.
- Solo Water, *Catherine Hill Bay Water Utility; Solo Water and Central Coast Council; Code of Conduct – Interconnections* (Rev0), 17 May 2017.
- Solo Water, *Catherine Hill Bay Water Utility; Solo Water and Central Coast Council; Code of Conduct – Interconnections* (Rev2), 5 July 2017.
- Email dated 11 May 2017 from Catherine Hill Bay Water to Central Coast Council (re: *FW: Pumpstation Meter Reading and Contact Details*).
- Email chain of communication between Catherine Hill Bay Water and Central Coast Council with entries dated 11 May 2017, 1 June 2017, 6 June 2017, 15 June 2017, 27 June 2017 and 30 June 2017 (re: *Solo Water code of conduct - Catherine Hill Bay*).
- Email dated 5 July 2017 from Central Coast Council to Catherine Hill Bay Water (re: *CHB-CCC-Code of Conduct -Draft 170511 Rev2 5_7_17.docx*).
- Letter dated 5 July 2017 from Central Coast Council to Catherine Hill Bay Water (re: *Letter – Code of Conduct*).
- Email dated 7 July 2017 from Central Coast Council to Catherine Hill Bay Water (re: *Interim Letter to Solo Water - Code of Conduct*).
- Letter (reference: D18/25784) dated 26 September 2018 from IPART to Catherine Hill Bay Water (re: *Clause B10.3 of Catherine Hill Bay Water Utility Pty Ltd's (CHBWU) network operator's licence No. 16_035 and clause B9.3 of Solo Water Pty Ltd's (Solo Water) retail supplier's licence No 15_036R*).
- Letter dated 1 March 2018 from the Department of Planning and Environment to Catherine Hill Bay Water (re: *Catherine Hill Bay Water Utility Pty Ltd – Network Operator's Licence No. 16_035*).
- Letter dated 27 March 2018 from Catherine Hill Bay Water to the Department of Planning and Environment (re: *Solo Water Retail Licence No. 15_036R and CHBWU Network Operator Licence No. 16_035 – Monopoly Supplier consideration*).
- Letter dated 10 August 2018 from the Minister for Energy and Utilities to Catherine Hill Bay Water (re: *Catherine Hill Bay Water Utility Pty Ltd – Network Operator's Licence No. 16_035*).
- Email dated 23 August 2018 from Catherine Hill Bay Water to IPART (re: *Request for Extension of Time for completion of the Code of Conduct with CCC*).
- Letter (reference: D18/25784) dated 26 September 2018 from IPART to Catherine Hill Bay Water (re: *Clause B10.3 of Catherine Hill Bay Water Utility Pty Ltd's (CHBWU) network operator's licence No. 16_035 and clause B9.3 of Solo Water Pty Ltd's (Solo Water) retail supplier's licence No 15_036R*).
- Letter dated 8 October 2018 from Catherine Hill Bay Water to IPART (re: *Code of Conduct – Central Coast Council; Catherine Hill Bay Water Utility Scheme*).

-
- Letter (reference: D18/32108) dated 6 November 2018 from IPART to Catherine Hill Bay Water (re: *Compliance with the Water Industry Competition Act 2006 - Voluntary Undertaking*).
-

Summary of reasons for grade

As reported in respect of the Stage 2 Scheme New Infrastructure Audit, although a Licensee's Code of Conduct has not yet been formally agreed, a draft *Code of Conduct* has been established and Central Coast Council has provided a letter indicating its intent to enter into the proposed *Code of Conduct* with Catherine Hill Bay Water (in relation to the supply of bulk potable water to the Catherine Hill Bay Water schemes). Review of the draft *Code of Conduct* available at the time of reporting reveals that it addresses the requisite matters, and there is no evidence that the terms of the proposed *Code of Conduct* have been contravened.

However, as the proposed *Code of Conduct* has not yet been formalised (agreed in writing by the two parties), Catherine Hill Bay Water has not demonstrated full compliance with this obligation. Given that the draft *Code of Conduct* remains in place and IPART has accepted a Voluntary Undertaking from Catherine Hill Bay Water in respect of this matter, the non-compliance is not considered to be material.

Discussion and notes

Compliance with these obligations has previously been assessed, initially as part of the New Infrastructure Audits conducted in respect of the Stage 1 (Interim Scheme) infrastructure¹³⁷ and more recently (October/November 2018) as part of the New Infrastructure Audits conducted in respect of the Stage 2 Scheme infrastructure.¹³⁸ Catherine Hill Bay Water advised that there has been no subsequent change in status as it is awaiting the outcome of the Central Coast Council water pricing Determination before finalising the Code of Conduct.

Accordingly, findings of the Stage 2 Scheme New Infrastructure Audit are replicated for the purposes of this audit.

Overview:

As reported in respect of the Stage 1 (Interim Scheme) New Infrastructure Audit,¹³⁹ the drinking water infrastructure to be owned and/or operated by Catherine Hill Bay Water will be connected to potable (drinking) water infrastructure owned and operated by Central Coast Council; Council will supply bulk potable water to Catherine Hill Bay Water (which has also been used to charge the recycled water network during Stage 1 (Interim Scheme) operation).

Accordingly, in the absence of a Code of Conduct being established under clause 25 of the Regulation, it is necessary for Catherine Hill Bay Water to establish a Licensee's Code of Conduct with Central Coast Council pursuant to clause B10 of its Network Operator's Licence.

Under the Stage 2 scheme arrangements Central Coast Council, remains the only other licensed network operator, licensed retail supplier and/or public water utility for the purposes of these obligations (the licensed retail supplier for the area to be serviced by the Catherine Hill Bay Water schemes is Solo Water Pty Ltd, parent company of Catherine Hill Bay Water Utility Pty Ltd).

Clause B10.1 – Establishment of a Licensee's Code of Conduct:

Catherine Hill Bay Water has prepared a draft *Code of Conduct*¹⁴⁰ which was submitted to Central Coast Council on 11 May 2017¹⁴¹ for review/comment prior to signing. There is evidence of follow-up by

¹³⁷ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.15.

¹³⁸ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water; New Infrastructure Audit (Stage 2 Scheme)* (Version 2.0), 25 November 2018, table A.16.

¹³⁹ Cobbitty Consulting/Water Futures, *Catherine Hill Bay Water Utility; New Infrastructure Audit (Stage 1 – Interim Scheme)* (Revision 2.0), 17 August 2017, table A.17.

¹⁴⁰ Solo Water, *Catherine Hill Bay Water Utility; Solo Water and Central Coast Council; Code of Conduct – Interconnections* (Rev0), 17 May 2017.

¹⁴¹ Email dated 11 May 2017 from Catherine Hill Bay Water to Central Coast Council (re: *FW: Pumpstation Meter Reading and Contact Details*).

Catherine Hill Bay Water on 18 May 2017, 6 June 2017, 15 June 2017 and 27 June 2017,¹⁴² prior to a meeting being held on 5 July 2017.

Following the meeting on 5 July 2017:

- Central Coast Council provided comments on the draft *Code of Conduct* prepared by Catherine Hill Bay Water;^{143,144} and
- Central Coast Council provided a letter confirming Council’s intent to enter into the agreement (Code of Conduct).^{145,146}

The letter of intent from Council indicates that:

“We understand that as a condition of your WICA licence for the Catherine Hill Bay Scheme you are required to enter into a Code of Conduct with Central Coast Council in relation to the bulk water connection point at the Kanangra Drive Reservoir.

We are in the process of reviewing the draft Code of Conduct provided by Solo Water. Subject to our detailed review of this and satisfactory endorsement by senior management and Central Coast Council, we can confirm that we have intention to enter into this agreement with Solo Water.

Until the Code of Conduct is finalised and agreed between the parties, we can confirm that the Catherine Hill Bay Water Utility Scheme will be managed as a critical water user as per our Drinking Water Management System and the s307 approval already issued under the Water Management Act (2000).

We trust this adequate to allow for you to commence commercial operation of the Catherine Hill Bay Water Utility Scheme.”

It is therefore apparent that Catherine Hill Bay Water has taken steps to establish a Licensee’s Code of Conduct and that Central Coast Council has advised of its intent to enter into such arrangement (subject to final review and internal approval).

Clause B10.2 – Responsibilities to be addressed by the Code of Conduct:

Review of the revised draft *Code of Conduct*¹⁴⁷ (i.e. the version including Council’s comments, which remains current) reveals that the requisite matters are addressed as follows:

- Repair, replacement and maintenance of infrastructure – clause 1.4 *Delineation of Responsibilities* (in relation to all aspects of the potable water system upstream and downstream of the designated Connection Point);
- Water quality – clause 1.7 *Water Quality*;
- Unavailability of water – clause 1.6 *Water Outages/Continuity of Supply*;
- Infrastructure failure – clause 1.4 *Delineation of Responsibilities* and clause 1.6 *Water Outages/Continuity of Supply*;
- Fees and charges – clause 1.12 *Fees and Charges*; and
- Customer complaints – clause 1.11 *Customer Complaints*.

¹⁴² Email chain of communication between Catherine Hill Bay Water and Central Coast Council with entries dated 11 May 2017, 1 June 2017, 6 June 2017, 15 June 2017, 27 June 2017 and 30 June 2017 (re: *Solo Water code of conduct - Catherine Hill Bay*).

¹⁴³ Solo Water, *Catherine Hill Bay Water Utility; Solo Water and Central Coast Council; Code of Conduct – Interconnections* (Rev2), 5 July 2017.

¹⁴⁴ Email dated 5 July 2017 from Central Coast Council to Catherine Hill Bay Water (re: *CHB-CCC-Code of Conduct -Draft 170511 Rev2 5_7_17.docx*).

¹⁴⁵ Letter dated 5 July 2017 from Central Coast Council to Catherine Hill Bay Water (re: *Letter – Code of Conduct*).

¹⁴⁶ Email dated 7 July 2017 from Central Coast Council to Catherine Hill Bay Water (re: *Interim Letter to Solo Water - Code of Conduct*).

¹⁴⁷ Solo Water, *Catherine Hill Bay Water Utility; Solo Water and Central Coast Council; Code of Conduct – Interconnections* (Rev2), 5 July 2017.

Accordingly, Catherine Hill Bay Water is considered to have demonstrated compliance with the requirements of clause B10.2, provided the draft *Code of Conduct* is formally agreed in its current form.

Clause B10.3 – Agreement by parties to the Licensee’s Code of Conduct:

Notwithstanding the provision of a letter a letter confirming Central Coast Council’s intent to enter into the agreement (the Licensee’s Code of Conduct)^{148,149} in July 2017, at the time of writing the *Code of Conduct* remains unsigned, i.e. it has not yet been agreed in writing by Catherine Hill Bay Water and Central Coast Council.

It is understood (based on reference in correspondence from IPART to Catherine Hill Bay Water)¹⁵⁰ that IPART granted an extension of time (beyond the commencement of commercial operation of the Stage 1 (Interim Scheme) infrastructure) such that Catherine Hill Bay Water to agree in writing a Code of Conduct with Central Coast Council by 30 June 2018.

Catherine Hill Bay Water advised that it had not pursued finalisation of the Code of Conduct whilst it awaited clarification in respect of a possible monopoly supplier declaration in relation to the Catherine Hill Bay Water schemes, which would likely have impacted any pricing arrangements between Catherine Hill Bay Water and Central Coast Council. The Department of Planning and Environment had notified Catherine Hill Bay Water of the possibility of such declaration in its potential in early March 2018,¹⁵¹ Catherine Hill Bay Water had responded in late-March 2018;¹⁵² however, advice from the Minister for Energy and Utilities that the declaration would not be made was not provided until August 2018.¹⁵³

Catherine Hill Bay Water requested as further extension to the time by which the Code of Conduct was to be in place (which had then passed);¹⁵⁴ however, IPART denied the request and in turn requested that Catherine Hill Bay Water provide a Voluntary Undertaking in respect of clause B10.3.¹⁵⁵ Catherine Hill Bay Water has provided such Voluntary Undertaking, which commits to have a Code of Conduct in place by 30 November 2019;¹⁵⁶ IPART has subsequently accepted that undertaking, noting that until such time that a Code of Conduct is formalised, Catherine Hill Bay Water will remain non-compliant with the requirements of clause B10.3.¹⁵⁷

Accordingly, Catherine Hill Bay Water is assessed to be non-compliant in respect of clause B10.3; however, given that:

- a draft *Code of Conduct* and Central Coast Council’s letter of intent remains in place; and
- IPART has accepted Catherine Hill Bay Water’s Voluntary Undertaking in respect of this matter, the non-compliance is not deemed to be material (at this time).

¹⁴⁸ Letter dated 5 July 2017 from Central Coast Council to Catherine Hill Bay Water (re: *Letter – Code of Conduct*).

¹⁴⁹ Email dated 7 July 2017 from Central Coast Council to Catherine Hill Bay Water (re: *Interim Letter to Solo Water – Code of Conduct*).

¹⁵⁰ Letter (reference: D18/25784) dated 26 September 2018 from IPART to Catherine Hill Bay Water (re: *Clause B10.3 of Catherine Hill Bay Water Utility Pty Ltd’s (CHBWU) network operator’s licence No. 16_035 and clause B9.3 of Solo Water Pty Ltd’s (Solo Water) retail supplier’s licence No 15_036R*).

¹⁵¹ Letter dated 1 March 2018 from the Department of Planning and Environment to Catherine Hill Bay Water (re: *Catherine Hill Bay Water Utility Pty Ltd – Network Operator’s Licence No. 16_035*).

¹⁵² Letter dated 27 March 2018 from Catherine Hill Bay Water to the Department of Planning and Environment (re: *Solo Water Retail Licence No. 15_036R and CHBWU Network Operator Licence No. 16_035 – Monopoly Supplier consideration*).

¹⁵³ Letter dated 10 August 2018 from the Minister for Energy and Utilities to Catherine Hill Bay Water (re: *Catherine Hill Bay Water Utility Pty Ltd – Network Operator’s Licence No. 16_035*).

¹⁵⁴ Email dated 23 August 2018 from Catherine Hill Bay Water to IPART (re: *Request for Extension of Time for completion of the Code of Conduct with CCC*).

¹⁵⁵ Letter (reference: D18/25784) dated 26 September 2018 from IPART to Catherine Hill Bay Water (re: *Clause B10.3 of Catherine Hill Bay Water Utility Pty Ltd’s (CHBWU) network operator’s licence No. 16_035 and clause B9.3 of Solo Water Pty Ltd’s (Solo Water) retail supplier’s licence No 15_036R*).

¹⁵⁶ Letter dated 8 October 2018 from Catherine Hill Bay Water to IPART (re: *Code of Conduct – Central Coast Council; Catherine Hill Bay Water Utility Scheme*).

¹⁵⁷ Letter (reference: D18/32108) dated 6 November 2018 from IPART to Catherine Hill Bay Water (re: *Compliance with the Water Industry Competition Act 2006 - Voluntary Undertaking*).

Clause B10.5 – Contravention of the Licensee’s Code of Conduct:

Although a formal Licensee’s Code of Conduct is not yet in place, the auditors identified no evidence to indicate that Catherine Hill Bay Water has contravened the intent of the draft *Code of Conduct* (which remains in place).

Recommendations


The following recommendation is made in respect of these obligations:

- **REC-CHB1-2019.01:** It is recommended that Catherine Hill Bay Water takes action to ensure that it updates the draft *Code of Conduct* (as necessary) and agrees in writing a Licensee’s Code of Conduct with Central Coast Council no later than 30 November 2019, as committed in the Voluntary Undertaking dated 8 October 2018 that has been accepted by IPART.
*(This recommendation is a restatement of recommendation **REC-CHB2-NIA.01** made in the Stage 2 Scheme New Infrastructure Audit Report).*
-

Opportunities for improvement

No opportunities for improvement have been identified in respect of these obligations.

Table F.7 **Schedule B to the Network Operator’s Licence – clause B13**

Clause	Requirement	Compliance Grade
Network Operator’s Licence cl.B13	<p>[B13.1] This clause B13 applies each time the Licensee has brought any of the Specified Water Industry Infrastructure into commercial operation.</p> <p>[B13.2] The Licensee must:</p> <p>a) notify IPART in accordance with the Reporting Manual that it has brought the relevant Specified Water Industry Infrastructure into commercial operation; and</p> <p>b) provide such notification within 10 days after it has brought the relevant Specified Water Industry Infrastructure into commercial operation.</p>	 Compliant
Risk	<p>This presents a relatively low operational risk. Whilst it is essential that the Licensee has approval to bring new infrastructure into commercial operation before doing so, there is a lesser risk associated with failing the notify IPART that it has brought that infrastructure into operation.</p>	Target for Full Compliance
		<p>Evidence that the Licensee has notified IPART in writing within 10 days of bringing any Specified Water Industry Infrastructure into operation.</p>
Evidence sighted		
<ul style="list-style-type: none"> ▪ Interviews with Catherine Hill Bay Water personnel on 24 January 2019. ▪ Site inspection of Stage 2 infrastructure at Catherine Hill Bay on 24 January 2019. ▪ Letter dated 9 November 2017 from Solo Water (Catherine Hill Bay Water) to IPART (re: <i>Notification of commencement of Commercial Operation at the Catherine Hill Bay Water Utility Scheme</i>). ▪ Email dated 10 November 2017 from Solo Water (Catherine Hill Bay Water) to IPART (re: <i>Commencement of Operations</i>), including attachments. ▪ IPART, <i>Network Operator’s Reporting Manual under the Water Industry Competition Act 2006 (NSW)</i> (Issue Number 5), June 2016. 		
Summary of reasons for grade		
<p>Catherine Hill Bay Water advised that the Stage 1 (Interim Scheme) water and sewerage infrastructure at Catherine Hill Bay had been brought into commercial operation during the audit period and demonstrated that it had notified IPART, in accordance with the <i>Reporting Manual</i>, that it had done so. Accordingly, Catherine Hill Bay Water is assessed to have demonstrated compliance with this obligation.</p>		

Discussion and notes

As reported in Table D.2, Catherine Hill Bay Water advised that it had brought the Stage 1 (Interim Scheme) infrastructure into commercial operation on 30 October 2017.

Catherine Hill Bay Water demonstrated that it had notified IPART that the infrastructure had been brought into commercial operation in a letter dated 9 November 2017.¹⁵⁸ It also provided a copy of email correspondence which indicates that a copy of the letter was sent to IPART on 10 November 2017,¹⁵⁹ i.e. 11 calendar days after the commencement of commercial operations.

The Licence is not explicit as to whether notification is required within 10 calendar days or 10 business days; nor is the WIC Regulation. However, the *Reporting Manual*¹⁶⁰ in place at the time indicates that notification is to be provided within 10 business days. Accordingly, Catherine Hill Bay Water is compliant with the timing requirement.

Review of Catherine Hill Bay Water's letter confirms that the notification to IPART included the information required by the *Reporting Manual*. More specifically, it included the following details:

- the relevant licence number;
- the Specified Water Industry Infrastructure that has been brought into commercial operation, including a reference to the relevant table in the network operator's licence (if relevant); and
- the date commercial operation started.

Recommendations

There are no recommendations in respect of this obligation.

Opportunities for improvement

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

¹⁵⁸ Letter dated 9 November 2017 from Solo Water (Catherine Hill Bay Water) to IPART (re: *Notification of commencement of Commercial Operation at the Catherine Hill Bay Water Utility Scheme*).

¹⁵⁹ Email dated 10 November 2017 from Solo Water (Catherine Hill Bay Water) to IPART (re: *Commencement of Operations*), including attachments.

¹⁶⁰ IPART, *Network Operator's Reporting Manual under the Water Industry Competition Act 2006 (NSW)* (Issue Number 5), June 2016, section 2.6.8.

