

Independent Pricing and Regulatory Tribunal
New South Wales

Assessment of Cooranbong Water Pty Ltd's
application to vary its network operator's
licence and Flow Systems Pty Ltd's
application to vary its retail supplier's licence
for the Cooranbong Scheme

Prepared in accordance with the *Water Industry
Competition Act 2006 (NSW)*

Report to the Minister
Water

March 2020

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Tribunal Members

The Tribunal members for this assessment are:

Dr Paul Paterson, Chair

Ms Deborah Cope

Ms Sandra Gamble

Enquiries regarding this document should be directed to a staff member:

Christine Allen (02) 9290 8412

Jessica Hanna (02) 9113 7715

Sachin Singh (02) 9113 7784

Nick Singer (02) 9290 8459

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1 Executive summary

We recommend that the Minister for Water, Property and Housing¹ (the Minister) grants Cooranbong Water Pty Ltd (Cooranbong Water) a varied network operator's licence and Flow Systems Pty Ltd (Flow Systems) a varied retail supplier's licence.²

Cooranbong Water currently provides sewerage services and drinking water to residents of Cooranbong in City of Lake Macquarie local government area (Cooranbong scheme). It is also licensed to recycle sewage and provide non-potable water for specific end-uses.

Cooranbong Water's varied network operator's licence would:

- ▼ Authorise Cooranbong Water to construct, operate and maintain sewerage, non-potable water and drinking water reticulation infrastructure to new areas in the North Cooranbong Development³
- ▼ Extend the non-potable water network infrastructure to already developed areas such as the existing town common, and
- ▼ Add dust suppression for construction activities within the development to the list of authorised uses for non-potable water.

The variation to Flow Systems' retail supplier's licence would authorise Flow Systems to supply (retail) sewerage services, drinking water and non-potable water to additional areas, as well as the end use for non-potable water of dust suppression for construction activities, in the Cooranbong scheme.

In assessing Cooranbong Water's licence variation application, we considered the licensing criteria set out in sections 10(3) and (4) of the *Water Industry Competition Act (2006)* (WIC Act), and had regard to the licensing principles in section 7(1) of the WIC Act.

We have also recommended licence conditions for the Minister to consider when granting the licence.

The recommended licence conditions are discussed in section 4.3 of this report. A draft varied network operator licence and draft varied retail supplier licence are presented in **Appendix A** of this report.

¹ The Minister for Water, Property and Housing administers the *Water Industry Competition Act 2006* (NSW).

² Where this Report refers to a *varied* licence, it is referring to a *new* licence granted by the Minister that replaces the previous licence.

³ North Cooranbong Development is a large-scale residential development being undertaken by Johnson Property Group Pty Ltd.

2 Recommendations

We recommend that the Minister for Water, Property, and Housing:

- 1 Grant a varied network operator's licence to Cooranbong Water (licence number 15_033), for the Cooranbong scheme subject to the conditions as set out in the attached draft licence.
- 2 Grant a varied retail supplier's licence to Flow Systems (licence 13_001R) for the Cooranbong scheme, subject to the conditions as set out in the attached draft licence.

The Minister must consider, but is not bound to accept, any advice or recommendation in this report in determining the licence application. The Minister may, if circumstances so require, seek further advice from us in relation to the licence application.⁴

The Minister is required to provide us with a notice of the decision for each licence and the reasons for the decision when deciding whether or not to grant the licences.⁵ We would then publish the notices on our website, in accordance with requirements of the WIC Act.⁶

2.1 The applicants and parent organisation

Cooranbong Water has no employees and relies on the full support of Flow Systems to provide technical, financial and organisational capacity. Flow Systems is the parent company of eight WIC Act licensees, including Cooranbong Water. Flow Systems itself holds a retail supplier's licence so that nine WIC Act licences are held within the Flow Systems group. Flow Systems is named on Cooranbong Water's current network operator's licence as an Authorised Person to construct, operate and maintain non-potable water and sewerage infrastructure.

Flow Systems' parent entity, Sustainable Communities Infrastructure Pty Ltd (SCI) is a special purpose vehicle with three shareholders, the New Zealand Superannuation Fund, the Commonwealth Superannuation Corporation (CSC) and MGIF SCIT PV Pty Ltd.

Under the proposed structure HRL Morrison & Co (Australia) Pty Ltd (Morrison & Co) will manage SCI and the Sustainable Communities Infrastructure Trust (SCIT) on behalf of SCI's shareholders. Morrison & Co is an investment management fund, founded in 1988.

A diagram illustrating Flow Systems ownership structure and related licence holders is provided at Appendix C.

⁴ WIC Act, section 10(2).

⁵ WIC Act, section 10(5).

⁶ WIC Act, section 10(6).

2.2 The Cooranbong scheme

North Cooranbong is a large-scale development located at Cooranbong, in the City of Lake Macquarie, NSW. Avondale Greens Developments Pty Ltd (Developer) engaged Cooranbong Water to provide drinking water, non-potable water and sewerage services.

Cooranbong Water has constructed, and currently operates and maintains, the water and sewage reticulation infrastructure (pipe network) within its licensed area of operation. The non-potable water treatment plant is under construction and until it is commissioned, drinking water is being supplied through both the drinking water and non-potable water reticulation networks. Drinking water is sourced from Hunter Water Corporation's network.

Cooranbong Water is servicing the scheme in two phases, as summarised in Table 2.1.

Table 2.1 Services provided in the proposed phases at the Cooranbong scheme

| Phase | Drinking water | Non-potable water | Sewerage |
|-------------|---|--|---|
| 1 (Current) | Drinking water reticulation connected to Hunter Water's drinking water supply via a bulk water meter off Wainman Drive. | Construction of reticulation network is complete, and currently supplied with drinking water as an interim measure. Treatment infrastructure is under construction. | Construction of sewage network is complete. Sewage collected via Cooranbong Water's pressure sewerage system and discharged to Hunter Water's sewerage network at a maintenance hole off Wainman Drive. |
| 2 (Future) | As per phase 1. | Reticulation network to be supplied with non-potable water, pending Minister's/IPART's approval. | Construction of non-potable water treatment plant to be completed and production of non-potable water to commence, pending Minister's/IPART's approval. |

Note: The licence application refers to the non-potable water treatment plant as a "Local Water Centre".

Cooranbong Water estimates completion of phase 2 in in mid-2020.

The treatment plant will consist of a membrane bioreactor and disinfection units and has provision to add reverse osmosis membranes in the future. The estimated maximum biological capacity of the treatment plant is up to 1000 kL/day of sewerage and would treat an average of 650 kL/day at full development⁷. An approval for commercial operation will be required before the treatment plant can deliver treated water to customers.

2.3 The existing licences

The Minister granted Cooranbong Water a licence (15_033) on 6 August 2015. This licence authorises it to:

- ▼ Construct, operate and maintain pressure sewerage, non-potable water and drinking water reticulation infrastructure, including the water recycling treatment plant, in the specified areas in its licence, and

⁷ *Cooranbong Water Pty Ltd Network Operator Licence 15_033 variation 2 Application, September 2018 version 3*, page 14. Received October, 2018.

- ▼ Use non-potable water for toilet flushing, washing machines (cold water), car washing, water features, residential irrigation, public open space irrigation.

The Minister subsequently varied Cooranbong Water's licence on 18 March 2016 to expand its area of operations, following IPART's assessment of its application⁸.

Flow Systems holds a corresponding retail supplier's licence (licence number 13_001R) granted by the Minister administering the WIC Act on 17 April 2013. The retail supplier's licence authorises Flow Systems to provide (retail) drinking water, non-potable water and sewerage services at various Flow Systems' schemes, including Cooranbong Water and eight other schemes (detailed in Appendix C).⁹

2.4 Applications for the varied licences

The current application is the second variation application to Cooranbong Water's area of operations. The overall area is large and has been divided into precincts identified as Areas A, B, C, D, E, F, H and I (refer to Figure 2.1). Areas identified as Areas G and J were initially applied for, but were subsequently withdrawn by the applicant.

The Network Operator Licence Application seeks to:

- ▼ Construct, operate and maintain sewerage, non-potable water and drinking water reticulation infrastructure to all of the new development areas (Areas A, B, C and D).¹⁰
- ▼ Extend the non-potable water network infrastructure to already developed areas such as the existing town common, (Areas H and I), and
- ▼ Add dust suppression for construction activities within the development to the list of authorised uses for non-potable water.

The Developer will construct the reticulation works as part of the development, in the additional areas applied for in this application, under the guidance of Cooranbong Water.

The Retail Supplier Licence Application seeks to:

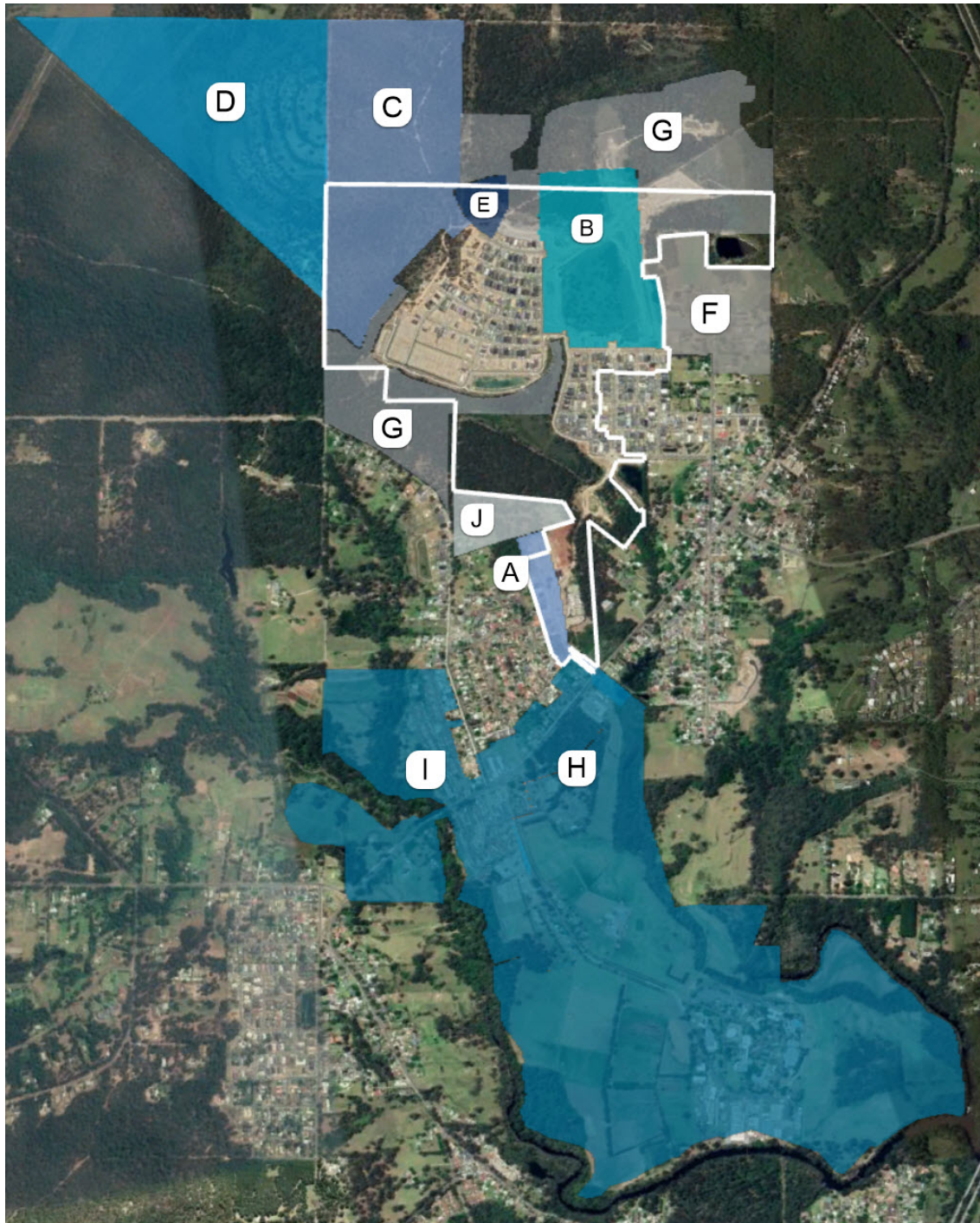
- ▼ Extend the retail of drinking water and sewerage services to all of the new and existing areas (identified as Areas A, B, C, D, E and F).¹⁰
- ▼ Extend the provision of non-potable water to all of the new and existing areas (identified as Areas A, B, C, D, E, F, H and I),¹⁰ and
- ▼ Add dust suppression for construction activities to the list of authorised uses for non-potable water in the Cooranbong scheme.

⁸ Assessment of Cooranbong Water's application to vary its network operator's licence 15_033 Water – Report to the Minister December 2015.

⁹ Pitt Town, Discovery Point, Wyee, North Cooranbong, Huntlee, Green Square, Box Hill North and Shepherds Bay.

¹⁰ Parts of areas A, B and C already fall within the existing area of operations.

Figure 2.1 North Cooranbong precincts



Note: This map is indicative only and is not accurate or to scale.

- a** Proposed additional Network Operator Licence areas for non-potable water are Areas D, H, I and parts of Areas A,B and C.
- b** Proposed additional Network Operator Licence areas for drinking water and sewerage services are area D and parts of Areas A, B, C.
- c** Proposed additional Retail Supplier Licence areas for non-potable water are Areas D, F, H, I and parts of Areas A,B, C, and E.
- d** Proposed additional Retail Supplier Licence areas for drinking water and sewerage services are parts of Areas A,B C, D, E and F.
- e** The white line is the indicative extent of the current area of operations.

Data source: Produced using Google Earth and information from Cooranbong Water's application to vary its network operator licence 15_033 variation 2 (updated), October 2018.

2.4.1 Defining the area of operations

The current application listed an additional 158 lots to add to the 102 lots listed on its existing licence. Many of the existing lot numbers have been retired due to both subdivisions of lots and others have been merged to create new lots.

Due to the constantly changing nature of the lots and boundaries, in our recommended licence we have redefined the area of operations using spatial coordinates. We have worked closely with NSW Spatial Services to update the description of the area of operations to more closely align with the boundaries of the previous area of operations and the additional new lots.

At the request of the applicant we have also slightly reduced the area of operations in one area to ensure there is a clear boundary and no overlap with the area serviced by Hunter Water.

We have also prepared maps for ease of reference depicting the areas of operations (Refer to the schedules within the recommended licences in Appendix A).

2.4.2 Environmental assessment

In determining whether to grant Cooranbong Water a varied network operator's licence for the Cooranbong scheme, the Minister is also a determining authority for the water industry infrastructure development under Part 5 of the EP&A Act¹¹.

We have undertaken an environmental assessment for Areas H and I of the scheme, having had regard to the environmental considerations required by the WIC Act,¹² and the requirements of section 5.5 of the EP&A Act. We engaged an expert consultant to undertake a review (see Appendix D) of the *Review of Environmental Factors (REF) for extension of WICA Network Operator Licence 15_033 Cooranbong*, prepared by RPS Australia East Pty Ltd. The consultant's assessment report concluded that the REF has identified that the environmental impacts are within acceptable parameters, provided the mitigation measures outlined in the REF are effectively implemented.¹³

We have not undertaken an environmental assessment for Areas A, B, C and D as we consider that Lake Macquarie City Council has granted consent for the proposed activities within Areas A, B, C and D under Part 4 of the Act, when it granted consent for the development within these areas. Lake Macquarie City Council does not have the same view and considers that "The consents do not approve the infrastructure required for the reticulated water and sewer service"¹⁴ (refer to Appendix E for the Summary of submissions). While it may not have been the Council's intent, we consider that the consent documents obtained under Part 4 of the *Environmental Planning and Assessment Act 1979* for the development also approved the activities proposed to be carried out under the licence, in Areas A, B, C and D.

¹¹ *State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)* provides that much of the infrastructure which requires a licence under the WIC Act is development which may be carried out **without development consent**. As a result, such development requires environmental assessment under Part 5 of the *Environmental Planning and Assessment Act 1979*.

¹² WIC Act, s 7(1)(a), s 10(4)(e) and clause 7 of the *Water Industry Competition Regulation 2008* (WIC Regulation).

¹³ Jacobs, *Review of Environmental Assessment for Application for extensions of NOL_033 for water services at the Cooranbong North subdivision: IPART review for Areas H & I 9 September 2019 and Addendum to Final report, 3 October 2019*.

¹⁴ C. Dwyer Lake Macquarie City Council, *Letter to J Hanna IPART*, 11 December 2018

3 Consultation and submissions

3.1 Consultation on the Network Operator Licence Application

Cooranbong Water initially submitted an application for a varied licence on 5 April 2018, with a revision submitted in October 2018. We sought further information with regard to the revision and required further information subsequent to Flow Systems group being put into administration for a period of time from 20 December 2018 to 16 April 2019 and the sale of the Flow Systems group in November 2019.

We consulted in October 2018

On 31 October 2018, we provided the licence variation application to, and invited submissions from the following Ministers and their relevant departments:

- ▼ Minister administering the *Public Health Act 2010* (NSW) (Minister for Health).
- ▼ Minister administering Chapter 2 of the *Water Management Act 2000* (NSW) (Minister for Regional Water).
- ▼ Minister administering the *Protection of the Environment Operations Act 1997* (NSW) (POEO Act) (Minister for the Environment).
- ▼ Minister administering the *Environmental Planning and Assessment Act 1979* (NSW) (Minister for Planning).¹⁵

We also provided a copy of the licence variation application to the Minister administering the WIC Act, who at that time was the Minister for Energy and Utilities the Hon. Don Harwin, MLC.¹⁶ We also called for submissions on the application from the public.¹⁷

We notified Hunter Water of the licence variation application¹⁸ because Cooranbong Water is connected to, and will continue to use water industry infrastructure owned and operated by Hunter Water as part of activities in relation to which it seeks a licence variation.¹⁹

We invited Lake Macquarie City Council to make a submission²⁰ as the consent authority under Part 4 of the *Environment Planning and Assessment Act 1979* (NSW) for the overall development and for water industry infrastructure in some of the areas being applied for in this licence variation.²¹

¹⁵ As required by the WIC Act, section 9(1)(b) and *Water Industry Competition (General) Regulation 2008*, clause 17(1).

¹⁶ As required by the WIC Act, section 9(1)(a).

¹⁷ As required by the WIC Act, section 9(1)(c).

¹⁸ Letter to Hunter Water, IPART, 31 October 2018.

¹⁹ As required by the WIC Act, section 9(1)(b)(iii) and WIC Regulation, clause 17(2).

²⁰ Letter to Lake Macquarie City Council, IPART, 31 October 2018.

²¹ Consent for the residential development is required under Part 4 of the EP&A Act. However, water industry infrastructure requires an assessment and determination under Part 5 of the EP&A Act as per clause 106 of ISEPP.

We also called for submissions on the application from the public.²² We advertised in the Lakes Mail, Newcastle Herald and the Sydney Morning Herald on 31 October 2018 for public submissions. The closing date for submissions was 12 December 2018.

We considered all submissions

We considered all submissions against the relevant licensing principles and criteria as part of our assessment of the application. Where necessary, we sought more information from Cooranbong Water to consider the issues raised in the submissions. Should the Minister grant the varied licences, we propose that the Minister impose conditions on the licence to address outstanding risk.

A summary of all the submissions we received is presented in Appendix Table E.1.

Our recommended licence conditions are summarised in section 4.

3.2 Consultation on the Retail Supplier's Licence Application

Flow Systems initially submitted an application for a varied licence on 5 June 2019, with subsequent revisions submitted in June and October 2019.

On 24 October 2019, we provided the Retail Supplier Licence Application to, and invited submissions from, the following Ministers and their relevant departments:

- ▼ Minister administering the WIC Act and the *Water Management Act 2000* (NSW) (Minister for Water, Property and Housing).
- ▼ Minister for Health.
- ▼ Minister for Planning.²³
- ▼ Minister for the Environment.

We also notified Hunter Water of the application.²⁴

We called for submissions on the application from the public.²⁵ The closing date for submissions was 21 November 2019.

We considered all submissions

We considered all submissions against the relevant licensing principles and criteria as part of our assessment of the application.

A summary of all the submissions we received is presented in Appendix E.

²² As required by the WIC Act, section 9(1)(c).

²³ As required under the section 9(1)(b) of the WIC Act and clause 17(1) of the *Water Industry Competition (General) Regulation 2008*.

²⁴ Letter to Hunter Water, IPART, 24 October 2019.

²⁵ WIC Act, section 9(1)(c).

We requested information after the sale to Morrison & Co

Subsequent to our consideration of submissions, the Flow Systems group was sold and now has new owners (ie, New Zealand Superannuation, Commonwealth Superannuation Corporation, MGIF SCIT PV Trust). We have therefore re-assessed the technical, organisational and financial capacity of the applicants under the new ownership structure.

We sought further information to understand the impact of the sale on Flow Systems' and Cooranbong Water's capacity to undertake activities that the licence would authorise. Information sought included:

- ▼ Details of the sales, new ownership structure, changes to Directors, management.
- ▼ Copies of agreements between the shareholders and the Flow Systems group, and relevant trust deeds and details of facilities or arrangements for funding.
- ▼ Financial including budgeting and financial forecasts.

4 Assessment of application

The WIC Act sets out licensing principles which the Minister must have regard to in considering whether or not to grant a licence.²⁶ The WIC Act also prohibits a licence from being granted to a disqualified corporation or related entity²⁷ and requires the Minister to be satisfied that the applicant meets specific criteria set out in the WIC Act or the regulations in order to grant a licence.²⁸ The Minister can consider relevant matters having regard to the public interest.²⁹

This section of our report contains our assessment of the Network Operator Licence Application and the Retail Supplier Licence Application against:

- ▼ The eligibility of the applicant (section 4.1); and
- ▼ The licensing principles (section 4.2)
- ▼ The licensing criteria (section 4.3).

This section also includes reasons for our recommendations. In addition to our assessment, we have updated the licence format and Schedule B, the standard ministerially imposed licence conditions, which are applicable to all network operators. In this report we have only discussed substantial changes to licence conditions. Minor changes, such as editorial or numbering changes are not discussed.

4.1 The applicants are eligible for a licence

We consider that Coorabong Water and Flow Systems are not disqualified corporations or corporations that are a related entity of a relevant³⁰ disqualified corporation.

We relied on the following information:

- ▼ ASIC reports that we obtained for Coorabong Water and Flow Systems, and for any relevant related entities, confirmed that these companies are not disqualified nor are their directors or persons concerned in the management disqualified individuals.³¹
- ▼ Information provided by Coorabong Water and Flow Systems regarding details of the:

²⁶ Section 7 of the WIC Act

²⁷ Section 10(3) of the WIC Act

²⁸ Section 10(4)(a) to 10(4)(e) of the WIC Act

²⁹ Section 10(4)(f) of the WIC Act

³⁰ A related entity that would have a direct or indirect interest in, or influence on, the carrying out of the activities that the licence authorises. WIC Act, section 10(3)(b).

³¹ The relevant searches were completed on 13 February 2020.

- Relevant related entities.³²
 - Names of the Directors, Chief Financial Officer and Chief Executive Officer for each of Flow Systems' and Cooranbong Water's relevant related entities (subsidiary companies and holding companies within Australia).
- ▼ Statutory declaration³³ signed by Cooranbong Water's Acting Chief Executive Officer and sole director, stating that:
- Cooranbong Water is not a disqualified corporation within the meaning of the WIC Act.
 - Cooranbong Water is not a related entity of a disqualified corporation that would have a direct or indirect interest in, or influence on, the carrying out of activities that the licence would authorise if granted.
- ▼ Statutory declaration³⁴ signed by Flow Systems' Acting Chief Executive Officer and sole director, stating that:
- Flow Systems is not a disqualified corporation within the meaning of the WIC Act.
 - Flow Systems is not a related entity of a disqualified corporation that would have a direct or indirect interest in, or influence on, the carrying out of activities that the licence would authorise if granted.

4.2 The applications are consistent with the licensing principles

In considering whether or not to recommend that the Minister grant the varied licence, and any conditions the varied licence should be subject to (if granted), we had regard to the licensing principles set out in the WIC Act.

Box 4.1 Licensing principles under section 7(1) of the WIC Act

"In considering whether or not a licence is to be granted under this Part and what conditions are to be imposed on such a licence, regard is to be had to the following principles:

- a) the protection of public health, the environment, public safety and consumers generally,
- b) the encouragement of competition in the supply of water and the provision of sewerage services,
- c) the ensuring of sustainability of water resources,
- d) the promotion of production and use of recycled water,
- e) the promotion of policies set out in any prescribed water policy document,
- f) the potential for adverse financial implications for small retail customers generally arising from the activities proposed to be covered by the licence,
- g) the promotion of the equitable sharing among participants in the drinking water market of the costs of water industry infrastructure that significantly contributes to water security."

³² Cooranbong Water identified the following relevant related entities: Flow Systems Pty Limited (ACN 136 272 298), Pitt Town Water Pty Limited (ACN 141 705 660), Discovery Point Water Pty Limited (ACN 142 392 541), Wye Water Pty Limited (ACN 160 953 775), Green Square Water Pty Limited (ACN 163 432 906), Huntlee Water Pty Limited (ACN 167 418 608), Cooranbong Water Pty Limited (ACN 169 450 453), Flow Systems Operations Pty Limited (ACN 603 106 305), Flow Systems Constructors Pty Ltd (ACN 605 967 280), Meter2Cash Solutions Pty Ltd (ACN 130 008 196), Sustainable Communities Infrastructure Pty Limited as trustee for the Sustainable Communities Infrastructure Trust (CAN 633 957 918).

³³ Updated statutory declaration dated 20 May 2019.

³⁴ Updated statutory declarations dated 15 and 16 August 2019.

4.2.1 The Network Operator Licence Application is consistent with licensing principles

We consider that the application is consistent with the licensing principles set out in the WIC Act.

In considering whether or not to recommend that the Minister grant the licence variation, and any conditions the varied licence should be subject to (if granted), we had regard to the licensing principles set out in the WIC Act. We have outlined our consideration in the sections below.

Protection of public health, the environment, public safety and consumers generally (licensing principle (a))

We have had regard to Cooranbong Water's capacity to construct, maintain and operate non-potable water, drinking water and sewerage infrastructure in the additional areas requested within the Cooranbong scheme in a manner that does not present a risk to public health, the environment, public safety and consumers generally.

Public health

We assessed Cooranbong Water's capacity to manage the key risks posed to public health by the activities to be licensed in the expanded Cooranbong scheme, having regard to the protection of public health in section 4.3.1 of this report.

Protection of the environment

We assessed Cooranbong Water's capacity to construct, operate and maintain drinking water, non-potable water and sewerage infrastructure for the expanded Cooranbong scheme in a manner that does not present a significant risk of harm to the environment.

We considered the following:

- ▼ **Capacity to comply with environmental regulations** - A search of EPA's public registers did not identify any notices, convictions or civil proceedings, enforceable undertakings or penalties issued under the POEO Act for Flow Systems or Cooranbong Water.³⁵ The EPA confirmed in its submission that it has no record of Flow Systems or Cooranbong Water breaching the POEO Act.
- ▼ **Capacity to implement environmental management processes in relation to the activities to be licensed** - Cooranbong Water has provided its risk assessments for non-potable water and sewerage activities and Flow Systems' ISO 14001 certification (Environmental Management Systems).

³⁵ EPA is required to maintain several public registers under section 308 of the POEO Act. We searched the register for any notices of conviction and civil proceedings, enforceable undertakings, and penalties on 7 December 2018. Available at: <https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers>

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- ▼ **Previous experience** – Cooranbong Water relies on Flow Systems for capacity. Flow Systems has previous experience in preparing environmental assessment reports and providing appropriate mitigation measures, as shown in recent network operator’s licence applications including Huntlee, Cooranbong, Green Square and Box Hill North schemes. This demonstrates that Cooranbong Water, supported by Flow Systems, has the capacity to implement the appropriate management systems that document and implement preventive measures to not cause significant harm to the environment during the construction, operation and maintenance of sewage and water infrastructure.

We also assessed whether Cooranbong Water has met the requirements for determination under Part 5 of the EP&A Act in relation to the proposed activities in Chapter 5 of this report.

The NSW Environment Protection Authority (EPA) made a submission regarding public interest considerations and land capability for irrigation zones during our consultation on the licence application.³⁶ Our response is in the summary of submissions in Appendix E. We note that the designated irrigation zones in the proposed Area H of this application has potential sodicity issues that can emerge from over irrigation. We consider that recommended licence conditions below will address the issues raised by the EPA.

The EPA also stated that approvals *may* be required under the POEO Act as the sewage treatment system capacity is above the processing capacity threshold and because Cooranbong Water proposes to irrigate using treated effluent.³⁷ Cooranbong Water has responded³⁸ that it will be using recycled water (non-potable water) for irrigation and not treated effluent, and it does not expect to reach the sewage treatment system capacity until 2024.

We have considered EPA’s reasons and Cooranbong Water’s response and consider that Cooranbong Water needs to further consult with the EPA to ensure it complies with its obligations for protection of the environment under WIC Act and the POEO Act. We consider that this should not impact the decision to grant the varied licence as Cooranbong Water is required under WIC Regulation Schedule 1 clause 4 to comply with the requirements of the POEO Act.

We recommend that Cooranbong Water should be subject to the following special (Schedule A) licence conditions (see draft licence in Attachment A), in relation to its capacity to protect the environment.

³⁶ Letter from EPA, dated 6 December 2018.

³⁷ Ibid.

³⁸ Letter from Flow Systems, 29 March 2019.

Table 4.1 Recommended licence conditions for protection of the environment

| Licence condition | Condition details |
|-------------------|---|
| Schedule A 2.1 | 2.1. Where the Licensee carries out any activities authorised by this Licence, the Licensee must: a) implement environmental risk mitigation measures substantially consistent with the environmental risk mitigation measures identified in the REF; and b) specify, in any Plan or combination of Plans, how the Licensee will implement environmental risk mitigation measures substantially consistent with the environmental risk mitigation measures identified in the REF. |
| Schedule A 3.1 | The Licensee must not commence, or authorise the commencement of, the construction of any Water Industry Infrastructure the subject of the REF until after the Licensee has provided a Construction Environmental Management Plan to IPART, and IPART has provided written approval of the Construction Environmental Management Plan to the Licensee. |
| Schedule A 3.2 | The Licensee must ensure that the construction of any Water Industry Infrastructure the subject of the REF is carried out in accordance with the approved Construction Environmental Management Plan. |
| Schedule A 4.1 | The Licensee must manage irrigation of Designated Irrigation Zones in accordance with the recommendations in the LCA. |
| Schedule A 4.2 | The Licensee must monitor soil condition of Designated Irrigation Zones on an annual basis and maintain records of monitoring. Any deterioration to soil conditions from the LCA must be reported to IPART with proposed mitigation measures that the Licensee will undertake. The licensee must undertake, and maintain records of, all proposed mitigation measures unless notified otherwise by IPART. |

Note: Schedule A lists special licence conditions.

Protection of public safety

We assessed Cooranbong Water’s capacity to manage key risks with regard to public health specifically and public safety in general in section 4.3.1 of this report.

Protection of consumers generally

We address potential financial impacts to customers below under licensing principle (f). We consider that this variation will not have non-financial impacts to consumers (except for public health which is addressed in section 4.3.1).

If the Minister approves a variation to the network operator’s licence, we consider that consumers generally will continue to be protected in relation to the activities licensed.

Encouragement of competition in the supply of water and the provision of sewage services (licensing principle (b))

Historically, Hunter Water has provided monopoly drinking water supply and sewerage services in the area. Cooranbong Water is currently supplying drinking water (sourced from Hunter Water) and sewerage services, and has approval to provide non-potable water to licensed areas within the existing Cooranbong scheme.

The varied licence would enable the existing private water utility to supply drinking water, non-potable water and provide sewerage services to additional areas in the North

Cooranbong Development. However, the varied licence (if granted) would not give Cooranbong Water an exclusive right to provide the services and should allow for future competition in supply.

Ensuring sustainability of water resources (licensing principle (c))

The proposed licence variation to extend the scheme's area of operations should enable Cooranbong Water to further reduce per capita demand on the Hunter Water drinking and sewerage networks by sourcing sewage from the Cooranbong scheme and to produce non-potable water to replace drinking water for permitted end uses within the expanded area of operations.

Promotion of production and use of recycled water (licensing principle (d))

The promotion of production and use of non-potable water is a key component of the proposed scheme. If granted a licence variation, Cooranbong Water will supply non-potable water to Flow Systems who will supply customers for the extended Cooranbong scheme. Cooranbong Water's website and other marketing material, promotes the use of non-potable water in the community.

Promotion of policies set out in any prescribed water policy document (licensing principle (e))

We have not identified any policies that apply to this scheme.

Potential for adverse financial implications for small retail customers generally arising from the activities proposed to be covered by the licence (licensing principle (f))

Cooranbong Water is a small private water utility and has a relatively small customer pool to recover operational and maintenance costs for the scheme. For this reason, and due to the high cost of producing non-potable water, there is a potential for adverse financial implications to small retail customers when compared to the larger publically owned utilities.

However, we consider that the Cooranbong scheme customers should be reasonably protected as:

- ▼ The applicant has a stated policy³⁹ of price matching with the local incumbent (Hunter Water) except for one off charges such as administration fees or connection fees⁴⁰, and
- ▼ The Minister can, at any stage, declare the scheme a monopoly and subject it to price regulation⁴¹.

³⁹ Flow Systems Price Policy: <https://askus.flowsystems.com.au/hc/en-us/articles/202089004--Price-Policy> Accessed 28 November 2019

⁴⁰ Flow Systems pricing information document states:
"The developer may choose to pass on the infrastructure fee (\$5,445.03 including GST) to the purchaser, purchasers will be notified by the developer whether this fee is included or not via the sales contract"

⁴¹ Determination of the pricing and/or periodic review of the policies. WIC Act, section 52(1).

Promotion of equitable sharing among participants in the drinking water market of the costs of water industry infrastructure that significantly contributes to water security (licensing principle (g))

The Cooranbong scheme buys drinking water from Hunter Water and on-sells the drinking water to customers of the scheme. Hunter Water and Flow Systems (the retail supplier for drinking water provided through the Cooranbong scheme) can negotiate prices for wholesale drinking water that best reflect the costs and benefits of the Cooranbong scheme for both parties. The granting of the proposed licence variation does not impact the equitable sharing of the costs of water industry infrastructure that significantly contributes to water security.

If IPART was asked by either party to set Hunter Water's wholesale prices to Flow Systems for drinking water supplied by the Cooranbong scheme, we would consider the contribution of the recycled water treatment plant to water security in the region to ensure the wholesale drinking water service provided to Flow Systems Pty Ltd for Cooranbong is priced in a way that recognises the benefits of the plant, without unreasonably adding to the prices paid by Hunter Water's other customers.

4.2.2 The Retail Supplier Licence Application is consistent with the licensing principles

We consider that the proposed extension of Flow Systems' area of operations, and the addition of an end use (ie, dust suppression for construction activities), is consistent with each of the licensing principles set out in the WIC Act. We analysed the information in the Retail Supplier Licence Application, and considered our assessment undertaken for the original retail supplier licence application in 2013. We conclude that there have not been any material changes to how licensing principles (a)-(g) apply, and that our analysis contained in the report provided to the Minister in 2015, in which we recommended that Flow Systems be granted a retail supplier licence for the Cooranbong scheme, continue to apply⁴².

4.3 The applicants would continue to meet the licensing criteria

In making our recommendation that the Minister grant varied licences, and the conditions to which these licences should be subject (if granted), we considered the licensing criteria set out in the WIC Act.

⁴² Assessment of Cooranbong Water's application to vary its network operator's licence 15_033, Prepared under the Water Industry Competition Act 2006 (NSW), Water — Report to the Minister December 2015

Box 4.2 Licensing criteria under section 10(4) of the WIC Act

“A licence may not be granted unless the Minister is satisfied as to each of the following:

- a) that the applicant has, and will continue to have, the capacity (including technical, financial and organisational capacity) to carry out the activities that the licence (if granted) would authorise,
- b) that the applicant has the capacity to carry out those activities in a manner that does not present a risk to public health,
- c) that the applicant has made, and will continue to maintain, appropriate arrangements with respect to insurance,
- d) in the case of an application for a licence to supply water, that, if such a licence is granted, sufficient quantities of the water supplied by the licensee will have been obtained otherwise than from a public water utility,
- e) such matters as are prescribed by the regulations,
- f) such other matters as the Minister considers relevant, having regard to the public interest.”

4.3.1 Coorabong Water meets the licensing criteria

We consider that the proposed extension of the scheme to authorise the construction, maintenance and operation of non-potable water, drinking water and sewerage infrastructure in the expanded area of operations, the addition of one new end-use satisfies the licensing criteria set out in the WIC Act. Our analysis of the new activities against licensing principles (a), (b), (c) and (f) is set out below.

For the remainder of the licensing criteria, we analysed the information in the Network Operator Licence Application, and considered our assessment undertaken for the original network operator’s licence application in 2012. We conclude that there have not been any material changes to how licensing principles (d)-(e) apply.⁴³

Technical capacity (licensing criteria (a))

We are satisfied that Coorabong Water has the technical capacity to undertake the proposed new activities.

Coorabong Water relies on the full support of Flow Systems staff and its systems for its technical capacity. Flow Systems provides technical services to Coorabong Water under a corporate services agreement⁴⁴ between the parties.

Evidence of technical capacity

Coorabong Water demonstrated its technical capacity to undertake the proposed activities for the expanded Coorabong scheme through the provision of plans and documents, developed by Flow Systems for the Coorabong scheme, which show an understanding of design, operation and maintenance of non-potable water, drinking water and sewerage infrastructure.

⁴³ We consider, having regard to the public interest, that there are no other matters that the Minister should consider as relevant to this application.

⁴⁴ Executed as an agreement on 10 June 2014.

During our assessment of the plans and documents we identified issues which should be rectified prior to commencing commercial operation of the new infrastructure and will communicate these to Coorabong Water.

We have included more detail of Coorabong Water's technical capacity assessment in Appendix B.

Relevant experience

Coorabong Water, supported by Flow Systems, operates infrastructure at the Coorabong scheme under its network operator's licence. Flow Systems will continue to provide sufficient technical capacity to Coorabong Water to operate under a varied licence. We assessed position descriptions and professional experience of specific personnel nominated in the application. We consider that the expertise required by Coorabong Water/Flow Systems personnel under a varied licence is not different to the expertise required under its current licence.

Compliance history

Coorabong Water has demonstrated its capacity to construct, operate and maintain non-potable water industry infrastructure at the Coorabong scheme since it was licensed in August 2015.

The most recent audit report for the Coorabong scheme identified several insignificant non-compliances regarding the implementation and currency of management plans. While the non-compliances indicate that improvement is required, they did not result in a failure of treatment processes or adversely impact public health and safety.

We have also considered similar non-compliances identified for other Flow Systems subsidiary licensees as relevant to Flow Systems' ability to provide technical capacity to Coorabong Water. IPART is undertaking a range of actions so that non-compliances are addressed and the risk of repeat non-compliances is reduced.

On balance, we consider that despite the recent findings of audits of other Flow Systems Schemes the Minister can be satisfied of the applicant's technical capacity to construct, operate and maintain non-potable water, drinking water and sewage infrastructure, when supported by additional licence conditions. Therefore, we have recommended four additional licence conditions to mitigate the risk of similar types of non-compliances on the implementation of licence plans.⁴⁵ We will undertake further audits to monitor ongoing compliance. The proposed new licence conditions are summarised in Table 4.2.

⁴⁵ Schedule A, clause 6.1 and clause 6.1 of the proposed network operator's licence.

Table 4.2 Recommended licence conditions for technical capacity and protection of public health

| Clause number | Condition |
|------------------------|---|
| Schedule A, clause 1.1 | <p>1.1. 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 carry out the activities authorised by this Licence, <p>the Licensee must provide IPART with written notice of that fact 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 services provided under the Agreement will be provided subsequent to the proposed termination, novation, assignment, transfer or alteration.</p> |
| Schedule A, clause 5.1 | <p>The Licensee must ensure that its water quality plan is a single, cohesive and structured scheme specific document which specifies the actions the licensee must take to implement the 12 elements of the framework for recycled water and drinking water quality management and use set out in the Australian Guidelines for Water Recycling and the Australian Drinking Water Guidelines.</p> |
| Schedule A, clause 6.1 | <p>The Licensee must develop and document, consistent with element 4 of the Australian Guidelines for Water Recycling and Australian Drinking Water Guidelines:</p> <ul style="list-style-type: none"> a) Monitoring protocols for operational performance of the non-potable water and drinking water supply systems, including the selection of operational parameters and criteria, and the routine analysis of results; b) Procedures for corrective action where operational parameters are not met; c) Procedures for rapid communication systems to deal with unexpected events; and d) Programs for regular inspection and maintenance of all equipment, including monitoring equipment. |
| Schedule A, clause 6.2 | <p>The Licensee must:</p> <ul style="list-style-type: none"> a) fully implement the Operational Procedures; b) ensure that all of its activities are carried out in accordance with the Operational Procedures; and c) keep records to demonstrate the extent to which the Operational Procedures have been implemented and complied with. |

Note: Schedule A are special licence conditions

Financial capacity (licensing criteria (a))

We are satisfied that Coorabong Water has the financial capacity to undertake the proposed new activities.

Coorabong Water currently relies on the support of Flow Systems for financial capacity as it does not have financial capacity as a stand-alone entity. In November 2019, the sale of the Flow Systems group to a consortium of investors (Shareholders), was completed.

We therefore re-assessed the financial capacity of the applicants under the new ownership structure and have concluded that the sale has not materially impacted Flow Systems or Cooranbong Water's financial capacity.

With support from the Shareholders, Cooranbong Water and Flow Systems have adequate levels of solvency and liquidity to undertake licensed activities under the network operator's licence.

We have included more detail of Flow Systems' financial capacity assessment in Appendix B.

We note that our financial assessment represents financial capacity at a point in time. Our recommendation to grant Cooranbong Water a varied licence should not be viewed as an endorsement of its future, ongoing viability of Cooranbong Water or Flow Systems. The assessment is based on a combination of information sources, none of which is to be regarded as individually determinative. We undertake this assessment for our own purposes and for the Minister's purposes in making a determination on the application. Our conclusion is not to be relied upon for any other purpose or by any other person.

We do not recommend additional licence conditions on financial capacity, should the Minister grant Cooranbong Water a varied licence. We consider that the existing condition in Schedule B, clause 1.1 adequately manages any risk on financial capacity.

Organisational capacity (licensing criteria (a))

We are satisfied that Cooranbong Water has the organisational capacity to undertake the proposed new activities.

We note that Cooranbong Water has no employees and relies on the full support of Flow Systems to provide organisational capacity. Flow Systems underwent a period of administration during the assessment of this application. We consider that despite the associated changes to the organisational structure, Cooranbong Water and Flow Systems' organisational capacity remains materially unchanged.

Our detailed assessment of Cooranbong Water's organisational capacity is in Appendix B.

Capacity to carry out those activities in a manner that does not present a risk to public health (licensing criteria (b))

We are satisfied that Cooranbong Water has the capacity to undertake the proposed new activities in a manner that does not present a risk to public health.

We assessed Cooranbong Water's capacity to manage the following key areas of risks to public health, posed by the:

- ▼ Construction, operation and maintenance of non-potable water and sewerage infrastructure for the Cooranbong scheme.
- ▼ Use of non-potable water for the additional end-use of dust suppression during construction activities.

We considered a range of information and evidence to establish Cooranbong Water's capacity. Our detailed assessment is in Appendix B.

Scheme management plans and risk methodology

We reviewed the risk assessments for this scheme and consider that there are inconsistencies with the way in which the risk assessment methodology has been applied.

In its submission, NSW Health has advised that the risk assessments and management plans should be reviewed in consultation with stakeholders.⁴⁶ This submission is available on our website and discussed in the summary of submissions in Appendix E.

Cooranbong Water must “consult with NSW Health during the detailed risk assessments for drinking and non-potable water” under clause B4.1 of the current network operator’s licence.⁴⁷ We expect that the issues with the risk assessment and controls will be addressed as part the consultation with NSW Health.

Cooranbong Water must update its water quality plans to address the risks associated with the new proposed end-use prior to supplying non-potable water for those purposes. As part of the update, Cooranbong Water must finalise the risk assessment and identify appropriate controls. Such a change to the water quality plan is significant and Cooranbong Water will require an audit to assess the adequacy of the revised plan under Schedule 1, clause 7(5)(a) of the *Water Industry Competition (General) Regulation (NSW) 2008 (WIC Regulation)*. An audit is also required prior to the commencement of commercial operation of the non-potable water treatment plant.

We expect that NSW Health’s request for consultation when updating management plans will be addressed through this process.

On balance, we consider that Cooranbong Water has the capacity to continue to protect public health under a varied licence when supported by a combination of the regulatory measures outlined above and additional licence conditions. Three of the additional special licence conditions in Schedule A of the proposed licence, also relate to ensuring activities are carried out in a manner that does not present a risk to public health. These are conditions 5.1, 6.1 and 6.2 in Schedule A of the licence presented in Table 4.2.

We have restricted one of the proposed new end-uses for non-potable water

The existing licence authorises Cooranbong Water to supply non-potable water for “water features” generally. We consider that it is appropriate to limit this end-use to “ornamental water features” only, consistent with our recommendation for other network operator licence applications for Flow Systems’ schemes. We consider that the public health risks posed by authorising the use of non-potable water in water features is high. This is because water features can include splash park type features or shallow pools, as may be present at the North Cooranbong development, with which children or adults may interact resulting in a high likelihood of ingesting non-potable water.

Therefore, we propose to limit this end-use as follows⁴⁸:

Ornamental water features means water features that

⁴⁶ Submission from NSW Health, 12 December 2018.

⁴⁷ Condition B3.1 of the proposed new licence.

⁴⁸ In Table 1.3 of the proposed network operator’s licence in Attachment A

- a) are provided primarily for aesthetic or beautification purposes, and
- b) do not, by their design or accessibility, encourage interaction with the water.

Appropriate arrangements with respect to insurance (licensing criteria (c))

We are satisfied that Cooranbong Water, supported by Flow Systems, has, and will continue to maintain, appropriate insurance arrangements for the Cooranbong scheme.

We requested advice from Insurance & Care NSW (icare) on the appropriateness of Flow Systems' and Cooranbong Water's insurance arrangements, with respect to the expanded Cooranbong Scheme. As a result of its review, icare considered Flow Systems and Cooranbong Water insurance arrangements as appropriate for the varied network operator's licence.⁴⁹

We note that Cooranbong Water is not insured for gradual pollution events.⁵⁰ However, we understand that this is generally uninsurable or cost-prohibitive. We have identified that irrigation in Areas H and I carries some risk of gradual pollution and have recommended licence conditions in Table 4.1 to mitigate this risk.

We received no submissions regarding Cooranbong Water's insurance arrangements.

We recommend that Cooranbong Water should not be subject to any further special licence conditions in relation to insurance, if a varied licence is granted. We consider that existing special condition 3.5 and standard conditions 2.1-2.6 of Schedule B remain appropriate to manage insurance risks in the varied licence.

Public interest considerations (licensing criteria (f))

We are satisfied that there are no public matter interest considerations

We have not identified any additional public interest matters that we consider relevant to the granting of the varied licence.

4.3.2 Flow Systems meets the licensing criteria

We consider that the proposed activities for the expanded Cooranbong scheme satisfies each of the licensing criteria set out in the WIC Act. We analysed the information in the Retail Supplier Licence Application, and considered our assessment undertaken for the original retail supplier licence application in 2014-2015. We conclude that there have not been any material changes to how licensing criteria (d)-(f) apply, and that our the analysis contained in the report provided to the Minister in 2015, in which we recommended that Flow Systems be granted a retail supplier licence for the Cooranbong scheme, continue to apply.

⁴⁹ Email to IPART, icare Insurance and Reinsurance Strategy Manager, 2 September 2019.

⁵⁰ *Insurance Experts Report – Cooranbong*. Prepared by A.J. Gallagher, 9 July 2019.

We have undertaken further analysis of the Retail Supplier Licence Application in relation to licensing criteria (a) - (c) as described below.

Technical capacity

We are satisfied that Flow Systems has the technical capacity to supply drinking and non-potable water to the customers of Cooranbong Water.

Flow Systems proposes to use the same systems, procedures and resources to supply its intended customers for the varied licence at the Cooranbong scheme.⁵¹

Flow Systems has demonstrated its technical capacity as a retail supplier of non-potable water through the provision of plans, codes of practice and policies that show its understanding of retail supply of non-potable water supply to customers.

We have included more detail of Flow Systems' technical capacity assessment in Appendix B.

Financial and organisational capacity

We are satisfied that Flow Systems has the financial and organisational capacity to supply drinking and non-potable water to the customers of Cooranbong Water.

With support from the Shareholders, Flow Systems has adequate levels of solvency and liquidity to undertake licensed activities under the retail supplier's licence.

We have included more detail of Flow Systems' financial capacity assessment in Appendix B.

We note that our financial assessment represents financial capacity at a point in time. Our recommendation to grant Flow Systems a varied licence should not be viewed as an endorsement of its future, ongoing viability of Flow Systems. The assessment is based on a combination of information sources, none of which is to be regarded as individually determinative. We undertake this assessment for our own purposes and for the Minister's purposes in making a determination on the application. Our conclusion is not to be relied upon for any other purpose or by any other person.

We do not recommend additional licence conditions on financial capacity, should the Minister grant Flow Systems a varied licence. We consider that the existing condition in Schedule B, clause 1.1 adequately manages any risk on financial capacity.

Our detailed assessment of Flow Systems' organisational capacity is in Appendix B.

Capacity to carry out those activities in a manner that does not present a risk to public health

We are satisfied that Flow Systems has the capacity to supply drinking and non-potable water to the customers of Cooranbong Water, in a manner that does not present a risk to public health.

⁵¹ The RSMP, codes and compliance procedures are standard documents that apply across all of Flow Systems' schemes.

Our detailed assessment of Flow Systems' capacity to undertake licensed retail activities in a manner that does not pose a risk to public health is in Appendix B.

Flow Systems will retail drinking water accessed from Cooranbong Water's network under an existing utility services agreement. This water is ultimately sourced from Hunter Water.

As Flow Systems will retail non-potable water produced by Cooranbong Water at the non-potable water treatment plant, we consider the management of public health risks by Cooranbong Water as outlined in section 4.2 to be relevant.

Appropriate arrangements with respect to insurance

We are satisfied that Flow Systems has, and will continue to maintain, appropriate insurance arrangements for the Cooranbong scheme.

We have previously assessed Flow Systems' insurance as adequate for the retail supply activities undertaken under the retail supplier's licence, which covers a number of schemes including the Cooranbong scheme⁵². The insurance arrangements set out in the Retail Supplier Licence Application have not materially changed from Flow Systems' existing insurance arrangements. We consider that Flow Systems insurance arrangements with respect to the activities undertaken under the retail supplier's licence are sufficient to cover the additional customers for the Cooranbong scheme.

⁵² See "Assessment of Flow Systems Pty Ltd's application to vary its retail supplier's licence no. 13_001R Prepared under the Water Industry Competition Act 2006 (NSW)" August 2017

5 Environmental assessment of the Cooranbong scheme

5.1 Part 5 of the EP&A Act

In addition to a licence variation application assessment, the Cooranbong scheme requires a Part 5 infrastructure and environmental assessment to be undertaken for Areas H and I. We have examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment should the Minister grant the varied licence for the Cooranbong scheme.

5.2 REF for the proposed sewage and non-potable water reticulation systems:⁵³

This report outlines Cooranbong Water's assessment of the environmental impacts of the construction, operation and maintenance of the proposed sewage and non-potable water reticulation networks and irrigation activities for Areas H and I of the Cooranbong scheme. The REF concluded that the proposed activities, in conjunction with the proposed mitigation measures, are not likely to significantly affect the environment.

Consultant's review of the Cooranbong sewage and non-potable water reticulation REF:⁵⁴

We engaged a consultant to review the REF provided by Cooranbong Water (refer to Appendix D for the Consultant's report). Following comments from the consultant, Cooranbong Water amended the REF and resubmitted it to us. The consultant reviewed the updated REF and concluded that:

"RPS Australia East Pty Ltd on behalf of Cooranbong Water Pty Ltd has addressed all the key issues raised in our previous review, and hence we are of the view that they have addressed all of the environmental risks adequately. The REF (version E) is now suitable to consider the environmental implications of the proposed development and meets the requirements of Sections 5.5 and 5.7 of the *NSW Environmental Planning and Assessment Act 1979* and Clause 228 of the *NSW Environmental Planning and Assessment Regulation 2000*. Furthermore, as the REF includes suitable safe guides, additional approval conditions (over and above those described in the REF) are not required."

On this basis, we have recommended the inclusion of Areas H and I defined in the REF in the area of operation.

⁵³ RPS, *Extension of WICA Network Operator Licence 15_033 Cooranbong: Review of Environmental Factors*, Version E, 25 September 2019.

⁵⁴ Jacobs, *Review of Environmental Assessment for Application for Extensions of NOL 15_033 for water services at the Cooranbong North subdivision: IPART review for Areas H & I* 9 September 2019 and *Addendum to Final report*, 3 October 2019.

A Recommended Licences



NEW SOUTH WALES GOVERNMENT

Water Industry Competition Act 2006 (NSW)

Network operator's licence

Licence no. 15_033

Cooranbong Water Pty Ltd

(ACN 169 450 453)

PRELIMINARY

1. Summary

- 1.1. This Licence is granted under section 10(1) of the Act.
- 1.2. The Act prohibits a person from constructing, maintaining or operating any water industry infrastructure otherwise than under the authority of a licence. This Licence authorises the Licensee and other Authorised Persons to carry out such activities that would otherwise be prohibited under the Act.

2. Outline

- 2.1. This Licence is divided into the following sections and schedules:

Section 1 authorises the construction, maintenance and operation of water infrastructure for non-potable water (if applicable).

Section 2 authorises the construction, maintenance and operation of water infrastructure for drinking water (if applicable).

Section 3 authorises the construction, maintenance and operation of sewerage infrastructure (if applicable).

Schedule A sets out special Ministerially-imposed licence conditions that are specific to this Licence.

Schedule B sets out Ministerially-imposed licence conditions that generally apply to network operators' licences granted under the Act.

Schedule C sets out definitions and interpretation provisions.

Schedule D sets out the area of operations for non-potable water and sewerage treatment infrastructure.

Schedule E sets out the area of operations for non-potable water reticulation infrastructure.

Schedule F sets out the area of operations for drinking water reticulation infrastructure and sewerage services infrastructure.

Schedule G provides indicative maps for reference only.

- 2.2. In addition to the conditions in Schedules A and B to this Licence, the Act and Regulation also contain conditions that apply to this Licence. Nothing in Schedules A or B modify or affect the conditions imposed on this Licence by the Act or Regulation.
- 2.3. Where there is an inconsistency between Schedule G on the one hand and any of Schedules D, E and F on the other hand, Schedules D, E and F are to prevail over Schedule G to the extent of the inconsistency.

SECTION 1 – ACTIVITIES AUTHORISED: NON-POTABLE WATER

Subject to the conditions imposed by the Act, the Regulation and Schedules A and B of this Licence, this Licence authorises the Licensee and any Authorised Persons specified in Table 1.1 to construct, maintain and operate the water industry infrastructure specified in Table 1.2:

- a) for one or more of the purposes for water industry infrastructure specified in Table 1.2; and
- b) within the area of operations specified in Table 1.3.

The non-potable water supplied by means of the water industry infrastructure specified in Table 1.2 may only be used for the authorised purposes for non-potable water specified in Table 1.4.

Table 1.1 Authorised Persons

| |
|--|
| Flow Systems Pty Ltd (ACN 136 272 298) |
|--|

Table 1.2 Water industry infrastructure and purposes for water industry infrastructure

- | |
|---|
| <ol style="list-style-type: none">1) A treatment plant for non-potable water and other water infrastructure used, or to be used, in connection with the treatment plant, where components of the treatment plant or other water infrastructure may be used for one or more of the following purposes for water industry infrastructure:<ol style="list-style-type: none">a) production of non-potable water;b) treatment of non-potable water;c) filtration of non-potable water;d) storage of non-potable water; ande) conveyance of non-potable water in the area specified in Table 1.3 (1).2) A reticulation network for non-potable water and other water infrastructure used, or to be used, in connection with the reticulation network, where components of the reticulation network or other water infrastructure may be used for one or more of the following purposes for water industry infrastructure:<ol style="list-style-type: none">a) production of non-potable water;b) treatment of non-potable water;c) filtration of non-potable water;d) storage of non-potable water; ande) conveyance of non-potable water in the areas specified in Table 1.3 (2). |
|---|

Table 1.3 Area of operations

- | |
|---|
| <ol style="list-style-type: none">1) The land bounded within the sequentially numbered vertices listed in Schedule D, Table D.1 and illustrated in Map 1 in Schedule G.2) The land bounded within the sequentially numbered vertices listed in Schedule E, Table E.1 and illustrated in Map 2 in Schedule G. |
|---|

Table 1.4 Authorised purposes for non-potable water

- | |
|---|
| <ol style="list-style-type: none">1) Toilet flushing2) Washing machines (cold water)3) Car washing4) Ornamental water features5) Irrigation6) Dust suppression for construction activities |
|---|

SECTION 2 – ACTIVITIES AUTHORISED: DRINKING WATER

Subject to the conditions imposed by the Act, the Regulation and Schedules A and B of this Licence, this Licence authorises the Licensee and any Authorised Persons specified in Table 2.1 to construct, maintain and operate the water industry infrastructure specified in Table 2.2:

- a) for one or more of the purposes for water industry infrastructure specified in Table 2.2; and
- b) within the area of operations specified in Table 2.3.

Table 2.1 Authorised Persons

| |
|--|
| Flow Systems Pty Ltd (ACN 136 272 298) |
|--|

Table 2.2 Water industry infrastructure and purposes for water industry infrastructure

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

- | |
|--|
| <ol style="list-style-type: none">a) storage of drinking water;b) conveyance of drinking water; andc) treatment of drinking water. |
|--|

Table 2.3 Area of operations

- | |
|--|
| <ol style="list-style-type: none">1) The land situated within the sequentially numbered vertices listed in Schedule F, Table F.1 and illustrated in Map 3 in Schedule G. |
|--|

Table 2.4 Authorised purposes

- | |
|---|
| <ol style="list-style-type: none">1) Provision of drinking water. |
|---|

SECTION 3 – ACTIVITIES AUTHORISED: SEWERAGE SERVICES

Subject to the conditions imposed by the Act, the Regulation and Schedules A and B of this Licence, this Licence authorises the Licensee and any Authorised Persons specified in Table 3.1 to construct, maintain and operate the water industry infrastructure specified in Table 3.2:

- a) for one or more of the purposes for water industry infrastructure specified in Table 3.2; and
- b) within the area of operations specified in Table 3.3.

Table 3.1 Authorised Persons

| |
|--|
| Flow Systems Pty Ltd (ACN 136 272 298) |
|--|

Table 3.2 Water industry infrastructure and purposes for water industry infrastructure

- | |
|---|
| <ol style="list-style-type: none">1) A treatment plant for sewage and other sewerage infrastructure used, or to be used, in connection with the treatment plant, where components of the treatment plant or other sewerage infrastructure may be used for one or more of the following purposes for water industry infrastructure:<ol style="list-style-type: none">a) production of treated non-potable water from sewage;b) treatment of sewage;c) filtration of sewage;d) storage of sewage; ande) conveyance of sewagein the area specified in Table 3.3 (1)2) A reticulation network for sewage and other sewerage infrastructure used, or to be used, in connection with the reticulation network, where components of the reticulation network or other sewerage infrastructure may be used for one or more of the following purposes for water industry infrastructure:<ol style="list-style-type: none">a) production of treated non-potable water from sewage,b) treatment of sewage;c) filtration of sewaged) storage of sewage; ande) conveyance of sewagein the area specified in Table 3.3 (2) |
|---|

Table 3.3 Area of operations

- 1) The land situated within the sequentially numbered vertices listed in Schedule D, Table D.1 and illustrated in Map 1 in Schedule G.
- 2) The land situated within the sequentially numbered vertices listed in Schedule D, Table F.2 and illustrated in Map 3 in Schedule G.

Table 3.4 Authorised purposes

- 1) Sewage collection and transport

SCHEDULE A – SPECIAL MINISTERIALLY-IMPOSED LICENCE CONDITIONS

1. Notification of changes to Agreements

1.1. If a party to an Agreement proposes to:

- 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 carry out the activities authorised by this Licence,

the Licensee must provide IPART with written notice of that fact 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 services provided under the Agreement will be provided subsequent to the proposed termination, novation, assignment, transfer or alteration.

2. Review of Environmental Factors

2.1. Where the Licensee carries out any activities authorised by this Licence, the Licensee must:

- a) implement environmental risk mitigation measures substantially consistent with the environmental risk mitigation measures identified in the REF; and
- b) specify, in any Plan or combination of Plans, how the Licensee will implement environmental risk mitigation measures substantially consistent with the environmental risk mitigation measures identified in the REF.

3. Construction Environmental Management Plan

3.1. The Licensee must not commence, or authorise the commencement of, the construction of any Water Industry Infrastructure the subject of the REF until after the Licensee has provided a Construction Environmental Management Plan to IPART, and IPART has provided written approval of the Construction Environmental Management Plan to the Licensee.

3.2. The Licensee must ensure that the construction of any Water Industry Infrastructure the subject of the REF is carried out in accordance with the approved Construction Environmental Management Plan.

4. Management of Designated Irrigation Zones

- 4.1. The Licensee must manage irrigation of Designated Irrigation Zones in accordance with the recommendations in the LCA
- 4.2. The Licensee must monitor soil condition of Designated Irrigation Zones on an annual basis and maintain records of monitoring. Any deterioration to soil conditions from the LCA must be reported to IPART with proposed mitigation measures that the Licensee will undertake. The licensee must undertake, and maintain records of, all proposed mitigation measures unless notified otherwise by IPART

5. Water Quality Plan

- 5.1. The licensee must ensure that its water quality plan is a single, cohesive and structured scheme specific document which specifies the actions the licensee must take to implement the 12 elements of the framework for recycled water and drinking water quality management and use set out in the Australian Guidelines for Water Recycling and the Australian Drinking Water Guidelines.

6. Operational Procedures

- 6.1. The Licensee must develop and document, consistent with element 4 of the Australian Guidelines for Water Recycling and Australian Drinking Water Guidelines:
 - a) monitoring protocols for operational performance of the recycled water and drinking water supply systems, including the selection of operational parameters and criteria, and the routine analysis of results;
 - b) procedures for corrective action where operational parameters are not met;
 - c) procedures for rapid communication systems to deal with unexpected events; and
 - d) programs for regular inspection and maintenance of all equipment, including monitoring equipment.
- 6.2. The Licensee must:
 - a) fully implement the Operational Procedures;
 - b) ensure that all of its activities are carried out in accordance with the Operational Procedures; and
 - c) keep records to demonstrate the extent to which the Operational Procedures have been implemented and complied with.

SCHEDULE B – GENERAL MINISTERIALLY-IMPOSED LICENCE CONDITIONS

1. Ongoing capacity to operate

- 1.1. 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 in accordance with the Reporting Manual.

2. Maintaining appropriate insurance

- 2.1. The Licensee must hold insurance that is appropriate for the size and nature of the activities that the Licensee is carrying out under this Licence.
- 2.2. 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.
- 2.3. Before commencing to commercially operate the Specified Water Industry Infrastructure under this Licence, the Licensee must demonstrate that the insurance held is appropriate for the size and nature of those commercial operation activities, by providing a report to IPART from an Insurance Expert that:
- a) certifies that in the Insurance Expert's opinion, the type, scope and limit of the insurance held by the Licensee is appropriate for the size and nature of those commercial operation activities; and
 - b) is in the form prescribed by the Reporting Manual.
- 2.4. [Not applicable]
- 2.5. If, in relation to the activities authorised by this Licence, there is, or is to be, a change in either of the following, the Licensee must provide a report to IPART in accordance with the Reporting Manual:
- 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 held by the Licensee.
- 2.6. From time to time when requested in writing by IPART, the Licensee must provide a report to IPART, in the manner and form and within the timeframes specified by IPART, from an Insurance Expert certifying that in the Insurance Expert's opinion the type, scope and limit on the amount of insurance held by the Licensee is appropriate for the size and nature of the activities that the Licensee is carrying out under this Licence.

[Note: The circumstances in which IPART may request a report under clause 2.6 include (but are not limited to) the following:

- where IPART considers that there may be a change in the type, scope or limit on the amount of insurance held by the Licensee in relation to activities that the Licensee is carrying out under this Licence;
- where there is a change in the type or extent of activities authorised by this Licence;
or
- where IPART or an approved auditor considers that the type, scope or limit on the amount of insurance held by the Licensee may not be appropriate for the size and nature of the activities that the Licensee is carrying out under this Licence.]

2.7. The Licensee must maintain professional indemnity insurance during the Design Phase and for a minimum period of 6 years from the date of the completion of the Design Phase.

3. Complying with NSW Health requirements

3.1. The Licensee must carry out the activities authorised by this Licence in compliance with any requirements of NSW Health that:

- a) IPART has agreed to; and
- b) are notified from time to time to the Licensee by IPART in writing.

4. Complying with Audit Guidelines

4.1. The Licensee must comply with any Audit Guidelines issued by IPART.

5. Reporting in accordance with the Reporting Manual

5.1. The Licensee must prepare and submit reports in accordance with the Reporting Manual.

6. Reporting information in relation to the register of licences

6.1. The Licensee must notify IPART, and provide IPART with details, of any change in relation to the following, in accordance with the Reporting Manual, within 14 days of the change:

- a) any source from which the water handled by the Specified Water Industry Infrastructure is derived;

- b) the identity of each licensed retail supplier or public water utility that has access to the infrastructure services provided by the Specified Water Industry Infrastructure for the purpose of supplying water to its customers;
- c) any other water infrastructure to which the Specified Water Industry Infrastructure is connected;
- d) in the case of non-potable water, the authorised purposes for that water;
- e) the identity of each licensed retail supplier or public water utility that has access to infrastructure services provided by the Specified Water Industry Infrastructure for the purpose of providing sewerage services to its customers;
- f) any other sewerage infrastructure to which the Specified Water Industry Infrastructure is connected; and
- g) the arrangements for the disposal of waste from the water industry infrastructure specified in section 3, Table 3.2.

7. Monitoring

- 7.1. The Licensee must undertake any monitoring that is required for the purposes of this Licence, any Plan, the Act or the Regulation in accordance with this clause 7.
- 7.2. The Licensee must keep the following records of any samples taken for monitoring purposes specified in the Water Quality Plan:
 - a) the date on which the sample was taken;
 - b) the time at which the sample was collected;
 - c) the point or location at which the sample was taken; and
 - d) the chain of custody of the sample (if applicable).
- 7.3. The Licensee must ensure that analyses of all samples taken for the purposes of Verification Monitoring are carried out by a laboratory accredited for the specified tests by an independent body that is acceptable to NSW Health, such as the National Association of Testing Authorities or an equivalent body.

8. Delineating responsibilities

- 8.1. If a code of conduct has not been established under clause 25 of the Regulation, the Licensee must, by a date specified by IPART, establish a code of conduct (**Licensee's Code of Conduct**) in accordance with this clause 8.
- 8.2. 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:
 - a) the Licensee; and

- b) each licensed network operator, licensed retail supplier and/or public water utility that:
 - i) supplies water or provides sewerage services by means of any water industry infrastructure that is connected to the Specified Water Industry Infrastructure; or
 - ii) constructs, maintains or operates any water industry infrastructure that is connected to the Specified Water Industry Infrastructure.

8.3. [Not applicable]

8.4. The Licensee's Code of Conduct must set out the respective responsibilities of the entities specified in clause 8.2 by, at a minimum, providing for:

- 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 other water industry infrastructure;
- b) who is responsible for water quality;
- c) who is liable in the event of the unavailability of water;
- d) who is liable in the event of failure of any water industry infrastructure;
- e) the fees and charges payable in respect of the use of the water industry infrastructure; and
- f) who is responsible for handling customer complaints.

8.5. 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.

9. Notification of changes to end-use

9.1. If the Licensee proposes to operate the Specified Water Industry Infrastructure to supply non-potable water for an end-use which is not set out in the most recent Water Quality Plan provided to IPART, the Licensee must notify IPART in writing at least 3 months before commencing such operation.

10. Notification of commercial operation

10.1. Each time the Licensee has brought any new Specified Water Industry Infrastructure into commercial operation, the Licensee must:

- a) notify IPART in accordance with the Reporting Manual that it has brought the relevant Specified Water Industry Infrastructure into commercial operation; and
- b) provide such notification within 10 days after it has brought the relevant Specified Water Industry Infrastructure into commercial operation.

11. Notification of non-compliant Plumbing

- 11.1. If the Licensee becomes aware that a customer's Plumbing is not Code Compliant, the Licensee must, within 10 days, notify the customer and the Plumbing Regulator, in writing, of that fact.

SCHEDULE C – INTERPRETATION AND DEFINITIONS

1. Interpretation

1.1. In this Licence, unless the context requires otherwise:

- a) the singular includes the plural and vice versa;
- b) headings are used for convenience only and do not affect the interpretation of this Licence;
- c) a reference to a document includes the document as modified from time to time and any document replacing it;
- d) a reference to a “person” includes a natural person and any body or entity whether incorporated or not;
- e) a reference to a clause is to a clause in this Licence;
- f) a reference to a section is to a section in this Licence;
- g) a reference to a schedule is to a schedule to this Licence;
- h) a reference to a law or statute includes regulations, rules, codes and other instruments under it, and consolidations, amendments, re-enactments or replacements of them; and
- i) explanatory notes do not form part of this Licence, but in the case of uncertainty may be relied on for interpretation purposes.

2. Definitions

2.1. Expressions used in this Licence that are defined in the Act or the Regulation have the meanings set out in the Act or the Regulation.

2.2. In this Licence:

Act means the *Water Industry Competition Act 2006* (NSW).

Agreement means any agreement or deed provided to IPART in connection with the Licensee's application for this Licence, or any application to vary this Licence.

Audit Guidelines means the document titled “*Audit Guideline – Water Industry Competition Act 2006*”, which is prepared by IPART and is available on IPART's website at www.ipart.nsw.gov.au, and any other guidelines issued by IPART in relation to audits under the Act.

| | |
|--|--|
| Authorised Person | means each person specified in, as applicable: <ul style="list-style-type: none"> a) section 1, Table 1.1; b) section 2, Table 2.1; and c) section 3, Table 3.1. |
| Authorised Purposes | means the authorised purposes specified in, as applicable: <ul style="list-style-type: none"> a) section 1, Table 1.4; b) section 2, Table 2.4; and c) section 3, Table 3.4. |
| Code Compliant | has the meaning given to that term under section 7 of the <i>Plumbing and Drainage Act 2011</i> (NSW). |
| Construction Environmental Management Plan | means a site or project specific plan which: <ul style="list-style-type: none"> a) complies with the basic structure detailed in the Environmental Management Plan Guidelines; and b) identifies how the Licensee will implement the environmental risk mitigation measures identified in the REF to the extent they relate to construction. |
| Designated Irrigation Zones | means designated irrigation zones identified in the LCA. |
| Design Phase | means the period during which any design works are carried out in relation to the water industry infrastructure that the Licensee is authorised to construct, maintain and operate under this Licence. |
| Environmental Management Plan Guidelines | means the document titled " <i>Guideline for the Preparation of Environmental Management Plans</i> ", prepared by the Department of Infrastructure, Planning and Natural Resources. |

| | |
|----------------------------|--|
| Insurance Expert | means an insurance broker which holds an Australian financial services licence under Part 7.6 of the <i>Corporations Act 2001</i> (Cth) that authorises the broker to provide financial product advice for, and deal in, contracts of insurance within the meaning of Chapter 7 of that Act. |
| IPART | means the Independent Pricing and Regulatory Tribunal of New South Wales established under the <i>Independent Pricing and Regulatory Tribunal Act 1992</i> (NSW). |
| LCA | means the “ <i>Land Capability Assessment and Recycled Water Irrigation Plan North Cooranbong, NSW (Extension to Cooranbong Water NOL#15_033)</i> ”, 24 September 2018. |
| Licence | means this network operator’s licence granted under section 10 of the Act. |
| Licensee | means Cooranbong Water Pty Ltd (ACN 169 450 453). |
| Licensee’s Code of Conduct | has the meaning given in Schedule B, clause 8.1. |
| Minister | means the Minister responsible for Part 2 of the Act. |
| NSW Health | means the Water Unit of NSW Ministry of Health and any of the local health districts as defined by the NSW Ministry of Health. |
| Ornamental Water Feature | means water features that: <ul style="list-style-type: none"> a) are provided primarily for aesthetic or beautification purposes, and b) do not, by their design or accessibility, encourage interaction with the water. |
| Plan | means any infrastructure operating plan, water quality plan or sewage management plan that the Licensee is required to prepare under the Regulation. |

| | |
|---|--|
| Plumbing | means any pipe, fitting or apparatus that is situated: <ul style="list-style-type: none"> a) downstream of the customer’s connection point to a water main, where the water main is Specified Water Industry Infrastructure; b) upstream of a customer’s connection point to a sewer main, where the sewer main is Specified Water Industry Infrastructure; or c) upstream of a customer’s connection point to a stormwater drain, where the stormwater drain is Specified Water Industry Infrastructure. |
| Plumbing Regulator | has the meaning given to that term under section 3 of the <i>Plumbing and Drainage Act 2011</i> (NSW). |
| REF | means the document titled “Extension of WICA Network Operator Licence 15_033 Cooranbong – Review of Environmental Factors”, Version E, prepared by RPS Australia East Pty Ltd and dated 25 September 2019 and does not include any modified version of that document or any document replacing it. |
| Regulation | means the Water Industry Competition (General) Regulation 2008 (NSW). |
| Reporting Manual | means the document titled “Network Operator’s Reporting Manual”, which is prepared by IPART and is available on IPART’s website at www.ipart.nsw.gov.au . |
| Specified Water Industry Infrastructure | means the water industry infrastructure specified in, as applicable: <ul style="list-style-type: none"> d) section 1, Table 1.2; e) section 2, Table 2.2; and f) section 3, Table 3.2. |
| Verification Monitoring | means verification monitoring as described in the document titled “ <i>Australian Drinking Water Guidelines</i> ” or the document titled “ <i>Australian Guidelines for Water Recycling</i> ” as the case may be. |
| Water Quality Plan | means the water quality plan that the Licensee is required to prepare under the Regulation. |

**SCHEDULE D – AREA OF OPERATIONS – NON-POTABLE WATER AND SEWAGE
TREATMENT INFRASTRUCTURE**

Table D.1 Vertices for area of operation

| Vertex | Coordinates ¹ | |
|---------------|---------------------------------|------------------|
| | Eastings | Northings |
| 1 | 355974.226 | 6340014.313 |
| 2 | 356089.188 | 6340029.934 |
| 3 | 356098.205 | 6340031.159 |
| 4 | 356139.302 | 6340022.406 |
| 5 | 356132.106 | 6339947.433 |
| 6 | 356089.208 | 6339500.483 |
| 7 | 356087.789 | 6339499.203 |
| 8 | 356047.991 | 6339543.034 |
| 9 | 356029.467 | 6339554.282 |
| 10 | 356000.436 | 6339586.616 |
| 11 | 356001.255 | 6339815.371 |
| 12 | 355985.02 | 6339934.868 |
| 13 | 355974.226 | 6340014.313 |

1 Coordinate reference system is MGA 56

**SCHEDULE E – AREA OF OPERATIONS – NON-POTABLE WATER RETICULATION
INFRASTRUCTURE**

Table E.1 Vertices for area of operation

| Coordinates ¹ | | | Coordinates ¹ | | |
|---------------------------------|----------------|-----------------|---------------------------------|----------------|-----------------|
| Vertex | Easting | Northing | Vertex | Easting | Northing |
| 1 | 354351.202 | 6342167.55 | 40 | 356472.252 | 6340901.686 |
| 2 | 354514.692 | 6342139.48 | 41 | 356465.966 | 6340857.134 |
| 3 | 354592.036 | 6342126.211 | 42 | 356518.25 | 6340853.471 |
| 4 | 355263.261 | 6342010.852 | 43 | 356522.239 | 6340734.066 |
| 5 | 355299.057 | 6342004.699 | 44 | 356521.267 | 6340708.562 |
| 6 | 355457.953 | 6341977.432 | 45 | 356511.592 | 6340653.776 |
| 7 | 355476.118 | 6341974.262 | 46 | 356628.492 | 6340635.63 |
| 8 | 355928.178 | 6341895.744 | 47 | 356663.771 | 6340597.367 |
| 9 | 355947.934 | 6341892.376 | 48 | 356656.201 | 6340553.09 |
| 10 | 355853.373 | 6341292.557 | 49 | 356655.421 | 6340548.975 |
| 11 | 356025.753 | 6341261.302 | 50 | 356518.744 | 6340571.539 |
| 12 | 356035.744 | 6341259.492 | 51 | 356517.393 | 6340564.916 |
| 13 | 356035.744 | 6341259.492 | 52 | 356511.02 | 6340529.497 |
| 14 | 356150.057 | 6341238.764 | 53 | 356509.328 | 6340520.087 |
| 15 | 356154.466 | 6341287.101 | 54 | 356508.144 | 6340512.92 |
| 16 | 356150.397 | 6341292.015 | 55 | 356507.647 | 6340509.879 |
| 17 | 356230.926 | 6341284.356 | 56 | 356473.232 | 6340515.876 |
| 18 | 356234.995 | 6341279.435 | 57 | 356459.461 | 6340518.274 |
| 19 | 356251.894 | 6341277.87 | 58 | 356457.642 | 6340507.902 |
| 20 | 356256.765 | 6341281.96 | 59 | 356425.193 | 6340513.556 |
| 21 | 356403.679 | 6341268.302 | 60 | 356392.735 | 6340519.209 |
| 22 | 356407.748 | 6341263.377 | 61 | 356378.973 | 6340521.608 |
| 23 | 356424.694 | 6341261.757 | 62 | 356346.515 | 6340527.26 |
| 24 | 356429.593 | 6341265.824 | 63 | 356314.239 | 6340533.244 |
| 25 | 356484.442 | 6341260.581 | 64 | 356314.179 | 6340540.351 |
| 26 | 356488.511 | 6341255.657 | 65 | 356255.557 | 6340549.401 |
| 27 | 356505.457 | 6341254.038 | 66 | 356241.003 | 6340473.322 |
| 28 | 356498.096 | 6341175.733 | 67 | 356251.795 | 6340469.873 |
| 29 | 356649.645 | 6341148.313 | 68 | 356238.394 | 6340391.931 |
| 30 | 356774.359 | 6341125.628 | 69 | 356228.412 | 6340393.983 |
| 31 | 356976.796 | 6341088.994 | 70 | 356218.483 | 6340342.249 |
| 32 | 356953.354 | 6340941.979 | 71 | 356253.676 | 6340334.913 |
| 33 | 356933.899 | 6340819.976 | 72 | 356249.597 | 6340308.5 |
| 34 | 356697.067 | 6340862.109 | 73 | 356308.787 | 6340296.974 |
| 35 | 356717.346 | 6340981.24 | 74 | 356304.967 | 6340279.013 |
| 36 | 356698.489 | 6340984.596 | 75 | 356297.856 | 6340238.541 |
| 37 | 356547.095 | 6340995.2 | 76 | 356313.647 | 6340235.975 |
| 38 | 356538.803 | 6340910.934 | 77 | 356329.672 | 6340233.37 |
| 39 | 356473.609 | 6340915.5 | 78 | 356345.706 | 6340230.766 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 79 | 356361.74 | 6340228.161 |
| 80 | 356377.774 | 6340225.556 |
| 81 | 356373.42 | 6340204.076 |
| 82 | 356370.51 | 6340204.431 |
| 83 | 356294.047 | 6340216.855 |
| 84 | 356271.293 | 6340220.551 |
| 85 | 356255.643 | 6340195.055 |
| 86 | 356235.132 | 6340161.656 |
| 87 | 356281.62 | 6340098.924 |
| 88 | 356320.705 | 6340027.191 |
| 89 | 356341.037 | 6340032.67 |
| 90 | 356370.51 | 6340204.431 |
| 91 | 356373.42 | 6340204.076 |
| 92 | 356363.245 | 6340144.607 |
| 93 | 356353.07 | 6340085.137 |
| 94 | 356332.72 | 6339966.2 |
| 95 | 356323.68 | 6339976.503 |
| 96 | 356287.552 | 6339941.527 |
| 97 | 356269.488 | 6339924.042 |
| 98 | 356251.424 | 6339906.549 |
| 99 | 356139.306 | 6340022.406 |
| 100 | 356132.106 | 6339947.433 |
| 101 | 356089.208 | 6339500.483 |
| 102 | 356087.789 | 6339499.202 |
| 103 | 356102.181 | 6339485.034 |
| 104 | 356108.883 | 6339477.55 |
| 105 | 356137.009 | 6339446.173 |
| 106 | 356191.06 | 6339385.868 |
| 107 | 356146.496 | 6339345.677 |
| 108 | 356101.721 | 6339305.283 |
| 109 | 356056.936 | 6339264.888 |
| 110 | 356012.152 | 6339224.497 |
| 111 | 355967.378 | 6339184.103 |
| 112 | 355937.522 | 6339157.174 |
| 113 | 355889.604 | 6339150.239 |
| 114 | 355789.484 | 6339135.747 |
| 115 | 355790.994 | 6339125.721 |
| 116 | 355792.485 | 6339115.772 |
| 117 | 355800.099 | 6339062.819 |
| 118 | 355807.754 | 6339009.666 |
| 119 | 355815.398 | 6338956.515 |
| 120 | 355823.99 | 6338896.791 |
| 121 | 356022.96 | 6338925.561 |
| 122 | 356014.361 | 6338985.301 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 123 | 356006.707 | 6339038.47 |
| 124 | 355999.045 | 6339091.637 |
| 125 | 355991.422 | 6339144.609 |
| 126 | 356208.677 | 6339176.1 |
| 127 | 356188.363 | 6339058.2 |
| 128 | 356179.897 | 6339009.081 |
| 129 | 356193.555 | 6338914.428 |
| 130 | 356214.688 | 6338767.887 |
| 131 | 356237.327 | 6338610.893 |
| 132 | 356323.194 | 6338606.372 |
| 133 | 356541.862 | 6338568.677 |
| 134 | 356471.029 | 6338437.977 |
| 135 | 356461.448 | 6338420.286 |
| 136 | 356360.085 | 6338292.326 |
| 137 | 356368.58 | 6338289.206 |
| 138 | 356379.966 | 6338285.023 |
| 139 | 356455.341 | 6338380.178 |
| 140 | 356456.826 | 6338382.05 |
| 141 | 356478.322 | 6338409.186 |
| 142 | 356491.967 | 6338434.366 |
| 143 | 356583.626 | 6338418.63 |
| 144 | 356568.24 | 6338323.669 |
| 145 | 356566.185 | 6338304.586 |
| 146 | 356564.64 | 6338290.269 |
| 147 | 356564.4 | 6338288.775 |
| 148 | 356574.441 | 6338287.192 |
| 149 | 356581.223 | 6338286.276 |
| 150 | 356584.637 | 6338285.82 |
| 151 | 356588.07 | 6338285.368 |
| 152 | 356591.541 | 6338284.917 |
| 153 | 356595.048 | 6338284.47 |
| 154 | 356598.602 | 6338284.027 |
| 155 | 356602.212 | 6338283.592 |
| 156 | 356605.878 | 6338283.163 |
| 157 | 356609.628 | 6338282.738 |
| 158 | 356614.135 | 6338282.254 |
| 159 | 356618.726 | 6338281.798 |
| 160 | 356623.372 | 6338281.39 |
| 161 | 356628.045 | 6338281.049 |
| 162 | 356632.717 | 6338280.794 |
| 163 | 356637.35 | 6338280.644 |
| 164 | 356641.934 | 6338280.618 |
| 165 | 356646.423 | 6338280.731 |
| 166 | 356650.797 | 6338281.006 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 167 | 356655.039 | 6338281.461 |
| 168 | 356661.259 | 6338282.546 |
| 169 | 356667.081 | 6338284.079 |
| 170 | 356672.533 | 6338286.035 |
| 171 | 356677.615 | 6338288.388 |
| 172 | 356682.345 | 6338291.113 |
| 173 | 356686.744 | 6338294.184 |
| 174 | 356690.821 | 6338297.576 |
| 175 | 356694.595 | 6338301.264 |
| 176 | 356698.085 | 6338305.222 |
| 177 | 356701.291 | 6338309.423 |
| 178 | 356703.484 | 6338312.657 |
| 179 | 356705.536 | 6338316.011 |
| 180 | 356707.446 | 6338319.488 |
| 181 | 356709.213 | 6338323.095 |
| 182 | 356710.849 | 6338326.829 |
| 183 | 356712.342 | 6338330.695 |
| 184 | 356713.693 | 6338334.697 |
| 185 | 356714.902 | 6338338.835 |
| 186 | 356715.979 | 6338343.113 |
| 187 | 356716.913 | 6338347.534 |
| 188 | 356717.689 | 6338351.908 |
| 189 | 356718.361 | 6338356.38 |
| 190 | 356718.967 | 6338360.915 |
| 191 | 356720.122 | 6338370.043 |
| 192 | 356720.737 | 6338374.564 |
| 193 | 356721.41 | 6338379.011 |
| 194 | 356722.177 | 6338383.35 |
| 195 | 356723.068 | 6338387.545 |
| 196 | 356724.12 | 6338391.561 |
| 197 | 356725.919 | 6338396.872 |
| 198 | 356728.079 | 6338401.796 |
| 199 | 356730.598 | 6338406.37 |
| 200 | 356733.458 | 6338410.635 |
| 201 | 356736.648 | 6338414.624 |
| 202 | 356740.16 | 6338418.374 |
| 203 | 356743.982 | 6338421.928 |
| 204 | 356748.097 | 6338425.314 |
| 205 | 356752.502 | 6338428.577 |
| 206 | 356757.18 | 6338431.748 |
| 207 | 356760.131 | 6338433.63 |
| 208 | 356763.166 | 6338435.465 |
| 209 | 356766.259 | 6338437.22 |
| 210 | 356769.409 | 6338438.868 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 211 | 356772.589 | 6338440.379 |
| 212 | 356775.8 | 6338441.726 |
| 213 | 356779.004 | 6338442.875 |
| 214 | 356782.202 | 6338443.8 |
| 215 | 356785.376 | 6338444.473 |
| 216 | 356788.507 | 6338444.86 |
| 217 | 356794.858 | 6338444.699 |
| 218 | 356800.975 | 6338443.328 |
| 219 | 356806.873 | 6338440.896 |
| 220 | 356812.552 | 6338437.552 |
| 221 | 356818.018 | 6338433.445 |
| 222 | 356823.287 | 6338428.724 |
| 223 | 356828.367 | 6338423.535 |
| 224 | 356833.265 | 6338418.029 |
| 225 | 356837.978 | 6338412.358 |
| 226 | 356842.534 | 6338406.662 |
| 227 | 356847.081 | 6338400.879 |
| 228 | 356851.486 | 6338395.211 |
| 229 | 356855.75 | 6338389.638 |
| 230 | 356859.911 | 6338384.142 |
| 231 | 356863.967 | 6338378.702 |
| 232 | 356867.958 | 6338373.295 |
| 233 | 356871.883 | 6338367.906 |
| 234 | 356875.771 | 6338362.51 |
| 235 | 356879.641 | 6338357.091 |
| 236 | 356883.502 | 6338351.627 |
| 237 | 356887.583 | 6338345.809 |
| 238 | 356891.674 | 6338339.933 |
| 239 | 356895.794 | 6338334.008 |
| 240 | 356899.923 | 6338328.042 |
| 241 | 356904.063 | 6338322.048 |
| 242 | 356908.23 | 6338316.038 |
| 243 | 356912.417 | 6338310.024 |
| 244 | 356916.612 | 6338304.016 |
| 245 | 356920.836 | 6338298.026 |
| 246 | 356925.068 | 6338292.062 |
| 247 | 356930.1 | 6338285.066 |
| 248 | 356935.158 | 6338278.127 |
| 249 | 356940.254 | 6338271.251 |
| 250 | 356945.404 | 6338264.439 |
| 251 | 356950.591 | 6338257.692 |
| 252 | 356955.851 | 6338251.018 |
| 253 | 356961.166 | 6338244.417 |
| 254 | 356966.555 | 6338237.893 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 255 | 356972.017 | 6338231.446 |
| 256 | 356977.572 | 6338225.086 |
| 257 | 356982.345 | 6338219.748 |
| 258 | 356987.165 | 6338214.451 |
| 259 | 356992.004 | 6338209.164 |
| 260 | 356996.824 | 6338203.864 |
| 261 | 357001.607 | 6338198.526 |
| 262 | 357006.335 | 6338193.125 |
| 263 | 357010.972 | 6338187.638 |
| 264 | 357015.507 | 6338182.036 |
| 265 | 357019.894 | 6338176.299 |
| 266 | 357024.125 | 6338170.398 |
| 267 | 357027.179 | 6338165.866 |
| 268 | 357030.15 | 6338161.252 |
| 269 | 357033.056 | 6338156.577 |
| 270 | 357035.935 | 6338151.865 |
| 271 | 357038.796 | 6338147.141 |
| 272 | 357041.665 | 6338142.425 |
| 273 | 357044.562 | 6338137.737 |
| 274 | 357047.515 | 6338133.107 |
| 275 | 357050.55 | 6338128.551 |
| 276 | 357053.677 | 6338124.094 |
| 277 | 357057.305 | 6338119.27 |
| 278 | 357061.061 | 6338114.587 |
| 279 | 357064.955 | 6338110.037 |
| 280 | 357068.959 | 6338105.61 |
| 281 | 357073.064 | 6338101.291 |
| 282 | 357075.622 | 6338098.734 |
| 283 | 357077.271 | 6338097.075 |
| 284 | 357081.56 | 6338092.95 |
| 285 | 357085.914 | 6338088.907 |
| 286 | 357090.332 | 6338084.936 |
| 287 | 357094.795 | 6338081.026 |
| 288 | 357099.097 | 6338077.329 |
| 289 | 357103.417 | 6338073.648 |
| 290 | 357107.709 | 6338069.955 |
| 291 | 357111.974 | 6338066.217 |
| 292 | 357116.175 | 6338062.406 |
| 293 | 357120.293 | 6338058.492 |
| 294 | 357124.301 | 6338054.441 |
| 295 | 357127.536 | 6338050.932 |
| 296 | 357128.181 | 6338050.226 |
| 297 | 357131.905 | 6338045.816 |
| 298 | 357135.455 | 6338041.178 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 299 | 357139.09 | 6338035.84 |
| 300 | 357142.477 | 6338030.208 |
| 301 | 357145.597 | 6338024.293 |
| 302 | 357148.432 | 6338018.099 |
| 303 | 357150.963 | 6338011.644 |
| 304 | 357153.18 | 6338004.932 |
| 305 | 357155.074 | 6337997.976 |
| 306 | 357156.626 | 6337990.783 |
| 307 | 357157.817 | 6337983.363 |
| 308 | 357158.629 | 6337975.725 |
| 309 | 357159.053 | 6337968.431 |
| 310 | 357159.18 | 6337960.979 |
| 311 | 357159.076 | 6337953.394 |
| 312 | 357158.768 | 6337945.699 |
| 313 | 357158.322 | 6337937.915 |
| 314 | 357157.773 | 6337930.068 |
| 315 | 357157.17 | 6337922.175 |
| 316 | 357156.557 | 6337914.266 |
| 317 | 357156 | 6337906.36 |
| 318 | 357155.527 | 6337898.481 |
| 319 | 357155.067 | 6337887.123 |
| 320 | 357154.839 | 6337875.839 |
| 321 | 357154.77 | 6337864.587 |
| 322 | 357154.794 | 6337853.339 |
| 323 | 357154.847 | 6337842.054 |
| 324 | 357154.872 | 6337830.707 |
| 325 | 357154.797 | 6337819.254 |
| 326 | 357154.555 | 6337807.668 |
| 327 | 357154.092 | 6337795.911 |
| 328 | 357153.323 | 6337783.952 |
| 329 | 357152.513 | 6337774.826 |
| 330 | 357151.46 | 6337765.757 |
| 331 | 357150.132 | 6337756.943 |
| 332 | 357148.481 | 6337748.581 |
| 333 | 357146.483 | 6337740.862 |
| 334 | 357144.091 | 6337733.981 |
| 335 | 357141.282 | 6337728.138 |
| 336 | 357137.998 | 6337723.525 |
| 337 | 357134.217 | 6337720.335 |
| 338 | 357133.604 | 6337720.112 |
| 339 | 357129.899 | 6337718.766 |
| 340 | 357126.408 | 6337718.717 |
| 341 | 357122.626 | 6337719.477 |
| 342 | 357118.563 | 6337720.896 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 343 | 357114.24 | 6337722.826 |
| 344 | 357109.67 | 6337725.115 |
| 345 | 357104.863 | 6337727.617 |
| 346 | 357099.831 | 6337730.18 |
| 347 | 357094.605 | 6337732.655 |
| 348 | 357089.167 | 6337734.891 |
| 349 | 357083.566 | 6337736.741 |
| 350 | 357079.097 | 6337737.828 |
| 351 | 357074.539 | 6337738.63 |
| 352 | 357072.875 | 6337738.825 |
| 353 | 357069.901 | 6337739.173 |
| 354 | 357065.201 | 6337739.497 |
| 355 | 357060.438 | 6337739.628 |
| 356 | 357055.621 | 6337739.605 |
| 357 | 357050.769 | 6337739.456 |
| 358 | 357045.899 | 6337739.221 |
| 359 | 357041.002 | 6337738.93 |
| 360 | 357036.096 | 6337738.613 |
| 361 | 357016.705 | 6337737.402 |
| 362 | 357011.165 | 6337737.033 |
| 363 | 357007.108 | 6337736.763 |
| 364 | 356997.625 | 6337736.054 |
| 365 | 356988.282 | 6337735.235 |
| 366 | 356979.12 | 6337734.268 |
| 367 | 356970.175 | 6337733.11 |
| 368 | 356961.457 | 6337731.733 |
| 369 | 356953.023 | 6337730.087 |
| 370 | 356944.901 | 6337728.143 |
| 371 | 356934.659 | 6337725.073 |
| 372 | 356924.937 | 6337721.49 |
| 373 | 356915.651 | 6337717.473 |
| 374 | 356906.706 | 6337713.101 |
| 375 | 356898.036 | 6337708.456 |
| 376 | 356889.546 | 6337703.618 |
| 377 | 356881.16 | 6337698.667 |
| 378 | 356872.794 | 6337693.677 |
| 379 | 356864.371 | 6337688.735 |
| 380 | 356855.806 | 6337683.92 |
| 381 | 356850.137 | 6337680.884 |
| 382 | 356844.421 | 6337677.886 |
| 383 | 356838.723 | 6337674.886 |
| 384 | 356833.073 | 6337671.84 |
| 385 | 356827.537 | 6337668.706 |
| 386 | 356822.16 | 6337665.443 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 387 | 356816.992 | 6337662.008 |
| 388 | 356812.079 | 6337658.359 |
| 389 | 356807.478 | 6337654.454 |
| 390 | 356803.236 | 6337650.251 |
| 391 | 356800.775 | 6337647.447 |
| 392 | 356798.456 | 6337644.524 |
| 393 | 356796.241 | 6337641.491 |
| 394 | 356794.121 | 6337638.355 |
| 395 | 356792.068 | 6337635.136 |
| 396 | 356790.043 | 6337631.84 |
| 397 | 356788.039 | 6337628.48 |
| 398 | 356786.016 | 6337625.071 |
| 399 | 356783.966 | 6337621.62 |
| 400 | 356781.851 | 6337618.141 |
| 401 | 356774.83 | 6337607.347 |
| 402 | 356767.061 | 6337596.674 |
| 403 | 356758.604 | 6337586.383 |
| 404 | 356749.512 | 6337576.753 |
| 405 | 356739.847 | 6337568.055 |
| 406 | 356729.659 | 6337560.557 |
| 407 | 356719.021 | 6337554.535 |
| 408 | 356707.984 | 6337550.261 |
| 409 | 356696.6 | 6337548.003 |
| 410 | 356692.595 | 6337548.015 |
| 411 | 356684.93 | 6337548.037 |
| 412 | 356679.71 | 6337548.84 |
| 413 | 356674.491 | 6337550.11 |
| 414 | 356669.313 | 6337551.811 |
| 415 | 356664.204 | 6337553.916 |
| 416 | 356659.201 | 6337556.39 |
| 417 | 356654.362 | 6337559.203 |
| 418 | 356649.714 | 6337562.321 |
| 419 | 356645.305 | 6337565.713 |
| 420 | 356641.162 | 6337569.347 |
| 421 | 356637.335 | 6337573.188 |
| 422 | 356635.389 | 6337575.366 |
| 423 | 356633.536 | 6337577.594 |
| 424 | 356631.767 | 6337579.864 |
| 425 | 356630.071 | 6337582.178 |
| 426 | 356628.44 | 6337584.529 |
| 427 | 356626.865 | 6337586.913 |
| 428 | 356625.336 | 6337589.326 |
| 429 | 356623.835 | 6337591.764 |
| 430 | 356622.361 | 6337594.223 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 431 | 356620.896 | 6337596.7 |
| 432 | 356617.938 | 6337601.759 |
| 433 | 356614.96 | 6337606.844 |
| 434 | 356611.936 | 6337611.922 |
| 435 | 356608.846 | 6337616.963 |
| 436 | 356605.665 | 6337621.93 |
| 437 | 356602.364 | 6337626.796 |
| 438 | 356598.906 | 6337631.532 |
| 439 | 356595.272 | 6337636.101 |
| 440 | 356591.446 | 6337640.473 |
| 441 | 356587.399 | 6337644.616 |
| 442 | 356580.203 | 6337650.904 |
| 443 | 356572.436 | 6337656.603 |
| 444 | 356564.238 | 6337661.828 |
| 445 | 356555.709 | 6337666.699 |
| 446 | 356546.978 | 6337671.329 |
| 447 | 356538.164 | 6337675.834 |
| 448 | 356529.379 | 6337680.334 |
| 449 | 356520.751 | 6337684.942 |
| 450 | 356512.4 | 6337689.775 |
| 451 | 356504.435 | 6337694.949 |
| 452 | 356501.709 | 6337696.895 |
| 453 | 356499.047 | 6337698.892 |
| 454 | 356496.422 | 6337700.934 |
| 455 | 356493.815 | 6337703.015 |
| 456 | 356491.235 | 6337705.128 |
| 457 | 356488.646 | 6337707.267 |
| 458 | 356483.439 | 6337711.596 |
| 459 | 356480.793 | 6337713.774 |
| 460 | 356478.1 | 6337715.95 |
| 461 | 356467.177 | 6337724.255 |
| 462 | 356455.447 | 6337732.267 |
| 463 | 356442.995 | 6337739.787 |
| 464 | 356429.89 | 6337746.619 |
| 465 | 356416.211 | 6337752.561 |
| 466 | 356402.043 | 6337757.421 |
| 467 | 356387.445 | 6337761.002 |
| 468 | 356372.506 | 6337763.101 |
| 469 | 356357.311 | 6337763.528 |
| 470 | 356341.909 | 6337762.078 |
| 471 | 356335.532 | 6337760.908 |
| 472 | 356329.13 | 6337759.483 |
| 473 | 356322.712 | 6337757.892 |
| 474 | 356316.266 | 6337756.235 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 475 | 356309.811 | 6337754.604 |
| 476 | 356303.336 | 6337753.093 |
| 477 | 356296.839 | 6337751.797 |
| 478 | 356290.319 | 6337750.811 |
| 479 | 356283.783 | 6337750.228 |
| 480 | 356277.221 | 6337750.143 |
| 481 | 356275.25 | 6337750.227 |
| 482 | 356271.288 | 6337750.53 |
| 483 | 356269.296 | 6337750.733 |
| 484 | 356267.304 | 6337750.963 |
| 485 | 356265.303 | 6337751.211 |
| 486 | 356257.194 | 6337752.253 |
| 487 | 356247.564 | 6337753.215 |
| 488 | 356237.734 | 6337753.792 |
| 489 | 356227.799 | 6337753.936 |
| 490 | 356217.862 | 6337753.605 |
| 491 | 356208.007 | 6337752.754 |
| 492 | 356198.346 | 6337751.337 |
| 493 | 356188.975 | 6337749.313 |
| 494 | 356179.987 | 6337746.633 |
| 495 | 356171.485 | 6337743.256 |
| 496 | 356163.564 | 6337739.138 |
| 497 | 356156.833 | 6337734.687 |
| 498 | 356150.547 | 6337729.805 |
| 499 | 356144.591 | 6337724.73 |
| 500 | 356138.83 | 6337719.703 |
| 501 | 356133.14 | 6337714.96 |
| 502 | 356127.395 | 6337710.74 |
| 503 | 356121.471 | 6337707.28 |
| 504 | 356115.225 | 6337704.819 |
| 505 | 356108.549 | 6337703.598 |
| 506 | 356101.31 | 6337703.855 |
| 507 | 356097.136 | 6337704.571 |
| 508 | 356080.63 | 6337705.924 |
| 509 | 356064.585 | 6337704.465 |
| 510 | 356048.835 | 6337700.71 |
| 511 | 356033.242 | 6337695.179 |
| 512 | 356017.658 | 6337688.383 |
| 513 | 356001.936 | 6337680.843 |
| 514 | 355985.928 | 6337673.075 |
| 515 | 355969.486 | 6337665.593 |
| 516 | 355952.454 | 6337658.915 |
| 517 | 355934.693 | 6337653.559 |
| 518 | 355927.221 | 6337651.857 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 519 | 355919.663 | 6337650.388 |
| 520 | 355912.064 | 6337649.08 |
| 521 | 355897.023 | 6337646.657 |
| 522 | 355889.685 | 6337645.398 |
| 523 | 355882.545 | 6337644.013 |
| 524 | 355875.651 | 6337642.426 |
| 525 | 355869.078 | 6337640.572 |
| 526 | 355862.874 | 6337638.371 |
| 527 | 355860.954 | 6337637.572 |
| 528 | 355859.062 | 6337636.736 |
| 529 | 355857.189 | 6337635.87 |
| 530 | 355855.325 | 6337634.981 |
| 531 | 355853.472 | 6337634.076 |
| 532 | 355849.718 | 6337632.24 |
| 533 | 355845.842 | 6337630.422 |
| 534 | 355843.82 | 6337629.535 |
| 535 | 355835.893 | 6337626.488 |
| 536 | 355827.222 | 6337623.817 |
| 537 | 355817.948 | 6337621.564 |
| 538 | 355808.209 | 6337619.778 |
| 539 | 355798.136 | 6337618.505 |
| 540 | 355787.878 | 6337617.789 |
| 541 | 355777.564 | 6337617.681 |
| 542 | 355767.334 | 6337618.221 |
| 543 | 355757.317 | 6337619.46 |
| 544 | 355747.644 | 6337621.442 |
| 545 | 355739.337 | 6337623.894 |
| 546 | 355731.507 | 6337626.918 |
| 547 | 355724.248 | 6337630.446 |
| 548 | 355717.664 | 6337634.403 |
| 549 | 355711.822 | 6337638.722 |
| 550 | 355706.815 | 6337643.33 |
| 551 | 355702.739 | 6337648.155 |
| 552 | 355699.679 | 6337653.127 |
| 553 | 355697.718 | 6337658.175 |
| 554 | 355696.944 | 6337663.227 |
| 555 | 355699.137 | 6337673.375 |
| 556 | 355705.629 | 6337683.3 |
| 557 | 355715.381 | 6337693.055 |
| 558 | 355727.365 | 6337702.7 |
| 559 | 355740.555 | 6337712.285 |
| 560 | 355753.923 | 6337721.867 |
| 561 | 355766.421 | 6337731.497 |
| 562 | 355777.023 | 6337741.236 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 563 | 355784.7 | 6337751.138 |
| 564 | 355788.416 | 6337761.252 |
| 565 | 355788.237 | 6337768.359 |
| 566 | 355785.947 | 6337775.517 |
| 567 | 355781.79 | 6337782.652 |
| 568 | 355776.039 | 6337789.685 |
| 569 | 355768.936 | 6337796.539 |
| 570 | 355760.735 | 6337803.136 |
| 571 | 355751.709 | 6337809.401 |
| 572 | 355742.091 | 6337815.254 |
| 573 | 355732.154 | 6337820.617 |
| 574 | 355722.14 | 6337825.412 |
| 575 | 355715.855 | 6337828.139 |
| 576 | 355709.656 | 6337830.659 |
| 577 | 355703.553 | 6337833.029 |
| 578 | 355691.687 | 6337837.523 |
| 579 | 355685.94 | 6337839.756 |
| 580 | 355680.333 | 6337842.054 |
| 581 | 355674.883 | 6337844.463 |
| 582 | 355669.598 | 6337847.045 |
| 583 | 355664.478 | 6337849.849 |
| 584 | 355659.739 | 6337852.784 |
| 585 | 355655.128 | 6337855.924 |
| 586 | 355650.616 | 6337859.228 |
| 587 | 355646.16 | 6337862.645 |
| 588 | 355637.262 | 6337869.64 |
| 589 | 355632.748 | 6337873.125 |
| 590 | 355628.142 | 6337876.539 |
| 591 | 355623.398 | 6337879.835 |
| 592 | 355618.497 | 6337882.966 |
| 593 | 355612.613 | 6337886.333 |
| 594 | 355606.563 | 6337889.523 |
| 595 | 355600.458 | 6337892.632 |
| 596 | 355594.4 | 6337895.761 |
| 597 | 355588.489 | 6337899.009 |
| 598 | 355582.846 | 6337902.476 |
| 599 | 355577.571 | 6337906.259 |
| 600 | 355572.767 | 6337910.462 |
| 601 | 355568.552 | 6337915.18 |
| 602 | 355565.019 | 6337920.516 |
| 603 | 355563.288 | 6337923.986 |
| 604 | 355561.804 | 6337927.693 |
| 605 | 355560.514 | 6337931.616 |
| 606 | 355559.389 | 6337935.74 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 607 | 355558.383 | 6337940.049 |
| 608 | 355557.467 | 6337944.526 |
| 609 | 355556.596 | 6337949.155 |
| 610 | 355555.732 | 6337953.92 |
| 611 | 355554.89 | 6337958.509 |
| 612 | 355553.859 | 6337963.796 |
| 613 | 355553.155 | 6337967.246 |
| 614 | 355552.422 | 6337970.719 |
| 615 | 355551.022 | 6337977.644 |
| 616 | 355550.421 | 6337981.055 |
| 617 | 355549.933 | 6337984.406 |
| 618 | 355549.586 | 6337987.679 |
| 619 | 355549.409 | 6337990.848 |
| 620 | 355549.429 | 6337993.894 |
| 621 | 355549.694 | 6337996.799 |
| 622 | 355551.104 | 6338002.511 |
| 623 | 355553.502 | 6338007.619 |
| 624 | 355556.664 | 6338012.275 |
| 625 | 355560.362 | 6338016.622 |
| 626 | 355564.352 | 6338020.806 |
| 627 | 355568.398 | 6338024.974 |
| 628 | 355572.275 | 6338029.268 |
| 629 | 355575.736 | 6338033.84 |
| 630 | 355578.566 | 6338038.832 |
| 631 | 355580.519 | 6338044.388 |
| 632 | 355581.496 | 6338051.637 |
| 633 | 355581.284 | 6338059.65 |
| 634 | 355580.186 | 6338068.244 |
| 635 | 355578.504 | 6338077.232 |
| 636 | 355576.539 | 6338086.431 |
| 637 | 355574.573 | 6338095.654 |
| 638 | 355572.917 | 6338104.716 |
| 639 | 355571.855 | 6338113.434 |
| 640 | 355571.706 | 6338121.62 |
| 641 | 355572.745 | 6338129.091 |
| 642 | 355573.777 | 6338132.493 |
| 643 | 355575.121 | 6338135.698 |
| 644 | 355576.71 | 6338138.734 |
| 645 | 355578.469 | 6338141.63 |
| 646 | 355580.351 | 6338144.413 |
| 647 | 355586.041 | 6338152.348 |
| 648 | 355587.74 | 6338154.945 |
| 649 | 355589.232 | 6338157.565 |
| 650 | 355592.667 | 6338168.36 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 651 | 355592.554 | 6338179.843 |
| 652 | 355589.5 | 6338191.935 |
| 653 | 355584.123 | 6338204.55 |
| 654 | 355577.05 | 6338217.604 |
| 655 | 355568.898 | 6338231.023 |
| 656 | 355560.284 | 6338244.718 |
| 657 | 355551.826 | 6338258.61 |
| 658 | 355544.151 | 6338272.612 |
| 659 | 355537.866 | 6338286.646 |
| 660 | 355537.147 | 6338288.552 |
| 661 | 355535.849 | 6338292.379 |
| 662 | 355535.27 | 6338294.306 |
| 663 | 355534.269 | 6338298.202 |
| 664 | 355533.857 | 6338300.18 |
| 665 | 355533.228 | 6338304.212 |
| 666 | 355533.021 | 6338306.275 |
| 667 | 355532.803 | 6338312.183 |
| 668 | 355533.039 | 6338318.311 |
| 669 | 355533.619 | 6338324.597 |
| 670 | 355534.42 | 6338330.994 |
| 671 | 355535.324 | 6338337.441 |
| 672 | 355536.21 | 6338343.884 |
| 673 | 355536.965 | 6338350.272 |
| 674 | 355537.47 | 6338356.543 |
| 675 | 355537.604 | 6338362.649 |
| 676 | 355537.246 | 6338368.528 |
| 677 | 355536.625 | 6338372.662 |
| 678 | 355535.735 | 6338376.671 |
| 679 | 355534.632 | 6338380.571 |
| 680 | 355533.371 | 6338384.392 |
| 681 | 355532.009 | 6338388.153 |
| 682 | 355529.21 | 6338395.579 |
| 683 | 355527.886 | 6338399.294 |
| 684 | 355526.682 | 6338403.035 |
| 685 | 355525.665 | 6338406.828 |
| 686 | 355524.16 | 6338415.775 |
| 687 | 355523.696 | 6338425.08 |
| 688 | 355524.077 | 6338434.725 |
| 689 | 355525.116 | 6338444.681 |
| 690 | 355526.617 | 6338454.928 |
| 691 | 355528.385 | 6338465.44 |
| 692 | 355530.215 | 6338476.196 |
| 693 | 355531.939 | 6338487.17 |
| 694 | 355533.334 | 6338498.338 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 695 | 355534.231 | 6338509.677 |
| 696 | 355534.322 | 6338511.765 |
| 697 | 355534.384 | 6338513.852 |
| 698 | 355534.428 | 6338515.936 |
| 699 | 355534.426 | 6338518.006 |
| 700 | 355534.309 | 6338522.093 |
| 701 | 355534.186 | 6338524.102 |
| 702 | 355534.017 | 6338526.075 |
| 703 | 355533.792 | 6338528.011 |
| 704 | 355533.522 | 6338529.908 |
| 705 | 355563.81 | 6338534.264 |
| 706 | 355669.898 | 6338549.521 |
| 707 | 355653.124 | 6338669.041 |
| 708 | 355636.35 | 6338788.534 |
| 709 | 355468.237 | 6338764.361 |
| 710 | 355473.844 | 6338770.985 |
| 711 | 355482.422 | 6338781.283 |
| 712 | 355487.326 | 6338787.426 |
| 713 | 355442.354 | 6338780.96 |
| 714 | 355450.493 | 6338790.585 |
| 715 | 355458.805 | 6338800.55 |
| 716 | 355466.927 | 6338810.724 |
| 717 | 355474.507 | 6338820.973 |
| 718 | 355481.2 | 6338831.173 |
| 719 | 355486.645 | 6338841.192 |
| 720 | 355490.489 | 6338850.898 |
| 721 | 355492.387 | 6338860.167 |
| 722 | 355491.979 | 6338868.864 |
| 723 | 355488.92 | 6338876.861 |
| 724 | 355487.049 | 6338879.632 |
| 725 | 355484.843 | 6338882.331 |
| 726 | 355482.395 | 6338884.999 |
| 727 | 355479.769 | 6338887.673 |
| 728 | 355477.049 | 6338890.395 |
| 729 | 355474.328 | 6338893.21 |
| 730 | 355471.68 | 6338896.155 |
| 731 | 355469.178 | 6338899.272 |
| 732 | 355466.916 | 6338902.601 |
| 733 | 355464.968 | 6338906.184 |
| 734 | 355465.601 | 6338907.562 |
| 735 | 355466.235 | 6338908.939 |
| 736 | 355466.868 | 6338910.318 |
| 737 | 355467.501 | 6338911.699 |
| 738 | 355468.125 | 6338913.08 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 739 | 355468.993 | 6338914.966 |
| 740 | 355469.862 | 6338916.848 |
| 741 | 355470.73 | 6338918.736 |
| 742 | 355471.561 | 6338920.635 |
| 743 | 355472.355 | 6338922.552 |
| 744 | 355473.432 | 6338925.451 |
| 745 | 355474.425 | 6338928.388 |
| 746 | 355475.353 | 6338931.351 |
| 747 | 355476.224 | 6338934.33 |
| 748 | 355477.067 | 6338937.316 |
| 749 | 355477.844 | 6338940.303 |
| 750 | 355478.556 | 6338943.308 |
| 751 | 355479.231 | 6338946.323 |
| 752 | 355479.905 | 6338949.341 |
| 753 | 355480.598 | 6338952.351 |
| 754 | 355481.302 | 6338955.3 |
| 755 | 355482.005 | 6338958.249 |
| 756 | 355482.718 | 6338961.196 |
| 757 | 355483.421 | 6338964.144 |
| 758 | 355484.134 | 6338967.093 |
| 759 | 355484.707 | 6338969.389 |
| 760 | 355485.299 | 6338971.679 |
| 761 | 355485.891 | 6338973.972 |
| 762 | 355486.417 | 6338976.274 |
| 763 | 355486.85 | 6338978.591 |
| 764 | 355487.241 | 6338981.788 |
| 765 | 355487.319 | 6338982.86 |
| 766 | 355487.474 | 6338985.016 |
| 767 | 355487.594 | 6338988.257 |
| 768 | 355487.594 | 6338988.259 |
| 769 | 355487.649 | 6338991.508 |
| 770 | 355487.713 | 6338994.749 |
| 771 | 355487.754 | 6338997.039 |
| 772 | 355487.748 | 6338999.327 |
| 773 | 355487.757 | 6338999.331 |
| 774 | 355487.742 | 6339001.617 |
| 775 | 355487.746 | 6339003.907 |
| 776 | 355487.787 | 6339006.197 |
| 777 | 355487.891 | 6339008.018 |
| 778 | 355487.891 | 6339008.021 |
| 779 | 355488.041 | 6339009.848 |
| 780 | 355488.041 | 6339009.859 |
| 781 | 355488.182 | 6339011.674 |
| 782 | 355488.258 | 6339013.493 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 783 | 355488.203 | 6339015.303 |
| 784 | 355487.859 | 6339017.782 |
| 785 | 355487.29 | 6339020.246 |
| 786 | 355486.572 | 6339022.698 |
| 787 | 355485.789 | 6339025.136 |
| 788 | 355485.789 | 6339025.141 |
| 789 | 355485.035 | 6339027.569 |
| 790 | 355484.231 | 6339030.155 |
| 791 | 355483.371 | 6339032.726 |
| 792 | 355482.484 | 6339035.286 |
| 793 | 355481.578 | 6339037.843 |
| 794 | 355480.681 | 6339040.4 |
| 795 | 355479.424 | 6339043.974 |
| 796 | 355478.157 | 6339047.543 |
| 797 | 355476.872 | 6339051.107 |
| 798 | 355475.578 | 6339054.666 |
| 799 | 355474.265 | 6339058.219 |
| 800 | 355430.823 | 6339049.207 |
| 801 | 355431.334 | 6339035.497 |
| 802 | 355431.844 | 6339021.789 |
| 803 | 355432.373 | 6339008.084 |
| 804 | 355432.921 | 6338994.388 |
| 805 | 355433.487 | 6338980.698 |
| 806 | 355434.09 | 6338967.018 |
| 807 | 355434.731 | 6338953.351 |
| 808 | 355435.418 | 6338939.697 |
| 809 | 355436.151 | 6338926.059 |
| 810 | 355436.95 | 6338912.439 |
| 811 | 355406.717 | 6338958.67 |
| 812 | 355406.358 | 6338907.672 |
| 813 | 355413.213 | 6338797.484 |
| 814 | 355384.111 | 6338766.488 |
| 815 | 355088.71 | 6338812.032 |
| 816 | 355080.33 | 6338822.454 |
| 817 | 355076.126 | 6338827.686 |
| 818 | 355071.304 | 6338833.685 |
| 819 | 355077.38 | 6338839.504 |
| 820 | 355086.255 | 6338847.995 |
| 821 | 355120.242 | 6338873.751 |
| 822 | 355158.717 | 6338902.9 |
| 823 | 355095.724 | 6338985.464 |
| 824 | 355100.718 | 6339019.034 |
| 825 | 355019.597 | 6339031.162 |
| 826 | 354999.703 | 6339034.136 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 827 | 354949.398 | 6339055.461 |
| 828 | 354914.031 | 6339100.776 |
| 829 | 354903.507 | 6339161.362 |
| 830 | 354918.454 | 6339213.79 |
| 831 | 354957.362 | 6339261.672 |
| 832 | 355021.02 | 6339258.656 |
| 833 | 355032.172 | 6339252.737 |
| 834 | 355051.022 | 6339242.743 |
| 835 | 355086.915 | 6339223.704 |
| 836 | 355127.205 | 6339197.814 |
| 837 | 355168.759 | 6339160.845 |
| 838 | 355267.779 | 6339044.49 |
| 839 | 355310.268 | 6339070.545 |
| 840 | 355335.245 | 6339079.353 |
| 841 | 355365.957 | 6339088.034 |
| 842 | 355379.99 | 6339067.128 |
| 843 | 355381.77 | 6339068.045 |
| 844 | 355382.214 | 6339068.272 |
| 845 | 355382.659 | 6339068.495 |
| 846 | 355383.104 | 6339068.719 |
| 847 | 355384.003 | 6339069.166 |
| 848 | 355384.457 | 6339069.386 |
| 849 | 355384.902 | 6339069.61 |
| 850 | 355385.357 | 6339069.825 |
| 851 | 355385.802 | 6339070.044 |
| 852 | 355386.256 | 6339070.26 |
| 853 | 355387.61 | 6339070.903 |
| 854 | 355388.973 | 6339071.534 |
| 855 | 355389.882 | 6339071.95 |
| 856 | 355390.336 | 6339072.154 |
| 857 | 355390.791 | 6339072.363 |
| 858 | 355391.254 | 6339072.566 |
| 859 | 355391.709 | 6339072.765 |
| 860 | 355392.627 | 6339073.171 |
| 861 | 355393.537 | 6339073.568 |
| 862 | 355394.928 | 6339074.153 |
| 863 | 355395.847 | 6339074.537 |
| 864 | 355396.775 | 6339074.921 |
| 865 | 355397.23 | 6339075.109 |
| 866 | 355398.167 | 6339075.484 |
| 867 | 355398.631 | 6339075.668 |
| 868 | 355399.096 | 6339075.848 |
| 869 | 355399.56 | 6339076.033 |
| 870 | 355400.952 | 6339076.576 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 871 | 355401.426 | 6339076.753 |
| 872 | 355401.89 | 6339076.929 |
| 873 | 355402.828 | 6339077.279 |
| 874 | 355403.766 | 6339077.625 |
| 875 | 355404.24 | 6339077.795 |
| 876 | 355405.178 | 6339078.133 |
| 877 | 355406.125 | 6339078.467 |
| 878 | 355406.599 | 6339078.632 |
| 879 | 355407.546 | 6339078.959 |
| 880 | 355408.011 | 6339079.12 |
| 881 | 355408.494 | 6339079.281 |
| 882 | 355408.968 | 6339079.439 |
| 883 | 355409.915 | 6339079.754 |
| 884 | 355410.863 | 6339080.065 |
| 885 | 355411.337 | 6339080.219 |
| 886 | 355413.252 | 6339080.818 |
| 887 | 355414.683 | 6339081.256 |
| 888 | 355415.166 | 6339081.397 |
| 889 | 355416.124 | 6339081.682 |
| 890 | 355421.386 | 6339083.221 |
| 891 | 355463.912 | 6339091.639 |
| 892 | 355463.37 | 6339093.635 |
| 893 | 355462.827 | 6339095.632 |
| 894 | 355462.244 | 6339097.787 |
| 895 | 355461.661 | 6339099.942 |
| 896 | 355461.06 | 6339102.093 |
| 897 | 355460.468 | 6339104.244 |
| 898 | 355459.857 | 6339106.392 |
| 899 | 355459.434 | 6339107.268 |
| 900 | 355458.991 | 6339108.138 |
| 901 | 355458.54 | 6339109 |
| 902 | 355458.07 | 6339109.852 |
| 903 | 355457.581 | 6339110.696 |
| 904 | 355455.46 | 6339113.957 |
| 905 | 355453.052 | 6339117.083 |
| 906 | 355450.412 | 6339120.055 |
| 907 | 355447.607 | 6339122.857 |
| 908 | 355444.684 | 6339125.464 |
| 909 | 355441.812 | 6339127.699 |
| 910 | 355438.766 | 6339129.748 |
| 911 | 355435.61 | 6339131.656 |
| 912 | 355432.4 | 6339133.467 |
| 913 | 355429.171 | 6339135.227 |
| 914 | 355426.592 | 6339136.63 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 915 | 355423.995 | 6339138.01 |
| 916 | 355421.37 | 6339139.323 |
| 917 | 355418.701 | 6339140.528 |
| 918 | 355415.978 | 6339141.584 |
| 919 | 355413.763 | 6339142.321 |
| 920 | 355411.503 | 6339142.98 |
| 921 | 355409.226 | 6339143.562 |
| 922 | 355406.931 | 6339144.063 |
| 923 | 355404.628 | 6339144.48 |
| 924 | 355402.632 | 6339144.938 |
| 925 | 355399.253 | 6339145.533 |
| 926 | 355395.782 | 6339145.99 |
| 927 | 355392.201 | 6339146.316 |
| 928 | 355388.547 | 6339146.528 |
| 929 | 355384.811 | 6339146.641 |
| 930 | 355381.001 | 6339146.662 |
| 931 | 355377.127 | 6339146.607 |
| 932 | 355373.189 | 6339146.497 |
| 933 | 355369.195 | 6339146.336 |
| 934 | 355365.127 | 6339146.141 |
| 935 | 355361.049 | 6339145.95 |
| 936 | 355356.999 | 6339145.798 |
| 937 | 355353.014 | 6339145.725 |
| 938 | 355349.138 | 6339145.765 |
| 939 | 355345.391 | 6339145.956 |
| 940 | 355341.838 | 6339146.337 |
| 941 | 355338.486 | 6339146.942 |
| 942 | 355335.392 | 6339147.813 |
| 943 | 355332.592 | 6339148.982 |
| 944 | 355330.775 | 6339150.025 |
| 945 | 355329.086 | 6339151.205 |
| 946 | 355327.499 | 6339152.491 |
| 947 | 355325.975 | 6339153.84 |
| 948 | 355324.489 | 6339155.222 |
| 949 | 355322.994 | 6339156.597 |
| 950 | 355321.452 | 6339157.93 |
| 951 | 355319.846 | 6339159.181 |
| 952 | 355318.121 | 6339160.321 |
| 953 | 355316.257 | 6339161.308 |
| 954 | 355314.585 | 6339161.987 |
| 955 | 355312.812 | 6339162.559 |
| 956 | 355310.956 | 6339163.036 |
| 957 | 355309.018 | 6339163.431 |
| 958 | 355307.015 | 6339163.773 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 959 | 355304.984 | 6339164.065 |
| 960 | 355302.917 | 6339164.336 |
| 961 | 355300.84 | 6339164.596 |
| 962 | 355298.773 | 6339164.858 |
| 963 | 355296.733 | 6339165.147 |
| 964 | 355289.148 | 6339166.631 |
| 965 | 355282.106 | 6339168.685 |
| 966 | 355275.569 | 6339171.268 |
| 967 | 355269.511 | 6339174.344 |
| 968 | 355263.885 | 6339177.871 |
| 969 | 355258.663 | 6339181.818 |
| 970 | 355253.8 | 6339186.14 |
| 971 | 355249.268 | 6339190.808 |
| 972 | 355245.021 | 6339195.773 |
| 973 | 355241.041 | 6339201.008 |
| 974 | 355236.785 | 6339207.2 |
| 975 | 355232.75 | 6339213.616 |
| 976 | 355228.853 | 6339220.179 |
| 977 | 355225.038 | 6339226.817 |
| 978 | 355221.224 | 6339233.464 |
| 979 | 355217.345 | 6339240.044 |
| 980 | 355213.338 | 6339246.486 |
| 981 | 355209.119 | 6339252.719 |
| 982 | 355204.633 | 6339258.674 |
| 983 | 355199.816 | 6339264.278 |
| 984 | 355195.134 | 6339268.989 |
| 985 | 355190.176 | 6339273.423 |
| 986 | 355185.025 | 6339277.653 |
| 987 | 355179.745 | 6339281.744 |
| 988 | 355174.401 | 6339285.768 |
| 989 | 355169.066 | 6339289.803 |
| 990 | 355163.813 | 6339293.915 |
| 991 | 355158.699 | 6339298.172 |
| 992 | 355153.796 | 6339302.65 |
| 993 | 355149.188 | 6339307.418 |
| 994 | 355147.146 | 6339309.774 |
| 995 | 355145.168 | 6339312.201 |
| 996 | 355143.273 | 6339314.7 |
| 997 | 355141.433 | 6339317.27 |
| 998 | 355139.657 | 6339319.91 |
| 999 | 355137.946 | 6339322.611 |
| 1000 | 355136.28 | 6339325.369 |
| 1001 | 355134.67 | 6339328.182 |
| 1002 | 355133.106 | 6339331.051 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 1003 | 355131.587 | 6339333.971 |
| 1004 | 355130.578 | 6339335.949 |
| 1005 | 355129.559 | 6339337.91 |
| 1006 | 355128.503 | 6339339.831 |
| 1007 | 355127.374 | 6339341.677 |
| 1008 | 355126.144 | 6339343.411 |
| 1009 | 355124.776 | 6339345.003 |
| 1010 | 355123.261 | 6339346.423 |
| 1011 | 355121.534 | 6339347.636 |
| 1012 | 355119.597 | 6339348.607 |
| 1013 | 355117.42 | 6339349.312 |
| 1014 | 355115.707 | 6339349.627 |
| 1015 | 355113.883 | 6339349.815 |
| 1016 | 355111.959 | 6339349.88 |
| 1017 | 355109.942 | 6339349.842 |
| 1018 | 355107.862 | 6339349.723 |
| 1019 | 355105.736 | 6339349.535 |
| 1020 | 355103.583 | 6339349.294 |
| 1021 | 355101.411 | 6339349.02 |
| 1022 | 355099.249 | 6339348.724 |
| 1023 | 355097.115 | 6339348.43 |
| 1024 | 355093.975 | 6339348.006 |
| 1025 | 355090.928 | 6339347.612 |
| 1026 | 355087.945 | 6339347.247 |
| 1027 | 355085.046 | 6339346.907 |
| 1028 | 355082.203 | 6339346.582 |
| 1029 | 355079.407 | 6339346.279 |
| 1030 | 355076.657 | 6339345.988 |
| 1031 | 355073.934 | 6339345.707 |
| 1032 | 355071.231 | 6339345.432 |
| 1033 | 355068.536 | 6339345.162 |
| 1034 | 355079.577 | 6339414.28 |
| 1035 | 355098.627 | 6339533.454 |
| 1036 | 355117.678 | 6339652.623 |
| 1037 | 355469.612 | 6339596.48 |
| 1038 | 355494.695 | 6339592.478 |
| 1039 | 355550.242 | 6339583.617 |
| 1040 | 355550.702 | 6339580.953 |
| 1041 | 355551.152 | 6339578.288 |
| 1042 | 355555.778 | 6339551.395 |
| 1043 | 355560.395 | 6339524.504 |
| 1044 | 355576.358 | 6339431.622 |
| 1045 | 355525.521 | 6339425.709 |
| 1046 | 355531.916 | 6339389.628 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 1047 | 355583.099 | 6339392.407 |
| 1048 | 355586.53 | 6339372.449 |
| 1049 | 355535.45 | 6339369.686 |
| 1050 | 355540.574 | 6339340.76 |
| 1051 | 355540.938 | 6339340.703 |
| 1052 | 355544.349 | 6339320.883 |
| 1053 | 355547.76 | 6339301.062 |
| 1054 | 355551.162 | 6339281.239 |
| 1055 | 355554.572 | 6339261.417 |
| 1056 | 355557.983 | 6339241.597 |
| 1057 | 355563.591 | 6339208.953 |
| 1058 | 355612.134 | 6339223.461 |
| 1059 | 355612.676 | 6339220.288 |
| 1060 | 355560.59 | 6339204.72 |
| 1061 | 355565.736 | 6339187.531 |
| 1062 | 355578.941 | 6339191.213 |
| 1063 | 355583.743 | 6339175.155 |
| 1064 | 355603.4 | 6339181.31 |
| 1065 | 355618.998 | 6339183.498 |
| 1066 | 355625.758 | 6339144.186 |
| 1067 | 355633.831 | 6339148.885 |
| 1068 | 355644.31 | 6339154.984 |
| 1069 | 355630.37 | 6339236.073 |
| 1070 | 355629.135 | 6339243.258 |
| 1071 | 355624.978 | 6339267.451 |
| 1072 | 355641.776 | 6339272.46 |
| 1073 | 355665.816 | 6339279.628 |
| 1074 | 355663.172 | 6339294.965 |
| 1075 | 355681.259 | 6339297.429 |
| 1076 | 355742.508 | 6339305.77 |
| 1077 | 355762.31 | 6339308.467 |
| 1078 | 355765.526 | 6339309.428 |
| 1079 | 355764.542 | 6339316.651 |
| 1080 | 355761.361 | 6339339.956 |
| 1081 | 355778.057 | 6339355.092 |
| 1082 | 355781.088 | 6339357.84 |
| 1083 | 355792.598 | 6339368.211 |
| 1084 | 355800.836 | 6339375.636 |
| 1085 | 355806.189 | 6339380.467 |
| 1086 | 355821.053 | 6339393.871 |
| 1087 | 355843.279 | 6339413.904 |
| 1088 | 355850.965 | 6339420.836 |
| 1089 | 355884.52 | 6339383.555 |
| 1090 | 355885.393 | 6339382.592 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 1091 | 355897.437 | 6339393.442 |
| 1092 | 355898.88 | 6339391.848 |
| 1093 | 355916.729 | 6339407.919 |
| 1094 | 355921.333 | 6339402.81 |
| 1095 | 355936.261 | 6339416.278 |
| 1096 | 355951.189 | 6339429.749 |
| 1097 | 355947.81 | 6339433.509 |
| 1098 | 355926.263 | 6339457.429 |
| 1099 | 355910.715 | 6339474.699 |
| 1100 | 355932.692 | 6339494.515 |
| 1101 | 355940.58 | 6339501.63 |
| 1102 | 355942.156 | 6339503.049 |
| 1103 | 355937.149 | 6339540.083 |
| 1104 | 355937.521 | 6339540.138 |
| 1105 | 355938.22 | 6339540.27 |
| 1106 | 355938.908 | 6339540.439 |
| 1107 | 355939.577 | 6339540.644 |
| 1108 | 355940.246 | 6339540.883 |
| 1109 | 355940.896 | 6339541.158 |
| 1110 | 355941.535 | 6339541.466 |
| 1111 | 355942.156 | 6339541.808 |
| 1112 | 355942.748 | 6339542.18 |
| 1113 | 355943.33 | 6339542.582 |
| 1114 | 355943.894 | 6339543.016 |
| 1115 | 355944.428 | 6339543.479 |
| 1116 | 355944.935 | 6339543.968 |
| 1117 | 355945.339 | 6339544.397 |
| 1118 | 355945.422 | 6339544.484 |
| 1119 | 355945.872 | 6339545.023 |
| 1120 | 355946.302 | 6339545.587 |
| 1121 | 355946.695 | 6339546.172 |
| 1122 | 355947.069 | 6339546.776 |
| 1123 | 355947.396 | 6339547.399 |
| 1124 | 355947.704 | 6339548.039 |
| 1125 | 355947.965 | 6339548.694 |
| 1126 | 355948.198 | 6339549.361 |
| 1127 | 355948.394 | 6339550.041 |
| 1128 | 355948.561 | 6339550.728 |
| 1129 | 355948.681 | 6339551.423 |
| 1130 | 355948.764 | 6339552.125 |
| 1131 | 355948.819 | 6339552.831 |
| 1132 | 355948.837 | 6339553.537 |
| 1133 | 355932.958 | 6339571.07 |
| 1134 | 355925.763 | 6339624.135 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 1135 | 355923.302 | 6339642.269 |
| 1136 | 355920.59 | 6339662.217 |
| 1137 | 355917.879 | 6339682.168 |
| 1138 | 355915.157 | 6339702.123 |
| 1139 | 355912.436 | 6339722.083 |
| 1140 | 355909.706 | 6339742.043 |
| 1141 | 355901.412 | 6339803.13 |
| 1142 | 355898.784 | 6339822.451 |
| 1143 | 355896.093 | 6339842.266 |
| 1144 | 355893.475 | 6339861.547 |
| 1145 | 355888.721 | 6339896.529 |
| 1146 | 355885.36 | 6339921.299 |
| 1147 | 355874.564 | 6340000.771 |
| 1148 | 355974.222 | 6340014.312 |
| 1149 | 356089.192 | 6340029.935 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 1150 | 356060.937 | 6340102.361 |
| 1151 | 355678.579 | 6340204.001 |
| 1152 | 355705.062 | 6340481.788 |
| 1153 | 355712.114 | 6340526.706 |
| 1154 | 355483.378 | 6340566.356 |
| 1155 | 355492.821 | 6340625.715 |
| 1156 | 355502.256 | 6340685.073 |
| 1157 | 355277.225 | 6340723.274 |
| 1158 | 355279.994 | 6340740.685 |
| 1159 | 355286.602 | 6340781.992 |
| 1160 | 355288.97 | 6340796.823 |
| 1161 | 355314.438 | 6340956.788 |
| 1162 | 354491.441 | 6341991.245 |
| 1163 | 354446.385 | 6342047.958 |
| 1164 | 354351.202 | 6342167.55 |

¹ Coordinate reference system is MGA 56

SCHEDULE F – AREA OF OPERATIONS – DRINKING WATER RETICULATION AND SEWERAGE SERVICES INFRASTRUCTURE

Table F.1 Vertices for area of operation

| Coordinates ¹ | | | Coordinates ¹ | | |
|--------------------------|------------|-------------|--------------------------|------------|-------------|
| Vertex | Easting | Northing | Vertex | Easting | Northing |
| 1 | 354351.202 | 6342167.55 | 40 | 356472.252 | 6340901.686 |
| 2 | 354514.692 | 6342139.48 | 41 | 356465.966 | 6340857.134 |
| 3 | 354592.036 | 6342126.211 | 42 | 356518.25 | 6340853.471 |
| 4 | 355263.261 | 6342010.852 | 43 | 356522.239 | 6340734.066 |
| 5 | 355299.057 | 6342004.699 | 44 | 356521.267 | 6340708.562 |
| 6 | 355457.953 | 6341977.432 | 45 | 356511.592 | 6340653.776 |
| 7 | 355476.118 | 6341974.262 | 46 | 356628.492 | 6340635.63 |
| 8 | 355928.178 | 6341895.744 | 47 | 356663.771 | 6340597.367 |
| 9 | 355947.934 | 6341892.376 | 48 | 356656.201 | 6340553.09 |
| 10 | 355853.373 | 6341292.557 | 49 | 356655.421 | 6340548.975 |
| 11 | 356025.753 | 6341261.302 | 50 | 356518.744 | 6340571.539 |
| 12 | 356035.744 | 6341259.492 | 51 | 356517.393 | 6340564.916 |
| 13 | 356035.744 | 6341259.492 | 52 | 356511.02 | 6340529.497 |
| 14 | 356150.057 | 6341238.764 | 53 | 356509.328 | 6340520.087 |
| 15 | 356154.466 | 6341287.101 | 54 | 356508.144 | 6340512.92 |
| 16 | 356150.397 | 6341292.015 | 55 | 356507.647 | 6340509.879 |
| 17 | 356230.926 | 6341284.356 | 56 | 356473.232 | 6340515.876 |
| 18 | 356234.995 | 6341279.435 | 57 | 356459.461 | 6340518.274 |
| 19 | 356251.894 | 6341277.87 | 58 | 356457.642 | 6340507.902 |
| 20 | 356256.765 | 6341281.96 | 59 | 356425.193 | 6340513.556 |
| 21 | 356403.679 | 6341268.302 | 60 | 356392.735 | 6340519.209 |
| 22 | 356407.748 | 6341263.377 | 61 | 356378.973 | 6340521.608 |
| 23 | 356424.694 | 6341261.757 | 62 | 356314.239 | 6340533.244 |
| 24 | 356429.593 | 6341265.824 | 63 | 356314.179 | 6340540.351 |
| 25 | 356484.442 | 6341260.581 | 64 | 356255.557 | 6340549.401 |
| 26 | 356488.511 | 6341255.657 | 65 | 356241.003 | 6340473.322 |
| 27 | 356505.457 | 6341254.038 | 66 | 356251.795 | 6340469.873 |
| 28 | 356498.096 | 6341175.733 | 67 | 356238.394 | 6340391.931 |
| 29 | 356649.645 | 6341148.313 | 68 | 356228.412 | 6340393.983 |
| 30 | 356774.359 | 6341125.628 | 69 | 356218.483 | 6340342.249 |
| 31 | 356976.796 | 6341088.994 | 70 | 356253.676 | 6340334.913 |
| 32 | 356953.354 | 6340941.979 | 71 | 356249.597 | 6340308.5 |
| 33 | 356933.899 | 6340819.976 | 72 | 356308.787 | 6340296.974 |
| 34 | 356697.067 | 6340862.109 | 73 | 356297.856 | 6340238.541 |
| 35 | 356717.346 | 6340981.24 | 74 | 356313.647 | 6340235.975 |
| 36 | 356698.489 | 6340984.596 | 75 | 356329.672 | 6340233.37 |
| 37 | 356547.095 | 6340995.2 | 76 | 356345.706 | 6340230.766 |
| 38 | 356538.803 | 6340910.934 | 77 | 356361.74 | 6340228.161 |
| 39 | 356473.609 | 6340915.5 | 78 | 356377.774 | 6340225.556 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 79 | 356373.42 | 6340204.076 |
| 80 | 356370.51 | 6340204.431 |
| 81 | 356294.047 | 6340216.855 |
| 82 | 356271.293 | 6340220.551 |
| 83 | 356255.643 | 6340195.055 |
| 84 | 356235.132 | 6340161.656 |
| 85 | 356281.62 | 6340098.924 |
| 86 | 356320.705 | 6340027.191 |
| 87 | 356341.037 | 6340032.67 |
| 88 | 356370.51 | 6340204.431 |
| 89 | 356373.42 | 6340204.076 |
| 90 | 356363.245 | 6340144.607 |
| 91 | 356353.07 | 6340085.137 |
| 92 | 356332.72 | 6339966.2 |
| 93 | 356323.68 | 6339976.503 |
| 94 | 356287.552 | 6339941.527 |
| 95 | 356269.488 | 6339924.042 |
| 96 | 356251.424 | 6339906.549 |
| 97 | 356139.306 | 6340022.406 |
| 98 | 356132.106 | 6339947.433 |
| 99 | 356089.208 | 6339500.483 |
| 100 | 356087.789 | 6339499.202 |
| 101 | 356102.181 | 6339485.034 |
| 102 | 356108.883 | 6339477.55 |
| 103 | 356137.009 | 6339446.173 |
| 104 | 356191.06 | 6339385.868 |
| 105 | 356146.496 | 6339345.677 |
| 106 | 356101.721 | 6339305.283 |
| 107 | 356018.411 | 6339397.769 |
| 108 | 356004.08 | 6339423.674 |
| 109 | 356005.942 | 6339425.349 |
| 110 | 356007.794 | 6339427.023 |
| 111 | 356022.722 | 6339440.491 |
| 112 | 356037.65 | 6339453.962 |
| 113 | 356052.579 | 6339467.432 |
| 114 | 356067.507 | 6339480.903 |
| 115 | 356000.322 | 6339555.491 |
| 116 | 355985.394 | 6339542.025 |
| 117 | 355970.456 | 6339528.561 |
| 118 | 355965.166 | 6339523.792 |
| 119 | 355955.518 | 6339515.096 |
| 120 | 355942.156 | 6339503.049 |
| 121 | 355937.149 | 6339540.083 |
| 122 | 355937.521 | 6339540.138 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 123 | 355938.22 | 6339540.27 |
| 124 | 355938.908 | 6339540.439 |
| 125 | 355939.577 | 6339540.644 |
| 126 | 355940.246 | 6339540.883 |
| 127 | 355940.896 | 6339541.158 |
| 128 | 355941.535 | 6339541.466 |
| 129 | 355942.156 | 6339541.808 |
| 130 | 355942.748 | 6339542.18 |
| 131 | 355943.33 | 6339542.582 |
| 132 | 355943.894 | 6339543.016 |
| 133 | 355944.428 | 6339543.479 |
| 134 | 355944.935 | 6339543.968 |
| 135 | 355945.339 | 6339544.397 |
| 136 | 355945.422 | 6339544.484 |
| 137 | 355945.872 | 6339545.023 |
| 138 | 355946.302 | 6339545.587 |
| 139 | 355946.695 | 6339546.172 |
| 140 | 355947.069 | 6339546.776 |
| 141 | 355947.396 | 6339547.399 |
| 142 | 355947.704 | 6339548.039 |
| 143 | 355947.965 | 6339548.694 |
| 144 | 355948.198 | 6339549.361 |
| 145 | 355948.394 | 6339550.041 |
| 146 | 355948.561 | 6339550.728 |
| 147 | 355948.681 | 6339551.423 |
| 148 | 355948.764 | 6339552.125 |
| 149 | 355948.819 | 6339552.831 |
| 150 | 355948.837 | 6339553.537 |
| 151 | 355932.958 | 6339571.07 |
| 152 | 355925.763 | 6339624.135 |
| 153 | 355923.302 | 6339642.269 |
| 154 | 355920.59 | 6339662.217 |
| 155 | 355917.879 | 6339682.168 |
| 156 | 355915.157 | 6339702.123 |
| 157 | 355912.436 | 6339722.083 |
| 158 | 355909.706 | 6339742.043 |
| 159 | 355901.412 | 6339803.13 |
| 160 | 355898.784 | 6339822.451 |
| 161 | 355896.093 | 6339842.266 |
| 162 | 355893.475 | 6339861.547 |
| 163 | 355888.721 | 6339896.529 |
| 164 | 355885.36 | 6339921.299 |
| 165 | 355874.564 | 6340000.771 |
| 166 | 355974.222 | 6340014.312 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 167 | 356089.192 | 6340029.935 |
| 168 | 356060.937 | 6340102.361 |
| 169 | 355678.579 | 6340204.001 |
| 170 | 355705.062 | 6340481.788 |
| 171 | 355712.114 | 6340526.706 |
| 172 | 355483.378 | 6340566.356 |
| 173 | 355492.821 | 6340625.715 |
| 174 | 355502.256 | 6340685.073 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 175 | 355277.225 | 6340723.274 |
| 176 | 355279.994 | 6340740.685 |
| 177 | 355286.602 | 6340781.992 |
| 178 | 355288.97 | 6340796.823 |
| 179 | 355314.438 | 6340956.788 |
| 180 | 354491.441 | 6341991.245 |
| 181 | 354446.385 | 6342047.958 |
| 182 | 354351.202 | 6342167.55 |

1 Coordinate reference system is MGA 56

SCHEDULE G – AREA OF OPERATIONS – MAPS



SCHEDULE G - MAP 1 - COORANBONG WATER - Area of operations - Non-potable water and sewage treatment infrastructure

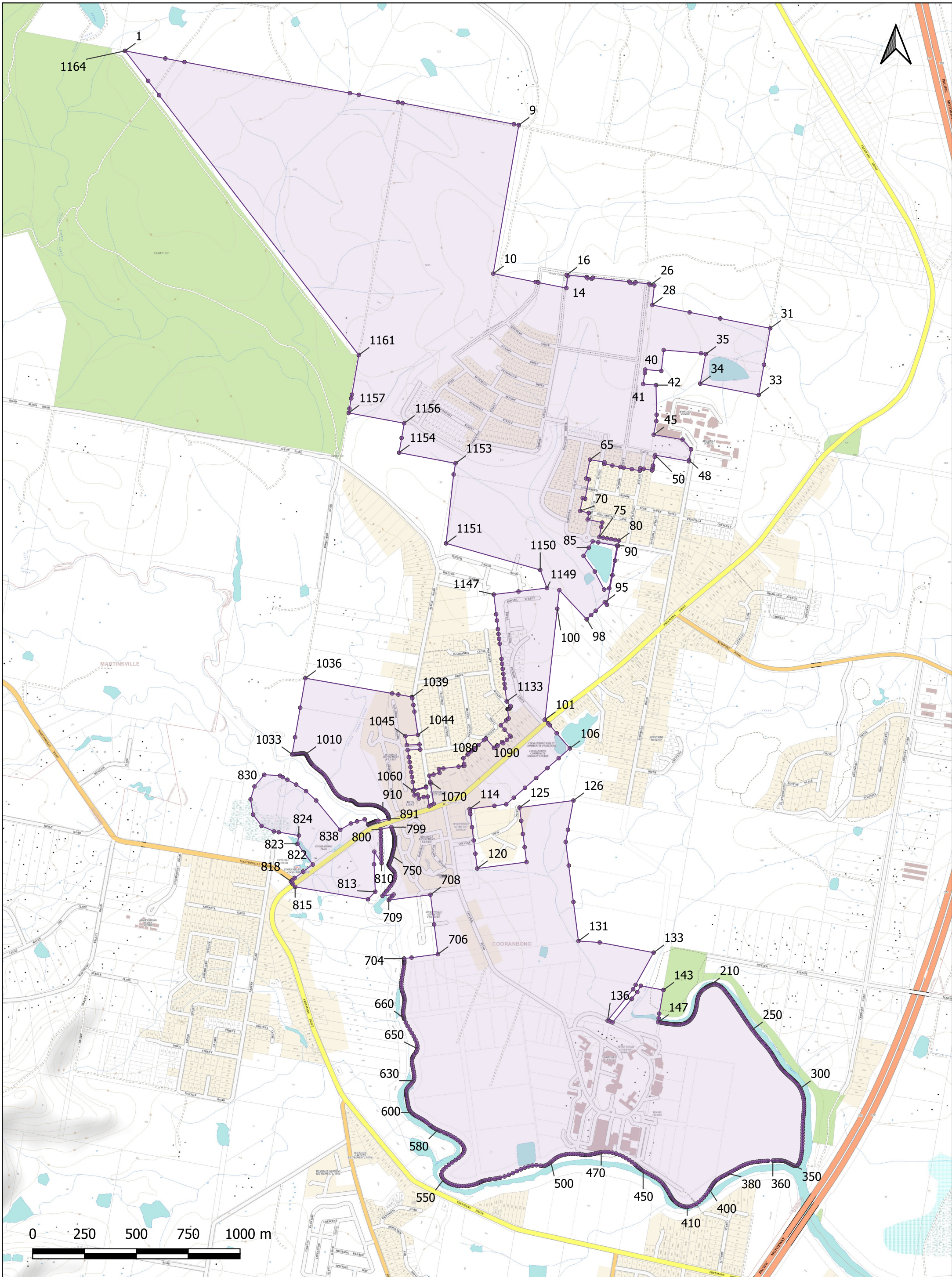
Date created: 28 February 2020
Version: 1.0

LICENCE DETAILS:

Licence Number: 15_033
Licence Type: Network Operator's Licence
Licensee: Cooranbong Water Pty Ltd (ACN 169 450 453)

LEGEND

- Vertex of area of operation
- Boundary of area of operation

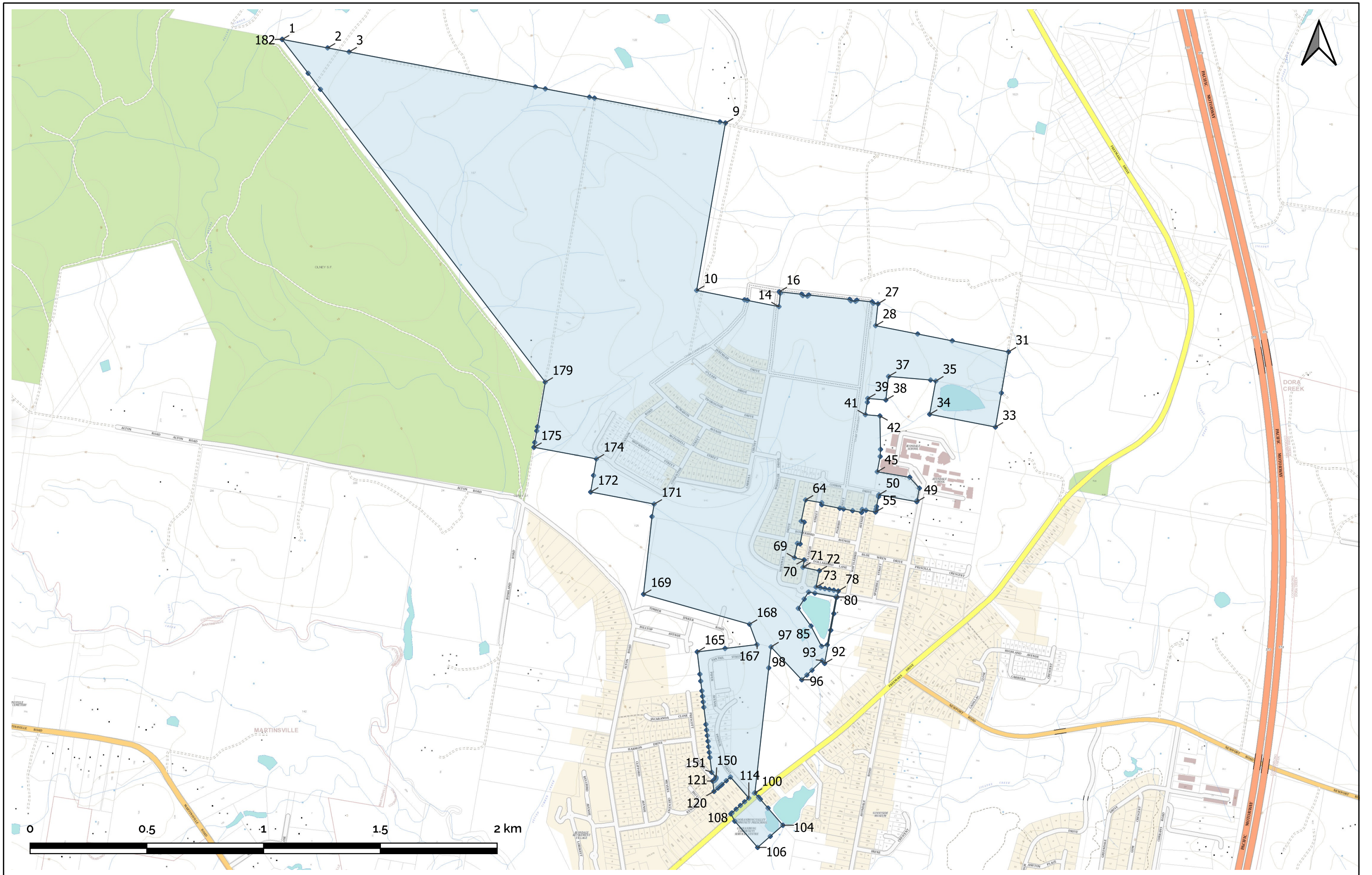


SCHEDULE G - MAP 2 - COORANBONG WATER - Area of Operations - Non-potable water network infrastructure

Date created: 4 March 2020
Version: 1.0

| LEGEND | |
|--------|-------------------------|
| | Licensed area |
| | Recycled Water boundary |
| | Recycled water vertices |




| LICENCE DETAILS: |
|--|
| Licence Number: 15_033 |
| Licence Type: Network Operator's Licence |
| Licensee: Cooranbong Water Pty Ltd (ACN 169 450 453) |



SCHEDULE G - MAP 3 - COORANBONG WATER - Area of Operations - Drinking water and sewerage network

Date created: 5 March 2020
Version: 1.0

LEGEND

| | |
|---|------------------------------------|
|  | Licensed Area |
|  | Drinking water & sewerage boundary |
|  | Drinking water & sewerage vertices |

LICENCE DETAILS:

| |
|--|
| Licence Number: 15_033 |
| Licence Type: Network Operator's Licence |
| Licensee: Cooranbong Water Pty Ltd (ACN 169 450 453) |



NEW SOUTH WALES GOVERNMENT

Water Industry Competition Act 2006 (NSW)

Retail supplier's licence

Licence no. 13_001R

Flow Systems Pty Ltd

(ACN 136 272 298)

PRELIMINARY

1. Summary

- 1.1. This Licence is granted under section 10(1) of the Act.
- 1.2. The Act prohibits a person from supplying water, or providing a sewerage service, by means of any water industry infrastructure, otherwise than under the authority of a licence. This Licence authorises the Licensee and other Authorised Persons to carry out such activities that would otherwise be prohibited under the Act.

2. Outline

- 2.1. This Licence is divided into the following sections and schedules:

| |
|---|
| Section 1 authorises the supply of non-potable water (if applicable). |
| Section 2 authorises the supply of drinking water (if applicable). |
| Section 3 authorises the supply of sewerage services (if applicable). |
| Schedule A sets out special Ministerially-imposed licence conditions that are specific to this Licence. |
| Schedule B sets out Ministerially-imposed licence conditions that generally apply to retail suppliers' licences granted under the Act. |
| Schedule C sets out relevant scheme details. |
| Schedule D sets out the area of operations for the retail of non-potable water for the North Cooranbong Scheme. |
| Schedule E sets out the area of operations for the retail of drinking water and sewerage services for the North Cooranbong Scheme. |
| Schedule F provides indicative maps for reference only. |
| Schedule G sets out definitions and interpretation provisions. |

- 2.2. In addition to the conditions in Schedules A and B to this Licence, the Act and Regulation also contain conditions that apply to this Licence. Nothing in Schedules A or B modify or affect the conditions imposed on this Licence by the Act or Regulation.

SECTION 1 – ACTIVITIES AUTHORISED - NON-POTABLE WATER SUPPLY

Subject to the conditions imposed by the Act, the Regulation and Schedules A and B of this Licence, this Licence authorises the Licensee and any Authorised Persons specified in Table 1.1 to supply non-potable water:

- a) by means of the water industry infrastructure specified in Table 1.2
- b) to the persons or classes of persons specified in Table 1.3
- c) within the Area of Operations specified in Table 1.4, and
- d) for one or more of the Authorised Purposes for non-potable water specified in Table 1.5.

Table 1.1 Authorised Persons

[Not applicable]

Table 1.2 Water industry infrastructure

The water industry infrastructure detailed in Schedule C, Table C.1.

Table 1.3 Person or classes of persons

Persons within the Area of Operations detailed in Schedule C, Table C.1.

Table 1.4 Area of Operations

The Area of Operations detailed in Schedule C, Table C.1.

Table 1.5 Authorised Purposes for non-potable water

The Authorised Purposes detailed in Schedule C, Table C.1.

SECTION 2 – ACTIVITIES AUTHORISED - DRINKING WATER SUPPLY

Subject to the conditions imposed by the Act, the Regulation and Schedules A and B of this Licence, this Licence authorises the Licensee and any Authorised Persons specified in Table 2.1 to supply drinking water:

- a) by means of the water industry infrastructure specified in Table 2.2
- b) to the persons or classes of persons specified in Table 2.3
- c) within the Area of Operations specified in Table 2.4, and
- d) for one or more of the Authorised Purposes for drinking water specified in Table 2.5.

Table 2.1 Authorised Persons

[Not applicable]

Table 2.2 Water industry infrastructure

The water industry infrastructure detailed in Schedule C, Table C.2.

Table 2.3 Person or classes of persons

Persons within the Area of Operations detailed in Schedule C, Table C.2.

Table 2.4 Area of Operations

The Area of Operations detailed in Schedule C, Table C.2.

Table 2.5 Authorised Purposes for drinking water

The Authorised Purposes detailed in Schedule C, Table C.2.

SECTION 3 – ACTIVITIES AUTHORISED - SEWERAGE SERVICES

Subject to the conditions imposed by the Act, the Regulation and Schedules A and B of this Licence, this Licence authorises the Licensee and any Authorised Persons specified in Table 3.1 to provide sewerage services:

- a) by means of the water industry infrastructure specified in Table 3.2
- b) to the persons or classes of persons specified in Table 3.3
- c) within the Area of Operations specified in Table 3.4, and
- d) for one or more of the Authorised Purposes for sewerage services specified in Table 3.5.

Table 3.1 Authorised Persons

[Not applicable]

Table 3.2 Water industry infrastructure

The water industry infrastructure detailed in Schedule C, Table C.3.

Table 3.3 Person or classes of persons

Persons within the Area of Operations detailed in Schedule C, Table C.3.

Table 3.4 Area of Operations

The Area of Operations detailed in Schedule C, Table C.3.

Table 3.5 Authorised Purposes for sewerage services

The Authorised Purposes detailed in Schedule C, Table C.3.

SCHEDULE A – SPECIAL MINISTERIALLY-IMPOSED LICENCE CONDITIONS

This schedule sets out the conditions which the Minister imposes pursuant to section 13(1)(b) of the Act. In addition to these special Ministerially-imposed conditions, the Licensee is subject to obligations imposed by the Act, the Regulation and the standard Ministerially-imposed licence conditions set out in Schedule B. The Minister may vary the conditions in this schedule or impose new conditions, provided there is no inconsistency with the conditions imposed by the Act or the Regulation.

1. If requested by IPART, the Licensee must prepare and provide IPART with:
 - a) a report, to IPART's satisfaction, outlining:
 - (i) evidence of discussions with intended customer(s) or formal agreement(s) with customer(s); and
 - (ii) the curriculum vitae of the key personnel involved in the operation and management of the activities authorised by this Licence, and
 - b) a statement:
 - (i) identifying any third party providing customer services under this Licence; and
 - (ii) outlining the enforceable controls the Licensee has in place to enable it to effectively respond to any suspected breaches of these Licence conditions.

SCHEDULE B – GENERAL MINISTERIALLY-IMPOSED LICENCE CONDITIONS

1. Ongoing capacity to operate

- 1.1. 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 in accordance with the Reporting Manual.

2. Maintaining appropriate insurance

- 2.1. The Licensee must hold insurance that is appropriate for the size and nature of the activities that the Licensee is carrying out under this Licence.
- 2.2. 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.
- 2.3. Before commencing any of the activities authorised by this Licence, the Licensee must demonstrate that the insurance held is appropriate for the size and nature of the activities, by providing a report to IPART from an Insurance Expert that:
- a) certifies that in the Insurance Expert's opinion, the type, scope and limit of the insurance held by the Licensee is appropriate for the size and nature of the activities; and
 - b) is in the form prescribed by the Reporting Manual.
- 2.4. *[Not applicable]*
- 2.5. If, in relation to the activities authorised by this Licence, there is, or is to be a change in either of the following, the Licensee must provide a report to IPART in accordance with the Reporting Manual:
- 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 held by the Licensee.
- 2.6. From time to time when requested in writing by IPART, the Licensee must provide a report to IPART, in the manner and form and within the timeframes specified by IPART, from an Insurance Expert certifying that in the Insurance Expert's opinion the type, scope and limit on the amount of insurance held by the Licensee is appropriate for the size and nature of the activities that the Licensee is carrying out under this Licence.

[Note: The circumstances in which IPART may request a report under clause 2.6 include (but are not limited to) the following:

- *where IPART considers that there may be a change in the type, scope or limit on the amount of insurance held by the Licensee in relation to activities that the Licensee is carrying out under this Licence;*

- *where there is a change in the type or extent of activities authorised by this Licence; or*
- *where IPART or an approved auditor considers that the type, scope or limit on the amount of insurance held by the Licensee may not be appropriate for the size and nature of the activities that the Licensee is carrying out under this Licence.]*

3. Complying with NSW Health requirements

- 3.1. The Licensee must carry out the activities authorised by this Licence in compliance with any requirements of NSW Health that:
- a) IPART has agreed to; and
 - b) are notified from time to time to the Licensee by IPART in writing.

4. Complying with Audit Guidelines

- 4.1. The Licensee must comply with any Audit Guidelines issued by IPART.

5. Reporting in accordance with the Reporting Manual

- 5.1. The Licensee must prepare and submit reports in accordance with the Reporting Manual.

6. Reporting information in relation to the register of licences

- 6.1. The Licensee must notify IPART, and provide IPART with details, of any change in relation to the following, in accordance with the Reporting Manual within 14 days of the change:
- a) any licensed network operator or public water utility from whose water industry infrastructure the Licensee supplies water to its customers;
 - b) any source from which the water handled by the water industry infrastructure referred to in clause 6.1a) is derived;
 - c) whether or not any of the Licensee's customers are Small Retail Customers;
 - d) any order under section 54 of the Act by which the Licensee is declared to be a retailer of last resort; and
 - e) any licensed network operator or public water utility by means of whose sewerage infrastructure the Licensee provides sewerage services to its customers.

7. Delineating responsibilities

- 7.1. If a code of conduct has not been established under clause 25 of the Regulation, the Licensee must, by a date specified by IPART, establish a code of conduct (Licensee's Code of Conduct) in accordance with this clause 7.
- 7.2. Before commencing to supply water or provide sewerage services by means of the Licensed Water Industry Infrastructure under this Licence or by a later date specified by IPART (if any), the Licensee's Code of Conduct must be agreed in writing between:
- a) the Licensee; and
 - b) each licensed network operator, licensed retail supplier and/or public water utility that:
 - i) supplies water or provides sewerage services by means of any water industry infrastructure that is connected to the Licensed Water Industry Infrastructure; or
 - ii) constructs, maintains or operates any water industry infrastructure that is connected to the Licensed Water Industry Infrastructure.
- 7.3. *[Not Applicable]*
- 7.4. The Licensee's Code of Conduct must set out the respective responsibilities of the entities specified in clause 7.2 by, at a minimum, providing for:
- a) who is responsible for repairing, replacing or maintaining any pipes, pumps, valves or storages or other infrastructure connecting the Licensed Water Industry Infrastructure to the other water industry infrastructure;
 - b) who is responsible for water quality;
 - c) who is liable in the event of the unavailability of water;
 - d) who is liable in the event of failure of any water industry infrastructure;
 - e) the fees and charges payable in respect of the use of the water industry infrastructure; and
 - f) who is responsible for handling customer complaints.
- 7.5. 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.

8. Infrastructure to be used

- 8.1. The Licensee must only source and supply water by means of water industry infrastructure, if that water industry infrastructure is maintained and operated by a licensed network operator or public water utility.
- 8.2. The Licensee must only provide sewerage services by means of water industry infrastructure, if that water industry infrastructure is maintained and operated by a licensed network operator or public water utility.

9. Notification of supply of water or provision of sewerage services

9.1. Each time the Licensee commences to supply water under this Licence, the Licensee must:

- a) notify IPART in accordance with the Reporting Manual that it has commenced to supply water to customers by means of the relevant Licensed Water Industry Infrastructure; and
- b) provide such notification within 10 days after such commencement.

9.2. Each time the Licensee commences to provide sewerage services under this Licence, the Licensee must:

- a) notify IPART in accordance with the Reporting Manual that it has commenced to provide sewerage services to customers by means of the relevant Licensed Water Industry Infrastructure; and
- b) provide such notification within 10 days after such commencement.

SCHEDULE C – RELEVANT SCHEME DETAILS

Table C.1 Non-potable water supply

| Scheme | Water industry infrastructure | Authorised Purposes | Area of Operations |
|-------------------------|---|---|--|
| Box Hill North Scheme | The water industry infrastructure specified in clause S1, Table 1.2 of the Box Hill North Network Operator's Licence. | The Authorised Purposes specified in clause S1, Table 1.3 of the Box Hill North Water Network Operator's Licence. | The Area of Operations specified in clause S1, Table 1.4 of the Box Hill North Water Network Operator's Licence. |
| Central Park Scheme | The water industry infrastructure specified in Section 1, Table 1.2A and Table 1.2B of the Central Park Water Network Operator's Licence. | The Authorised Purposes specified in Section 1, Table 1.3 of the Central Park Water Network Operator's Licence. | The Area of Operations specified in Section 1, Table 1.4A and Table 1.4B of the Central Park Water Network Operator's Licence, and Lot 2012 DP 1183894, and Lot 2012 DP 1190337. |
| Discovery Point Scheme | The water industry infrastructure specified in Schedule A, Table 1.2 of the Discovery Point Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 1.3 of the Discovery Point Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 1.4 of the Discovery Point Water Network Operator's Licence. |
| Glossodia Scheme | The water industry infrastructure specified in Table 1.2 in Section 1 of the Glossodia Network Operator's Licence. | The Authorised Purposes specified in Table 1.4 in Section 1 of the Glossodia Network Operator's Licence. | The Area of Operations specified in Table 1.3 in Section 1 of the Glossodia Network Operator's Licence. |
| Green Square Scheme | The water industry infrastructure specified in Schedule A, Table 1.2 of the Green Square Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 1.3 of the Green Square Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 1.4 of the Green Square Water Network Operator's Licence. |
| Huntlee Scheme | The water industry infrastructure specified in Schedule A, Table 1.2 of the Huntlee Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 1.3 of the Huntlee Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 1.4 of the Huntlee Water Network Operator's Licence. |
| North Cooranbong Scheme | The water industry infrastructure specified in Section 1, Table 1.2 of the Cooranbong Water Network Operator's Licence. | The Authorised Purposes specified in Section 1, Table 1.4 of the Cooranbong Water Network Operator's Licence. | The Area of Operations specified in Schedule D of this licence. |

| Scheme | Water industry infrastructure | Authorised Purposes | Area of Operations |
|----------------------|--|--|---|
| Pitt Town Scheme | The water industry infrastructure specified in Schedule A, Table 1.2 of the Pitt Town Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 1.3 of the Pitt Town Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 1.4 of the Pitt Town Water Network Operator's Licence. |
| Shepherds Bay Scheme | The water industry infrastructure specified in Section 1, Table 1.2 of the Shepherds Bay Water Network Operator's Licence. | The Authorised Purposes specified in Section 1, Table 1.2 and Table 1.4 of the Shepherds Bay Water Network Operator's Licence. | The Area of Operations specified in Section 1, Table 1.3 of the Shepherds Bay Water Network Operator's Licence. |
| Wye Scheme | The water industry infrastructure specified in Schedule A, Table 1.2 of the Wye Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 1.3 of the Wye Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 1.4 of the Wye Water Network Operator's Licence. |

Table C.2 – Drinking water supply

| Scheme | Water industry infrastructure | Authorised Purposes | Area of Operations |
|-------------------------|---|---|---|
| Central Park Scheme | The water industry infrastructure specified in Section 2, Table 2.2 of the Central Park Water Network Operator's Licence. | The Authorised Purposes specified in Section 2, Table 2.2 of the Central Park Water Network Operator's Licence. | The Area of Operations specified in Section 2, Table 2.3 of the Central Park Water Network Operator's Licence., and Lot 2012 DP 1183894, and Lot 2012 DP 1190337. |
| Discovery Point Scheme | The water industry infrastructure specified in Schedule A, Table 2.2 of the Discovery Point Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 2.3 of the Discovery Point Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 2.4 of the Discovery Point Water Network Operator's Licence. |
| Huntlee Scheme | The water industry infrastructure specified in Schedule A, Table 2.2 of the Huntlee Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 2.3 of the Huntlee Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 2.4 of the Huntlee Water Network Operator's Licence. |
| North Cooranbong Scheme | The water industry infrastructure specified in Section 2, Table 2.2 of the Cooranbong Water Network Operator's Licence. | The Authorised Purposes specified in Section 2, Table 2.4 of the Cooranbong Water Network Operator's Licence. | The Area of Operations specified in Schedule E of this licence. |
| Shepherds Bay Scheme | The water industry infrastructure specified in Section 2, Table 2.2 of the Shepherds Bay Water Network Operator's Licence. | The Authorised Purposes specified in Section 2, Table 2.2 of the Shepherds Bay Water Network Operator's Licence. | The Area of Operations specified in Section 2, Table 2.3 of the Shepherds Bay Water Network Operator's Licence. |
| Wye Scheme | The water industry infrastructure specified in Schedule A, Table 2.2 of the Wye Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 2.3 of the Wye Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 2.4 of the Wye Water Network Operator's Licence. |

Table C.3 Provision of sewerage services

| Scheme | Water industry infrastructure | Authorised Purposes | Area of Operations |
|-------------------------|---|--|--|
| Box Hill North Scheme | The water industry infrastructure specified in clause S3, Table 3.2 of the Box Hill North Network Operator's Licence. | The Authorised Purposes specified in clause S3, Table 3.3 of the Box Hill North Water Network Operator's Licence. | The Area of Operations specified in clause S3, Table 3.4 of the Box Hill North Water Network Operator's Licence. |
| Central Park Scheme | The water industry infrastructure specified in Section 3, Table 3.2 of the Central Park Water Network Operator's Licence. | The Authorised Purposes specified in Section 3, Table 3.2 of the Central Park Water Network Operator's Licence. | The Area of Operations specified in Section 3, Table 3.3 of the Central Park Water Network Operator's Licence, and Lot 2012 DP 1183894, and Lot 2012 DP 1190337. |
| Discovery Point Scheme | The water industry infrastructure specified in Schedule A, Table 3.2 of the Discovery Point Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 3.3 of the Discovery Point Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 3.4 of the Discovery Point Water Network Operator's Licence. |
| Glossodia Scheme | The water industry infrastructure specified in Table 3.2 in Section 1 of the Glossodia Network Operator's Licence. | The Authorised Purposes specified in Table 3.2 in Section 1 of the Glossodia Network Operator's Licence. | The Area of Operations specified in Table 3.3 in Section 1 of the Glossodia Network Operator's Licence. |
| Pitt Town Scheme | The water industry infrastructure specified in Schedule A, Table 2.2 of the Pitt Town Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 2.3 of the Pitt Town Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 2.4 of the Pitt Town Water Network Operator's Licence. |
| Huntlee Scheme | The water industry infrastructure specified in Schedule A, Table 3.2 of the Huntlee Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 3.3 of the Huntlee Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 3.4 of the Huntlee Water Network Operator's Licence. |
| North Cooranbong Scheme | The water industry infrastructure specified in Section 3, Table 3.2 of the Cooranbong Water Network Operator's Licence. | The Authorised Purposes specified in Section 3, Tables 3.2 and 3.4 of the Cooranbong Water Network Operator's Licence. | The Area of Operations specified in Schedule E of this licence. |

| Scheme | Water industry infrastructure | Authorised Purposes | Area of Operations |
|----------------------|--|--|---|
| Shepherds Bay Scheme | The water industry infrastructure specified in Section 3, Table 3.2 of the Shepherds Bay Water Network Operator's Licence. | The Authorised Purposes specified in Section 3, Table 3.2 of the Shepherds Bay Water Network Operator's Licence. | The Area of Operations specified in Section 3, Table 3.3 of the Shepherds Bay Water Network Operator's Licence. |
| Wye Scheme | The water industry infrastructure specified in Schedule A, Table 3.2 of the Wye Water Network Operator's Licence. | The Authorised Purposes specified in Schedule A, Table 3.3 of the Wye Water Network Operator's Licence. | The Area of Operations specified in Schedule A, Table 3.4 of the Wye Water Network Operator's Licence. |

**SCHEDULE D – AREA OF OPERATIONS – NORTH COORANBONG SCHEME - RETAIL
OF NON-POTABLE WATER**

| Coordinates ¹ | | | Coordinates ¹ | | |
|--------------------------|------------|-------------|--------------------------|------------|-------------|
| Vertex | Easting | Northing | Vertex | Easting | Northing |
| 1 | 354351.202 | 6342167.550 | 46 | 355960.599 | 6341304.676 |
| 2 | 354514.692 | 6342139.480 | 47 | 355962.109 | 6341304.822 |
| 3 | 354592.036 | 6342126.211 | 48 | 355963.620 | 6341304.959 |
| 4 | 355263.261 | 6342010.852 | 49 | 355965.130 | 6341305.090 |
| 5 | 355299.057 | 6342004.699 | 50 | 355966.642 | 6341305.211 |
| 6 | 355457.953 | 6341977.432 | 51 | 355968.154 | 6341305.325 |
| 7 | 355476.118 | 6341974.262 | 52 | 355969.667 | 6341305.432 |
| 8 | 355928.178 | 6341895.744 | 53 | 355971.181 | 6341305.530 |
| 9 | 355947.934 | 6341892.376 | 54 | 355972.694 | 6341305.620 |
| 10 | 355853.373 | 6341292.557 | 55 | 355974.208 | 6341305.702 |
| 11 | 355889.131 | 6341288.932 | 56 | 355975.723 | 6341305.776 |
| 12 | 355908.528 | 6341294.666 | 57 | 355977.237 | 6341305.843 |
| 13 | 355909.987 | 6341295.082 | 58 | 355978.752 | 6341305.902 |
| 14 | 355911.448 | 6341295.492 | 59 | 355980.267 | 6341305.953 |
| 15 | 355912.912 | 6341295.894 | 60 | 355981.783 | 6341305.996 |
| 16 | 355914.377 | 6341296.289 | 61 | 355983.299 | 6341306.031 |
| 17 | 355915.844 | 6341296.675 | 62 | 355984.816 | 6341306.058 |
| 18 | 355917.315 | 6341297.054 | 63 | 355986.332 | 6341306.076 |
| 19 | 355918.785 | 6341297.426 | 64 | 355987.847 | 6341306.088 |
| 20 | 355920.259 | 6341297.789 | 65 | 355989.363 | 6341306.091 |
| 21 | 355921.734 | 6341298.145 | 66 | 355990.880 | 6341306.086 |
| 22 | 355923.210 | 6341298.493 | 67 | 355992.396 | 6341306.074 |
| 23 | 355924.690 | 6341298.834 | 68 | 355993.911 | 6341306.054 |
| 24 | 355926.169 | 6341299.168 | 69 | 355995.427 | 6341306.026 |
| 25 | 355927.652 | 6341299.492 | 70 | 355996.943 | 6341305.990 |
| 26 | 355929.136 | 6341299.810 | 71 | 355998.458 | 6341305.945 |
| 27 | 355930.620 | 6341300.120 | 72 | 355999.973 | 6341305.893 |
| 28 | 355932.108 | 6341300.421 | 73 | 356001.488 | 6341305.834 |
| 29 | 355933.596 | 6341300.716 | 74 | 356003.003 | 6341305.764 |
| 30 | 355935.085 | 6341301.002 | 75 | 356004.517 | 6341305.689 |
| 31 | 355936.577 | 6341301.280 | 76 | 356006.030 | 6341305.606 |
| 32 | 355938.069 | 6341301.552 | 77 | 356007.543 | 6341305.514 |
| 33 | 355939.563 | 6341301.814 | 78 | 356009.055 | 6341305.415 |
| 34 | 355941.058 | 6341302.070 | 79 | 356010.568 | 6341305.307 |
| 35 | 355942.555 | 6341302.318 | 80 | 356012.079 | 6341305.193 |
| 36 | 355944.052 | 6341302.557 | 81 | 356013.589 | 6341305.069 |
| 37 | 355947.053 | 6341303.013 | 82 | 356015.100 | 6341304.938 |
| 38 | 355948.553 | 6341303.229 | 83 | 356036.436 | 6341302.923 |
| 39 | 355950.057 | 6341303.438 | 84 | 356040.052 | 6341298.556 |
| 40 | 355951.560 | 6341303.639 | 85 | 356036.864 | 6341263.580 |
| 41 | 355953.064 | 6341303.831 | 86 | 356150.057 | 6341238.764 |
| 42 | 355954.569 | 6341304.015 | 87 | 356154.466 | 6341287.101 |
| 43 | 355956.076 | 6341304.193 | 88 | 356150.397 | 6341292.015 |
| 44 | 355957.583 | 6341304.363 | 89 | 356230.926 | 6341284.356 |
| 45 | 355959.091 | 6341304.523 | 90 | 356234.995 | 6341279.435 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 91 | 356251.894 | 6341277.870 |
| 92 | 356256.765 | 6341281.960 |
| 93 | 356403.679 | 6341268.302 |
| 94 | 356407.748 | 6341263.377 |
| 95 | 356424.694 | 6341261.757 |
| 96 | 356429.593 | 6341265.824 |
| 97 | 356484.442 | 6341260.581 |
| 98 | 356488.511 | 6341255.657 |
| 99 | 356505.457 | 6341254.038 |
| 100 | 356498.096 | 6341175.733 |
| 101 | 356649.645 | 6341148.313 |
| 102 | 356774.359 | 6341125.628 |
| 103 | 356976.796 | 6341088.994 |
| 104 | 356953.354 | 6340941.979 |
| 105 | 356911.009 | 6340676.479 |
| 106 | 356885.170 | 6340514.852 |
| 107 | 356884.165 | 6340509.213 |
| 108 | 356879.669 | 6340483.987 |
| 109 | 356871.355 | 6340438.179 |
| 110 | 356663.500 | 6340472.232 |
| 111 | 356675.399 | 6340545.157 |
| 112 | 356655.424 | 6340548.976 |
| 113 | 356654.135 | 6340541.077 |
| 114 | 356517.390 | 6340564.916 |
| 115 | 356517.393 | 6340564.916 |
| 116 | 356511.020 | 6340529.497 |
| 117 | 356509.328 | 6340520.087 |
| 118 | 356508.144 | 6340512.920 |
| 119 | 356507.647 | 6340509.879 |
| 120 | 356473.232 | 6340515.876 |
| 121 | 356459.461 | 6340518.274 |
| 122 | 356457.642 | 6340507.902 |
| 123 | 356425.193 | 6340513.556 |
| 124 | 356392.735 | 6340519.209 |
| 125 | 356378.973 | 6340521.608 |
| 126 | 356346.515 | 6340527.260 |
| 127 | 356343.352 | 6340509.238 |
| 128 | 356314.239 | 6340533.244 |
| 129 | 356314.179 | 6340540.351 |
| 130 | 356255.557 | 6340549.401 |
| 131 | 356241.003 | 6340473.322 |
| 132 | 356251.795 | 6340469.873 |
| 133 | 356238.394 | 6340391.931 |
| 134 | 356228.412 | 6340393.983 |
| 135 | 356218.483 | 6340342.249 |
| 136 | 356253.676 | 6340334.913 |
| 137 | 356249.597 | 6340308.500 |
| 138 | 356308.787 | 6340296.974 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 139 | 356304.967 | 6340279.013 |
| 140 | 356297.856 | 6340238.541 |
| 141 | 356313.647 | 6340235.975 |
| 142 | 356329.672 | 6340233.370 |
| 143 | 356345.706 | 6340230.766 |
| 144 | 356361.740 | 6340228.161 |
| 145 | 356377.774 | 6340225.556 |
| 146 | 356373.420 | 6340204.076 |
| 147 | 356370.510 | 6340204.431 |
| 148 | 356294.047 | 6340216.855 |
| 149 | 356271.293 | 6340220.551 |
| 150 | 356255.643 | 6340195.055 |
| 151 | 356235.132 | 6340161.656 |
| 152 | 356281.620 | 6340098.924 |
| 153 | 356320.705 | 6340027.191 |
| 154 | 356341.037 | 6340032.670 |
| 155 | 356370.510 | 6340204.431 |
| 156 | 356373.420 | 6340204.076 |
| 157 | 356363.245 | 6340144.607 |
| 158 | 356353.070 | 6340085.137 |
| 159 | 356332.720 | 6339966.200 |
| 160 | 356323.680 | 6339976.503 |
| 161 | 356287.552 | 6339941.527 |
| 162 | 356269.488 | 6339924.042 |
| 163 | 356251.424 | 6339906.549 |
| 164 | 356139.306 | 6340022.406 |
| 165 | 356132.106 | 6339947.433 |
| 166 | 356089.208 | 6339500.483 |
| 167 | 356087.789 | 6339499.202 |
| 168 | 356102.181 | 6339485.034 |
| 169 | 356108.883 | 6339477.550 |
| 170 | 356137.009 | 6339446.173 |
| 171 | 356191.060 | 6339385.868 |
| 172 | 356146.496 | 6339345.677 |
| 173 | 356101.721 | 6339305.283 |
| 174 | 356056.936 | 6339264.888 |
| 175 | 356012.152 | 6339224.497 |
| 176 | 355967.378 | 6339184.103 |
| 177 | 355937.522 | 6339157.174 |
| 178 | 355889.604 | 6339150.239 |
| 179 | 355789.484 | 6339135.747 |
| 180 | 355790.994 | 6339125.721 |
| 181 | 355792.485 | 6339115.772 |
| 182 | 355800.099 | 6339062.819 |
| 183 | 355807.754 | 6339009.666 |
| 184 | 355815.398 | 6338956.515 |
| 185 | 355823.990 | 6338896.791 |
| 186 | 356022.960 | 6338925.561 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 187 | 356014.361 | 6338985.301 |
| 188 | 356006.707 | 6339038.470 |
| 189 | 355999.045 | 6339091.637 |
| 190 | 355991.422 | 6339144.609 |
| 191 | 356208.677 | 6339176.100 |
| 192 | 356188.363 | 6339058.200 |
| 193 | 356179.897 | 6339009.081 |
| 194 | 356193.555 | 6338914.428 |
| 195 | 356214.688 | 6338767.887 |
| 196 | 356237.327 | 6338610.893 |
| 197 | 356323.194 | 6338606.372 |
| 198 | 356541.862 | 6338568.677 |
| 199 | 356471.029 | 6338437.977 |
| 200 | 356461.448 | 6338420.286 |
| 201 | 356360.085 | 6338292.326 |
| 202 | 356368.580 | 6338289.206 |
| 203 | 356379.966 | 6338285.023 |
| 204 | 356455.341 | 6338380.178 |
| 205 | 356456.826 | 6338382.050 |
| 206 | 356478.322 | 6338409.186 |
| 207 | 356491.967 | 6338434.366 |
| 208 | 356583.626 | 6338418.630 |
| 209 | 356568.240 | 6338323.669 |
| 210 | 356566.185 | 6338304.586 |
| 211 | 356564.640 | 6338290.269 |
| 212 | 356564.400 | 6338288.775 |
| 213 | 356574.441 | 6338287.192 |
| 214 | 356581.223 | 6338286.276 |
| 215 | 356584.637 | 6338285.820 |
| 216 | 356588.070 | 6338285.368 |
| 217 | 356591.541 | 6338284.917 |
| 218 | 356595.048 | 6338284.470 |
| 219 | 356598.602 | 6338284.027 |
| 220 | 356602.212 | 6338283.592 |
| 221 | 356605.878 | 6338283.163 |
| 222 | 356609.628 | 6338282.738 |
| 223 | 356614.135 | 6338282.254 |
| 224 | 356618.726 | 6338281.798 |
| 225 | 356623.372 | 6338281.390 |
| 226 | 356628.045 | 6338281.049 |
| 227 | 356632.717 | 6338280.794 |
| 228 | 356637.350 | 6338280.644 |
| 229 | 356641.934 | 6338280.618 |
| 230 | 356646.423 | 6338280.731 |
| 231 | 356650.797 | 6338281.006 |
| 232 | 356655.039 | 6338281.461 |
| 233 | 356661.259 | 6338282.546 |
| 234 | 356667.081 | 6338284.079 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 235 | 356672.533 | 6338286.035 |
| 236 | 356677.615 | 6338288.388 |
| 237 | 356682.345 | 6338291.113 |
| 238 | 356686.744 | 6338294.184 |
| 239 | 356690.821 | 6338297.576 |
| 240 | 356694.595 | 6338301.264 |
| 241 | 356698.085 | 6338305.222 |
| 242 | 356701.291 | 6338309.423 |
| 243 | 356703.484 | 6338312.657 |
| 244 | 356705.536 | 6338316.011 |
| 245 | 356707.446 | 6338319.488 |
| 246 | 356709.213 | 6338323.095 |
| 247 | 356710.849 | 6338326.829 |
| 248 | 356712.342 | 6338330.695 |
| 249 | 356713.693 | 6338334.697 |
| 250 | 356714.902 | 6338338.835 |
| 251 | 356715.979 | 6338343.113 |
| 252 | 356716.913 | 6338347.534 |
| 253 | 356717.689 | 6338351.908 |
| 254 | 356718.361 | 6338356.380 |
| 255 | 356718.967 | 6338360.915 |
| 256 | 356720.122 | 6338370.043 |
| 257 | 356720.737 | 6338374.564 |
| 258 | 356721.410 | 6338379.011 |
| 259 | 356722.177 | 6338383.350 |
| 260 | 356723.068 | 6338387.545 |
| 261 | 356724.120 | 6338391.561 |
| 262 | 356725.919 | 6338396.872 |
| 263 | 356728.079 | 6338401.796 |
| 264 | 356730.598 | 6338406.370 |
| 265 | 356733.458 | 6338410.635 |
| 266 | 356736.648 | 6338414.624 |
| 267 | 356740.160 | 6338418.374 |
| 268 | 356743.982 | 6338421.928 |
| 269 | 356748.097 | 6338425.314 |
| 270 | 356752.502 | 6338428.577 |
| 271 | 356757.180 | 6338431.748 |
| 272 | 356760.131 | 6338433.630 |
| 273 | 356763.166 | 6338435.465 |
| 274 | 356766.259 | 6338437.220 |
| 275 | 356769.409 | 6338438.868 |
| 276 | 356772.589 | 6338440.379 |
| 277 | 356775.800 | 6338441.726 |
| 278 | 356779.004 | 6338442.875 |
| 279 | 356782.202 | 6338443.800 |
| 280 | 356785.376 | 6338444.473 |
| 281 | 356788.507 | 6338444.860 |
| 282 | 356794.858 | 6338444.699 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 283 | 356800.975 | 6338443.328 |
| 284 | 356806.873 | 6338440.896 |
| 285 | 356812.552 | 6338437.552 |
| 286 | 356818.018 | 6338433.445 |
| 287 | 356823.287 | 6338428.724 |
| 288 | 356828.367 | 6338423.535 |
| 289 | 356833.265 | 6338418.029 |
| 290 | 356837.978 | 6338412.358 |
| 291 | 356842.534 | 6338406.662 |
| 292 | 356847.081 | 6338400.879 |
| 293 | 356851.486 | 6338395.211 |
| 294 | 356855.750 | 6338389.638 |
| 295 | 356859.911 | 6338384.142 |
| 296 | 356863.967 | 6338378.702 |
| 297 | 356867.958 | 6338373.295 |
| 298 | 356871.883 | 6338367.906 |
| 299 | 356875.771 | 6338362.510 |
| 300 | 356879.641 | 6338357.091 |
| 301 | 356883.502 | 6338351.627 |
| 302 | 356887.583 | 6338345.809 |
| 303 | 356891.674 | 6338339.933 |
| 304 | 356895.794 | 6338334.008 |
| 305 | 356899.923 | 6338328.042 |
| 306 | 356904.063 | 6338322.048 |
| 307 | 356908.230 | 6338316.038 |
| 308 | 356912.417 | 6338310.024 |
| 309 | 356916.612 | 6338304.016 |
| 310 | 356920.836 | 6338298.026 |
| 311 | 356925.068 | 6338292.062 |
| 312 | 356930.100 | 6338285.066 |
| 313 | 356935.158 | 6338278.127 |
| 314 | 356940.254 | 6338271.251 |
| 315 | 356945.404 | 6338264.439 |
| 316 | 356950.591 | 6338257.692 |
| 317 | 356955.851 | 6338251.018 |
| 318 | 356961.166 | 6338244.417 |
| 319 | 356966.555 | 6338237.893 |
| 320 | 356972.017 | 6338231.446 |
| 321 | 356977.572 | 6338225.086 |
| 322 | 356982.345 | 6338219.748 |
| 323 | 356987.165 | 6338214.451 |
| 324 | 356992.004 | 6338209.164 |
| 325 | 356996.824 | 6338203.864 |
| 326 | 357001.607 | 6338198.526 |
| 327 | 357006.335 | 6338193.125 |
| 328 | 357010.972 | 6338187.638 |
| 329 | 357015.507 | 6338182.036 |
| 330 | 357019.894 | 6338176.299 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 331 | 357024.125 | 6338170.398 |
| 332 | 357027.179 | 6338165.866 |
| 333 | 357030.150 | 6338161.252 |
| 334 | 357033.056 | 6338156.577 |
| 335 | 357035.935 | 6338151.865 |
| 336 | 357038.796 | 6338147.141 |
| 337 | 357041.665 | 6338142.425 |
| 338 | 357044.562 | 6338137.737 |
| 339 | 357047.515 | 6338133.107 |
| 340 | 357050.550 | 6338128.551 |
| 341 | 357053.677 | 6338124.094 |
| 342 | 357057.305 | 6338119.270 |
| 343 | 357061.061 | 6338114.587 |
| 344 | 357064.955 | 6338110.037 |
| 345 | 357068.959 | 6338105.610 |
| 346 | 357073.064 | 6338101.291 |
| 347 | 357075.622 | 6338098.734 |
| 348 | 357077.271 | 6338097.075 |
| 349 | 357081.560 | 6338092.950 |
| 350 | 357085.914 | 6338088.907 |
| 351 | 357090.332 | 6338084.936 |
| 352 | 357094.795 | 6338081.026 |
| 353 | 357099.097 | 6338077.329 |
| 354 | 357103.417 | 6338073.648 |
| 355 | 357107.709 | 6338069.955 |
| 356 | 357111.974 | 6338066.217 |
| 357 | 357116.175 | 6338062.406 |
| 358 | 357120.293 | 6338058.492 |
| 359 | 357124.301 | 6338054.441 |
| 360 | 357127.536 | 6338050.932 |
| 361 | 357128.181 | 6338050.226 |
| 362 | 357131.905 | 6338045.816 |
| 363 | 357135.455 | 6338041.178 |
| 364 | 357139.090 | 6338035.840 |
| 365 | 357142.477 | 6338030.208 |
| 366 | 357145.597 | 6338024.293 |
| 367 | 357148.432 | 6338018.099 |
| 368 | 357150.963 | 6338011.644 |
| 369 | 357153.180 | 6338004.932 |
| 370 | 357155.074 | 6337997.976 |
| 371 | 357156.626 | 6337990.783 |
| 372 | 357157.817 | 6337983.363 |
| 373 | 357158.629 | 6337975.725 |
| 374 | 357159.053 | 6337968.431 |
| 375 | 357159.180 | 6337960.979 |
| 376 | 357159.076 | 6337953.394 |
| 377 | 357158.768 | 6337945.699 |
| 378 | 357158.322 | 6337937.915 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 379 | 357157.773 | 6337930.068 |
| 380 | 357157.170 | 6337922.175 |
| 381 | 357156.557 | 6337914.266 |
| 382 | 357156.000 | 6337906.360 |
| 383 | 357155.527 | 6337898.481 |
| 384 | 357155.067 | 6337887.123 |
| 385 | 357154.839 | 6337875.839 |
| 386 | 357154.770 | 6337864.587 |
| 387 | 357154.794 | 6337853.339 |
| 388 | 357154.847 | 6337842.054 |
| 389 | 357154.872 | 6337830.707 |
| 390 | 357154.797 | 6337819.254 |
| 391 | 357154.555 | 6337807.668 |
| 392 | 357154.092 | 6337795.911 |
| 393 | 357153.323 | 6337783.952 |
| 394 | 357152.513 | 6337774.826 |
| 395 | 357151.460 | 6337765.757 |
| 396 | 357150.132 | 6337756.943 |
| 397 | 357148.481 | 6337748.581 |
| 398 | 357146.483 | 6337740.862 |
| 399 | 357144.091 | 6337733.981 |
| 400 | 357141.282 | 6337728.138 |
| 401 | 357137.998 | 6337723.525 |
| 402 | 357134.217 | 6337720.335 |
| 403 | 357133.604 | 6337720.112 |
| 404 | 357129.899 | 6337718.766 |
| 405 | 357126.408 | 6337718.717 |
| 406 | 357122.626 | 6337719.477 |
| 407 | 357118.563 | 6337720.896 |
| 408 | 357114.240 | 6337722.826 |
| 409 | 357109.670 | 6337725.115 |
| 410 | 357104.863 | 6337727.617 |
| 411 | 357099.831 | 6337730.180 |
| 412 | 357094.605 | 6337732.655 |
| 413 | 357089.167 | 6337734.891 |
| 414 | 357083.566 | 6337736.741 |
| 415 | 357079.097 | 6337737.828 |
| 416 | 357074.539 | 6337738.630 |
| 417 | 357072.875 | 6337738.825 |
| 418 | 357069.901 | 6337739.173 |
| 419 | 357065.201 | 6337739.497 |
| 420 | 357060.438 | 6337739.628 |
| 421 | 357055.621 | 6337739.605 |
| 422 | 357050.769 | 6337739.456 |
| 423 | 357045.899 | 6337739.221 |
| 424 | 357041.002 | 6337738.930 |
| 425 | 357036.096 | 6337738.613 |
| 426 | 357016.705 | 6337737.402 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 427 | 357011.165 | 6337737.033 |
| 428 | 357007.108 | 6337736.763 |
| 429 | 356997.625 | 6337736.054 |
| 430 | 356988.282 | 6337735.235 |
| 431 | 356979.120 | 6337734.268 |
| 432 | 356970.175 | 6337733.110 |
| 433 | 356961.457 | 6337731.733 |
| 434 | 356953.023 | 6337730.087 |
| 435 | 356944.901 | 6337728.143 |
| 436 | 356934.659 | 6337725.073 |
| 437 | 356924.937 | 6337721.490 |
| 438 | 356915.651 | 6337717.473 |
| 439 | 356906.706 | 6337713.101 |
| 440 | 356898.036 | 6337708.456 |
| 441 | 356889.546 | 6337703.618 |
| 442 | 356881.160 | 6337698.667 |
| 443 | 356872.794 | 6337693.677 |
| 444 | 356864.371 | 6337688.735 |
| 445 | 356855.806 | 6337683.920 |
| 446 | 356850.137 | 6337680.884 |
| 447 | 356844.421 | 6337677.886 |
| 448 | 356838.723 | 6337674.886 |
| 449 | 356833.073 | 6337671.840 |
| 450 | 356827.537 | 6337668.706 |
| 451 | 356822.160 | 6337665.443 |
| 452 | 356816.992 | 6337662.008 |
| 453 | 356812.079 | 6337658.359 |
| 454 | 356807.478 | 6337654.454 |
| 455 | 356803.236 | 6337650.251 |
| 456 | 356800.775 | 6337647.447 |
| 457 | 356798.456 | 6337644.524 |
| 458 | 356796.241 | 6337641.491 |
| 459 | 356794.121 | 6337638.355 |
| 460 | 356792.068 | 6337635.136 |
| 461 | 356790.043 | 6337631.840 |
| 462 | 356788.039 | 6337628.480 |
| 463 | 356786.016 | 6337625.071 |
| 464 | 356783.966 | 6337621.620 |
| 465 | 356781.851 | 6337618.141 |
| 466 | 356774.830 | 6337607.347 |
| 467 | 356767.061 | 6337596.674 |
| 468 | 356758.604 | 6337586.383 |
| 469 | 356749.512 | 6337576.753 |
| 470 | 356739.847 | 6337568.055 |
| 471 | 356729.659 | 6337560.557 |
| 472 | 356719.021 | 6337554.535 |
| 473 | 356707.984 | 6337550.261 |
| 474 | 356696.600 | 6337548.003 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 475 | 356692.595 | 6337548.015 |
| 476 | 356684.930 | 6337548.037 |
| 477 | 356679.710 | 6337548.840 |
| 478 | 356674.491 | 6337550.110 |
| 479 | 356669.313 | 6337551.811 |
| 480 | 356664.204 | 6337553.916 |
| 481 | 356659.201 | 6337556.390 |
| 482 | 356654.362 | 6337559.203 |
| 483 | 356649.714 | 6337562.321 |
| 484 | 356645.305 | 6337565.713 |
| 485 | 356641.162 | 6337569.347 |
| 486 | 356637.335 | 6337573.188 |
| 487 | 356635.389 | 6337575.366 |
| 488 | 356633.536 | 6337577.594 |
| 489 | 356631.767 | 6337579.864 |
| 490 | 356630.071 | 6337582.178 |
| 491 | 356628.440 | 6337584.529 |
| 492 | 356626.865 | 6337586.913 |
| 493 | 356625.336 | 6337589.326 |
| 494 | 356623.835 | 6337591.764 |
| 495 | 356622.361 | 6337594.223 |
| 496 | 356620.896 | 6337596.700 |
| 497 | 356617.938 | 6337601.759 |
| 498 | 356614.960 | 6337606.844 |
| 499 | 356611.936 | 6337611.922 |
| 500 | 356608.846 | 6337616.963 |
| 501 | 356605.665 | 6337621.930 |
| 502 | 356602.364 | 6337626.796 |
| 503 | 356598.906 | 6337631.532 |
| 504 | 356595.272 | 6337636.101 |
| 505 | 356591.446 | 6337640.473 |
| 506 | 356587.399 | 6337644.616 |
| 507 | 356580.203 | 6337650.904 |
| 508 | 356572.436 | 6337656.603 |
| 509 | 356564.238 | 6337661.828 |
| 510 | 356555.709 | 6337666.699 |
| 511 | 356546.978 | 6337671.329 |
| 512 | 356538.164 | 6337675.834 |
| 513 | 356529.379 | 6337680.334 |
| 514 | 356520.751 | 6337684.942 |
| 515 | 356512.400 | 6337689.775 |
| 516 | 356504.435 | 6337694.949 |
| 517 | 356501.709 | 6337696.895 |
| 518 | 356499.047 | 6337698.892 |
| 519 | 356496.422 | 6337700.934 |
| 520 | 356493.815 | 6337703.015 |
| 521 | 356491.235 | 6337705.128 |
| 522 | 356488.646 | 6337707.267 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 523 | 356483.439 | 6337711.596 |
| 524 | 356480.793 | 6337713.774 |
| 525 | 356478.100 | 6337715.950 |
| 526 | 356467.177 | 6337724.255 |
| 527 | 356455.447 | 6337732.267 |
| 528 | 356442.995 | 6337739.787 |
| 529 | 356429.890 | 6337746.619 |
| 530 | 356416.211 | 6337752.561 |
| 531 | 356402.043 | 6337757.421 |
| 532 | 356387.445 | 6337761.002 |
| 533 | 356372.506 | 6337763.101 |
| 534 | 356357.311 | 6337763.528 |
| 535 | 356341.909 | 6337762.078 |
| 536 | 356335.532 | 6337760.908 |
| 537 | 356329.130 | 6337759.483 |
| 538 | 356322.712 | 6337757.892 |
| 539 | 356316.266 | 6337756.235 |
| 540 | 356309.811 | 6337754.604 |
| 541 | 356303.336 | 6337753.093 |
| 542 | 356296.839 | 6337751.797 |
| 543 | 356290.319 | 6337750.811 |
| 544 | 356283.783 | 6337750.228 |
| 545 | 356277.221 | 6337750.143 |
| 546 | 356275.250 | 6337750.227 |
| 547 | 356271.288 | 6337750.530 |
| 548 | 356269.296 | 6337750.733 |
| 549 | 356267.304 | 6337750.963 |
| 550 | 356265.303 | 6337751.211 |
| 551 | 356257.194 | 6337752.253 |
| 552 | 356247.564 | 6337753.215 |
| 553 | 356237.734 | 6337753.792 |
| 554 | 356227.799 | 6337753.936 |
| 555 | 356217.862 | 6337753.605 |
| 556 | 356208.007 | 6337752.754 |
| 557 | 356198.346 | 6337751.337 |
| 558 | 356188.975 | 6337749.313 |
| 559 | 356179.987 | 6337746.633 |
| 560 | 356171.485 | 6337743.256 |
| 561 | 356163.564 | 6337739.138 |
| 562 | 356156.833 | 6337734.687 |
| 563 | 356150.547 | 6337729.805 |
| 564 | 356144.591 | 6337724.730 |
| 565 | 356138.830 | 6337719.703 |
| 566 | 356133.140 | 6337714.960 |
| 567 | 356127.395 | 6337710.740 |
| 568 | 356121.471 | 6337707.280 |
| 569 | 356115.225 | 6337704.819 |
| 570 | 356108.549 | 6337703.598 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 571 | 356101.310 | 6337703.855 |
| 572 | 356097.136 | 6337704.571 |
| 573 | 356080.630 | 6337705.924 |
| 574 | 356064.585 | 6337704.465 |
| 575 | 356048.835 | 6337700.710 |
| 576 | 356033.242 | 6337695.179 |
| 577 | 356017.658 | 6337688.383 |
| 578 | 356001.936 | 6337680.843 |
| 579 | 355985.928 | 6337673.075 |
| 580 | 355969.486 | 6337665.593 |
| 581 | 355952.454 | 6337658.915 |
| 582 | 355934.693 | 6337653.559 |
| 583 | 355927.221 | 6337651.857 |
| 584 | 355919.663 | 6337650.388 |
| 585 | 355912.064 | 6337649.080 |
| 586 | 355897.023 | 6337646.657 |
| 587 | 355889.685 | 6337645.398 |
| 588 | 355882.545 | 6337644.013 |
| 589 | 355875.651 | 6337642.426 |
| 590 | 355869.078 | 6337640.572 |
| 591 | 355862.874 | 6337638.371 |
| 592 | 355860.954 | 6337637.572 |
| 593 | 355859.062 | 6337636.736 |
| 594 | 355857.189 | 6337635.870 |
| 595 | 355855.325 | 6337634.981 |
| 596 | 355853.472 | 6337634.076 |
| 597 | 355849.718 | 6337632.240 |
| 598 | 355845.842 | 6337630.422 |
| 599 | 355843.820 | 6337629.535 |
| 600 | 355835.893 | 6337626.488 |
| 601 | 355827.222 | 6337623.817 |
| 602 | 355817.948 | 6337621.564 |
| 603 | 355808.209 | 6337619.778 |
| 604 | 355798.136 | 6337618.505 |
| 605 | 355787.878 | 6337617.789 |
| 606 | 355777.564 | 6337617.681 |
| 607 | 355767.334 | 6337618.221 |
| 608 | 355757.317 | 6337619.460 |
| 609 | 355747.644 | 6337621.442 |
| 610 | 355739.337 | 6337623.894 |
| 611 | 355731.507 | 6337626.918 |
| 612 | 355724.248 | 6337630.446 |
| 613 | 355717.664 | 6337634.403 |
| 614 | 355711.822 | 6337638.722 |
| 615 | 355706.815 | 6337643.330 |
| 616 | 355702.739 | 6337648.155 |
| 617 | 355699.679 | 6337653.127 |
| 618 | 355697.718 | 6337658.175 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 619 | 355696.944 | 6337663.227 |
| 620 | 355699.137 | 6337673.375 |
| 621 | 355705.629 | 6337683.300 |
| 622 | 355715.381 | 6337693.055 |
| 623 | 355727.365 | 6337702.700 |
| 624 | 355740.555 | 6337712.285 |
| 625 | 355753.923 | 6337721.867 |
| 626 | 355766.421 | 6337731.497 |
| 627 | 355777.023 | 6337741.236 |
| 628 | 355784.700 | 6337751.138 |
| 629 | 355788.416 | 6337761.252 |
| 630 | 355788.237 | 6337768.359 |
| 631 | 355785.947 | 6337775.517 |
| 632 | 355781.790 | 6337782.652 |
| 633 | 355776.039 | 6337789.685 |
| 634 | 355768.936 | 6337796.539 |
| 635 | 355760.735 | 6337803.136 |
| 636 | 355751.709 | 6337809.401 |
| 637 | 355742.091 | 6337815.254 |
| 638 | 355732.154 | 6337820.617 |
| 639 | 355722.140 | 6337825.412 |
| 640 | 355715.855 | 6337828.139 |
| 641 | 355709.656 | 6337830.659 |
| 642 | 355703.553 | 6337833.029 |
| 643 | 355691.687 | 6337837.523 |
| 644 | 355685.940 | 6337839.756 |
| 645 | 355680.333 | 6337842.054 |
| 646 | 355674.883 | 6337844.463 |
| 647 | 355669.598 | 6337847.045 |
| 648 | 355664.478 | 6337849.849 |
| 649 | 355659.739 | 6337852.784 |
| 650 | 355655.128 | 6337855.924 |
| 651 | 355650.616 | 6337859.228 |
| 652 | 355646.160 | 6337862.645 |
| 653 | 355637.262 | 6337869.640 |
| 654 | 355632.748 | 6337873.125 |
| 655 | 355628.142 | 6337876.539 |
| 656 | 355623.398 | 6337879.835 |
| 657 | 355618.497 | 6337882.966 |
| 658 | 355612.613 | 6337886.333 |
| 659 | 355606.563 | 6337889.523 |
| 660 | 355600.458 | 6337892.632 |
| 661 | 355594.400 | 6337895.761 |
| 662 | 355588.489 | 6337899.009 |
| 663 | 355582.846 | 6337902.476 |
| 664 | 355577.571 | 6337906.259 |
| 665 | 355572.767 | 6337910.462 |
| 666 | 355568.552 | 6337915.180 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 667 | 355565.019 | 6337920.516 |
| 668 | 355563.288 | 6337923.986 |
| 669 | 355561.804 | 6337927.693 |
| 670 | 355560.514 | 6337931.616 |
| 671 | 355559.389 | 6337935.740 |
| 672 | 355558.383 | 6337940.049 |
| 673 | 355557.467 | 6337944.526 |
| 674 | 355556.596 | 6337949.155 |
| 675 | 355555.732 | 6337953.920 |
| 676 | 355554.890 | 6337958.509 |
| 677 | 355553.859 | 6337963.796 |
| 678 | 355553.155 | 6337967.246 |
| 679 | 355552.422 | 6337970.719 |
| 680 | 355551.022 | 6337977.644 |
| 681 | 355550.421 | 6337981.055 |
| 682 | 355549.933 | 6337984.406 |
| 683 | 355549.586 | 6337987.679 |
| 684 | 355549.409 | 6337990.848 |
| 685 | 355549.429 | 6337993.894 |
| 686 | 355549.694 | 6337996.799 |
| 687 | 355551.104 | 6338002.511 |
| 688 | 355553.502 | 6338007.619 |
| 689 | 355556.664 | 6338012.275 |
| 690 | 355560.362 | 6338016.622 |
| 691 | 355564.352 | 6338020.806 |
| 692 | 355568.398 | 6338024.974 |
| 693 | 355572.275 | 6338029.268 |
| 694 | 355575.736 | 6338033.840 |
| 695 | 355578.566 | 6338038.832 |
| 696 | 355580.519 | 6338044.388 |
| 697 | 355581.496 | 6338051.637 |
| 698 | 355581.284 | 6338059.650 |
| 699 | 355580.186 | 6338068.244 |
| 700 | 355578.504 | 6338077.232 |
| 701 | 355576.539 | 6338086.431 |
| 702 | 355574.573 | 6338095.654 |
| 703 | 355572.917 | 6338104.716 |
| 704 | 355571.855 | 6338113.434 |
| 705 | 355571.706 | 6338121.620 |
| 706 | 355572.745 | 6338129.091 |
| 707 | 355573.777 | 6338132.493 |
| 708 | 355575.121 | 6338135.698 |
| 709 | 355576.710 | 6338138.734 |
| 710 | 355578.469 | 6338141.630 |
| 711 | 355580.351 | 6338144.413 |
| 712 | 355586.041 | 6338152.348 |
| 713 | 355587.740 | 6338154.945 |
| 714 | 355589.232 | 6338157.565 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 715 | 355592.667 | 6338168.360 |
| 716 | 355592.554 | 6338179.843 |
| 717 | 355589.500 | 6338191.935 |
| 718 | 355584.123 | 6338204.550 |
| 719 | 355577.050 | 6338217.604 |
| 720 | 355568.898 | 6338231.023 |
| 721 | 355560.284 | 6338244.718 |
| 722 | 355551.826 | 6338258.610 |
| 723 | 355544.151 | 6338272.612 |
| 724 | 355537.866 | 6338286.646 |
| 725 | 355537.147 | 6338288.552 |
| 726 | 355535.849 | 6338292.379 |
| 727 | 355535.270 | 6338294.306 |
| 728 | 355534.269 | 6338298.202 |
| 729 | 355533.857 | 6338300.180 |
| 730 | 355533.228 | 6338304.212 |
| 731 | 355533.021 | 6338306.275 |
| 732 | 355532.803 | 6338312.183 |
| 733 | 355533.039 | 6338318.311 |
| 734 | 355533.619 | 6338324.597 |
| 735 | 355534.420 | 6338330.994 |
| 736 | 355535.324 | 6338337.441 |
| 737 | 355536.210 | 6338343.884 |
| 738 | 355536.965 | 6338350.272 |
| 739 | 355537.470 | 6338356.543 |
| 740 | 355537.604 | 6338362.649 |
| 741 | 355537.246 | 6338368.528 |
| 742 | 355536.625 | 6338372.662 |
| 743 | 355535.735 | 6338376.671 |
| 744 | 355534.632 | 6338380.571 |
| 745 | 355533.371 | 6338384.392 |
| 746 | 355532.009 | 6338388.153 |
| 747 | 355529.210 | 6338395.579 |
| 748 | 355527.886 | 6338399.294 |
| 749 | 355526.682 | 6338403.035 |
| 750 | 355525.665 | 6338406.828 |
| 751 | 355524.160 | 6338415.775 |
| 752 | 355523.696 | 6338425.080 |
| 753 | 355524.077 | 6338434.725 |
| 754 | 355525.116 | 6338444.681 |
| 755 | 355526.617 | 6338454.928 |
| 756 | 355528.385 | 6338465.440 |
| 757 | 355530.215 | 6338476.196 |
| 758 | 355531.939 | 6338487.170 |
| 759 | 355533.334 | 6338498.338 |
| 760 | 355534.231 | 6338509.677 |
| 761 | 355534.322 | 6338511.765 |
| 762 | 355534.384 | 6338513.852 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 763 | 355534.428 | 6338515.936 |
| 764 | 355534.426 | 6338518.006 |
| 765 | 355534.309 | 6338522.093 |
| 766 | 355534.186 | 6338524.102 |
| 767 | 355534.017 | 6338526.075 |
| 768 | 355533.792 | 6338528.011 |
| 769 | 355533.522 | 6338529.908 |
| 770 | 355563.810 | 6338534.264 |
| 771 | 355669.898 | 6338549.521 |
| 772 | 355653.124 | 6338669.041 |
| 773 | 355636.350 | 6338788.534 |
| 774 | 355468.237 | 6338764.361 |
| 775 | 355473.844 | 6338770.985 |
| 776 | 355482.422 | 6338781.283 |
| 777 | 355487.326 | 6338787.426 |
| 778 | 355442.354 | 6338780.960 |
| 779 | 355450.493 | 6338790.585 |
| 780 | 355458.805 | 6338800.550 |
| 781 | 355466.927 | 6338810.724 |
| 782 | 355474.507 | 6338820.973 |
| 783 | 355481.200 | 6338831.173 |
| 784 | 355486.645 | 6338841.192 |
| 785 | 355490.489 | 6338850.898 |
| 786 | 355492.387 | 6338860.167 |
| 787 | 355491.979 | 6338868.864 |
| 788 | 355488.920 | 6338876.861 |
| 789 | 355487.049 | 6338879.632 |
| 790 | 355484.843 | 6338882.331 |
| 791 | 355482.395 | 6338884.999 |
| 792 | 355479.769 | 6338887.673 |
| 793 | 355477.049 | 6338890.395 |
| 794 | 355474.328 | 6338893.210 |
| 795 | 355471.680 | 6338896.155 |
| 796 | 355469.178 | 6338899.272 |
| 797 | 355466.916 | 6338902.601 |
| 798 | 355464.968 | 6338906.184 |
| 799 | 355465.601 | 6338907.562 |
| 800 | 355466.235 | 6338908.939 |
| 801 | 355466.868 | 6338910.318 |
| 802 | 355467.501 | 6338911.699 |
| 803 | 355468.125 | 6338913.080 |
| 804 | 355468.993 | 6338914.966 |
| 805 | 355469.862 | 6338916.848 |
| 806 | 355470.730 | 6338918.736 |
| 807 | 355471.561 | 6338920.635 |
| 808 | 355472.355 | 6338922.552 |
| 809 | 355473.432 | 6338925.451 |
| 810 | 355474.425 | 6338928.388 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 811 | 355475.353 | 6338931.351 |
| 812 | 355476.224 | 6338934.330 |
| 813 | 355477.067 | 6338937.316 |
| 814 | 355477.844 | 6338940.303 |
| 815 | 355478.556 | 6338943.308 |
| 816 | 355479.231 | 6338946.323 |
| 817 | 355479.905 | 6338949.341 |
| 818 | 355480.598 | 6338952.351 |
| 819 | 355481.302 | 6338955.300 |
| 820 | 355482.005 | 6338958.249 |
| 821 | 355482.718 | 6338961.196 |
| 822 | 355483.421 | 6338964.144 |
| 823 | 355484.134 | 6338967.093 |
| 824 | 355484.707 | 6338969.389 |
| 825 | 355485.299 | 6338971.679 |
| 826 | 355485.891 | 6338973.972 |
| 827 | 355486.417 | 6338976.274 |
| 828 | 355486.850 | 6338978.591 |
| 829 | 355487.241 | 6338981.788 |
| 830 | 355487.319 | 6338982.860 |
| 831 | 355487.474 | 6338985.016 |
| 832 | 355487.594 | 6338988.257 |
| 833 | 355487.594 | 6338988.259 |
| 834 | 355487.649 | 6338991.508 |
| 835 | 355487.713 | 6338994.749 |
| 836 | 355487.754 | 6338997.039 |
| 837 | 355487.748 | 6338999.327 |
| 838 | 355487.757 | 6338999.331 |
| 839 | 355487.742 | 6339001.617 |
| 840 | 355487.746 | 6339003.907 |
| 841 | 355487.787 | 6339006.197 |
| 842 | 355487.891 | 6339008.018 |
| 843 | 355487.891 | 6339008.021 |
| 844 | 355488.041 | 6339009.848 |
| 845 | 355488.041 | 6339009.859 |
| 846 | 355488.182 | 6339011.674 |
| 847 | 355488.258 | 6339013.493 |
| 848 | 355488.203 | 6339015.303 |
| 849 | 355487.859 | 6339017.782 |
| 850 | 355487.290 | 6339020.246 |
| 851 | 355486.572 | 6339022.698 |
| 852 | 355485.789 | 6339025.136 |
| 853 | 355485.789 | 6339025.141 |
| 854 | 355485.035 | 6339027.569 |
| 855 | 355484.231 | 6339030.155 |
| 856 | 355483.371 | 6339032.726 |
| 857 | 355482.484 | 6339035.286 |
| 858 | 355481.578 | 6339037.843 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 859 | 355480.681 | 6339040.400 |
| 860 | 355479.424 | 6339043.974 |
| 861 | 355478.157 | 6339047.543 |
| 862 | 355476.872 | 6339051.107 |
| 863 | 355475.578 | 6339054.666 |
| 864 | 355474.265 | 6339058.219 |
| 865 | 355430.823 | 6339049.207 |
| 866 | 355431.334 | 6339035.497 |
| 867 | 355431.844 | 6339021.789 |
| 868 | 355432.373 | 6339008.084 |
| 869 | 355432.921 | 6338994.388 |
| 870 | 355433.487 | 6338980.698 |
| 871 | 355434.090 | 6338967.018 |
| 872 | 355434.731 | 6338953.351 |
| 873 | 355435.418 | 6338939.697 |
| 874 | 355436.151 | 6338926.059 |
| 875 | 355436.950 | 6338912.439 |
| 876 | 355406.717 | 6338958.670 |
| 877 | 355406.358 | 6338907.672 |
| 878 | 355413.213 | 6338797.484 |
| 879 | 355384.111 | 6338766.488 |
| 880 | 355088.710 | 6338812.032 |
| 881 | 355080.330 | 6338822.454 |
| 882 | 355076.126 | 6338827.686 |
| 883 | 355071.304 | 6338833.685 |
| 884 | 355077.380 | 6338839.504 |
| 885 | 355086.255 | 6338847.995 |
| 886 | 355120.242 | 6338873.751 |
| 887 | 355158.717 | 6338902.900 |
| 888 | 355095.724 | 6338985.464 |
| 889 | 355100.718 | 6339019.034 |
| 890 | 355019.597 | 6339031.162 |
| 891 | 354999.703 | 6339034.136 |
| 892 | 354949.398 | 6339055.461 |
| 893 | 354914.031 | 6339100.776 |
| 894 | 354903.507 | 6339161.362 |
| 895 | 354918.454 | 6339213.790 |
| 896 | 354957.362 | 6339261.672 |
| 897 | 355021.020 | 6339258.656 |
| 898 | 355032.172 | 6339252.737 |
| 899 | 355051.022 | 6339242.743 |
| 900 | 355086.915 | 6339223.704 |
| 901 | 355127.205 | 6339197.814 |
| 902 | 355168.759 | 6339160.845 |
| 903 | 355267.779 | 6339044.490 |
| 904 | 355310.268 | 6339070.545 |
| 905 | 355335.245 | 6339079.353 |
| 906 | 355365.957 | 6339088.034 |

| Coordinates ¹ | | |
|--------------------------|------------|-------------|
| Vertex | Easting | Northing |
| 907 | 355379.990 | 6339067.128 |
| 908 | 355381.770 | 6339068.045 |
| 909 | 355382.214 | 6339068.272 |
| 910 | 355382.659 | 6339068.495 |
| 911 | 355383.104 | 6339068.719 |
| 912 | 355384.003 | 6339069.166 |
| 913 | 355384.457 | 6339069.386 |
| 914 | 355384.902 | 6339069.610 |
| 915 | 355385.357 | 6339069.825 |
| 916 | 355385.802 | 6339070.044 |
| 917 | 355386.256 | 6339070.260 |
| 918 | 355387.610 | 6339070.903 |
| 919 | 355388.973 | 6339071.534 |
| 920 | 355389.882 | 6339071.950 |
| 921 | 355390.336 | 6339072.154 |
| 922 | 355390.791 | 6339072.363 |
| 923 | 355391.254 | 6339072.566 |
| 924 | 355391.709 | 6339072.765 |
| 925 | 355392.627 | 6339073.171 |
| 926 | 355393.537 | 6339073.568 |
| 927 | 355394.928 | 6339074.153 |
| 928 | 355395.847 | 6339074.537 |
| 929 | 355396.775 | 6339074.921 |
| 930 | 355397.230 | 6339075.109 |
| 931 | 355398.167 | 6339075.484 |
| 932 | 355398.631 | 6339075.668 |
| 933 | 355399.096 | 6339075.848 |
| 934 | 355399.560 | 6339076.033 |
| 935 | 355400.952 | 6339076.576 |
| 936 | 355401.426 | 6339076.753 |
| 937 | 355401.890 | 6339076.929 |
| 938 | 355402.828 | 6339077.279 |
| 939 | 355403.766 | 6339077.625 |
| 940 | 355404.240 | 6339077.795 |
| 941 | 355405.178 | 6339078.133 |
| 942 | 355406.125 | 6339078.467 |
| 943 | 355406.599 | 6339078.632 |
| 944 | 355407.546 | 6339078.959 |
| 945 | 355408.011 | 6339079.120 |
| 946 | 355408.494 | 6339079.281 |
| 947 | 355408.968 | 6339079.439 |
| 948 | 355409.915 | 6339079.754 |
| 949 | 355410.863 | 6339080.065 |
| 950 | 355411.337 | 6339080.219 |
| 951 | 355413.252 | 6339080.818 |
| 952 | 355414.683 | 6339081.256 |
| 953 | 355415.166 | 6339081.397 |
| 954 | 355416.124 | 6339081.682 |

| Coordinates ¹ | | | Coordinates ¹ | | |
|--------------------------|------------|-------------|--------------------------|------------|-------------|
| Vertex | Easting | Northing | Vertex | Easting | Northing |
| 955 | 355421.386 | 6339083.221 | 1003 | 355349.138 | 6339145.765 |
| 956 | 355463.912 | 6339091.639 | 1004 | 355345.391 | 6339145.956 |
| 957 | 355463.370 | 6339093.635 | 1005 | 355341.838 | 6339146.337 |
| 958 | 355462.827 | 6339095.632 | 1006 | 355338.486 | 6339146.942 |
| 959 | 355462.244 | 6339097.787 | 1007 | 355335.392 | 6339147.813 |
| 960 | 355461.661 | 6339099.942 | 1008 | 355332.592 | 6339148.982 |
| 961 | 355461.060 | 6339102.093 | 1009 | 355330.775 | 6339150.025 |
| 962 | 355460.468 | 6339104.244 | 1010 | 355329.086 | 6339151.205 |
| 963 | 355459.857 | 6339106.392 | 1011 | 355327.499 | 6339152.491 |
| 964 | 355459.434 | 6339107.268 | 1012 | 355325.975 | 6339153.840 |
| 965 | 355458.991 | 6339108.138 | 1013 | 355324.489 | 6339155.222 |
| 966 | 355458.540 | 6339109.000 | 1014 | 355322.994 | 6339156.597 |
| 967 | 355458.070 | 6339109.852 | 1015 | 355321.452 | 6339157.930 |
| 968 | 355457.581 | 6339110.696 | 1016 | 355319.846 | 6339159.181 |
| 969 | 355455.460 | 6339113.957 | 1017 | 355318.121 | 6339160.321 |
| 970 | 355453.052 | 6339117.083 | 1018 | 355316.257 | 6339161.308 |
| 971 | 355450.412 | 6339120.055 | 1019 | 355314.585 | 6339161.987 |
| 972 | 355447.607 | 6339122.857 | 1020 | 355312.812 | 6339162.559 |
| 973 | 355444.684 | 6339125.464 | 1021 | 355310.956 | 6339163.036 |
| 974 | 355441.812 | 6339127.699 | 1022 | 355309.018 | 6339163.431 |
| 975 | 355438.766 | 6339129.748 | 1023 | 355307.015 | 6339163.773 |
| 976 | 355435.610 | 6339131.656 | 1024 | 355304.984 | 6339164.065 |
| 977 | 355432.400 | 6339133.467 | 1025 | 355302.917 | 6339164.336 |
| 978 | 355429.171 | 6339135.227 | 1026 | 355300.840 | 6339164.596 |
| 979 | 355426.592 | 6339136.630 | 1027 | 355298.773 | 6339164.858 |
| 980 | 355423.995 | 6339138.010 | 1028 | 355296.733 | 6339165.147 |
| 981 | 355421.370 | 6339139.323 | 1029 | 355289.148 | 6339166.631 |
| 982 | 355418.701 | 6339140.528 | 1030 | 355282.106 | 6339168.685 |
| 983 | 355415.978 | 6339141.584 | 1031 | 355275.569 | 6339171.268 |
| 984 | 355413.763 | 6339142.321 | 1032 | 355269.511 | 6339174.344 |
| 985 | 355411.503 | 6339142.980 | 1033 | 355263.885 | 6339177.871 |
| 986 | 355409.226 | 6339143.562 | 1034 | 355258.663 | 6339181.818 |
| 987 | 355406.931 | 6339144.063 | 1035 | 355253.800 | 6339186.140 |
| 988 | 355404.628 | 6339144.480 | 1036 | 355249.268 | 6339190.808 |
| 989 | 355402.632 | 6339144.938 | 1037 | 355245.021 | 6339195.773 |
| 990 | 355399.253 | 6339145.533 | 1038 | 355241.041 | 6339201.008 |
| 991 | 355395.782 | 6339145.990 | 1039 | 355236.785 | 6339207.200 |
| 992 | 355392.201 | 6339146.316 | 1040 | 355232.750 | 6339213.616 |
| 993 | 355388.547 | 6339146.528 | 1041 | 355228.853 | 6339220.179 |
| 994 | 355384.811 | 6339146.641 | 1042 | 355225.038 | 6339226.817 |
| 995 | 355381.001 | 6339146.662 | 1043 | 355221.224 | 6339233.464 |
| 996 | 355377.127 | 6339146.607 | 1044 | 355217.345 | 6339240.044 |
| 997 | 355373.189 | 6339146.497 | 1045 | 355213.338 | 6339246.486 |
| 998 | 355369.195 | 6339146.336 | 1046 | 355209.119 | 6339252.719 |
| 999 | 355365.127 | 6339146.141 | 1047 | 355204.633 | 6339258.674 |
| 1000 | 355361.049 | 6339145.950 | 1048 | 355199.816 | 6339264.278 |
| 1001 | 355356.999 | 6339145.798 | 1049 | 355195.134 | 6339268.989 |
| 1002 | 355353.014 | 6339145.725 | 1050 | 355190.176 | 6339273.423 |

| Coordinates ¹ | | | Coordinates ¹ | | |
|--------------------------|------------|-------------|--------------------------|------------|-------------|
| Vertex | Easting | Northing | Vertex | Easting | Northing |
| 1051 | 355185.025 | 6339277.653 | 1099 | 355079.577 | 6339414.280 |
| 1052 | 355179.745 | 6339281.744 | 1100 | 355098.627 | 6339533.454 |
| 1053 | 355174.401 | 6339285.768 | 1101 | 355117.678 | 6339652.623 |
| 1054 | 355169.066 | 6339289.803 | 1102 | 355469.612 | 6339596.480 |
| 1055 | 355163.813 | 6339293.915 | 1103 | 355494.695 | 6339592.478 |
| 1056 | 355158.699 | 6339298.172 | 1104 | 355550.242 | 6339583.617 |
| 1057 | 355153.796 | 6339302.650 | 1105 | 355550.702 | 6339580.953 |
| 1058 | 355149.188 | 6339307.418 | 1106 | 355551.152 | 6339578.288 |
| 1059 | 355147.146 | 6339309.774 | 1107 | 355555.778 | 6339551.395 |
| 1060 | 355145.168 | 6339312.201 | 1108 | 355560.395 | 6339524.504 |
| 1061 | 355143.273 | 6339314.700 | 1109 | 355576.358 | 6339431.622 |
| 1062 | 355141.433 | 6339317.270 | 1110 | 355525.521 | 6339425.709 |
| 1063 | 355139.657 | 6339319.910 | 1111 | 355531.916 | 6339389.628 |
| 1064 | 355137.946 | 6339322.611 | 1112 | 355583.099 | 6339392.407 |
| 1065 | 355136.280 | 6339325.369 | 1113 | 355586.530 | 6339372.449 |
| 1066 | 355134.670 | 6339328.182 | 1114 | 355535.450 | 6339369.686 |
| 1067 | 355133.106 | 6339331.051 | 1115 | 355540.574 | 6339340.760 |
| 1068 | 355131.587 | 6339333.971 | 1116 | 355540.938 | 6339340.703 |
| 1069 | 355130.578 | 6339335.949 | 1117 | 355544.349 | 6339320.883 |
| 1070 | 355129.559 | 6339337.910 | 1118 | 355547.760 | 6339301.062 |
| 1071 | 355128.503 | 6339339.831 | 1119 | 355551.162 | 6339281.239 |
| 1072 | 355127.374 | 6339341.677 | 1120 | 355554.572 | 6339261.417 |
| 1073 | 355126.144 | 6339343.411 | 1121 | 355557.983 | 6339241.597 |
| 1074 | 355124.776 | 6339345.003 | 1122 | 355563.591 | 6339208.953 |
| 1075 | 355123.261 | 6339346.423 | 1123 | 355612.134 | 6339223.461 |
| 1076 | 355121.534 | 6339347.636 | 1124 | 355612.676 | 6339220.288 |
| 1077 | 355119.597 | 6339348.607 | 1125 | 355560.590 | 6339204.720 |
| 1078 | 355117.420 | 6339349.312 | 1126 | 355565.736 | 6339187.531 |
| 1079 | 355115.707 | 6339349.627 | 1127 | 355578.941 | 6339191.213 |
| 1080 | 355113.883 | 6339349.815 | 1128 | 355583.743 | 6339175.155 |
| 1081 | 355111.959 | 6339349.880 | 1129 | 355603.400 | 6339181.310 |
| 1082 | 355109.942 | 6339349.842 | 1130 | 355618.998 | 6339183.498 |
| 1083 | 355107.862 | 6339349.723 | 1131 | 355625.758 | 6339144.186 |
| 1084 | 355105.736 | 6339349.535 | 1132 | 355633.831 | 6339148.885 |
| 1085 | 355103.583 | 6339349.294 | 1133 | 355644.310 | 6339154.984 |
| 1086 | 355101.411 | 6339349.020 | 1134 | 355630.370 | 6339236.073 |
| 1087 | 355099.249 | 6339348.724 | 1135 | 355629.135 | 6339243.258 |
| 1088 | 355097.115 | 6339348.430 | 1136 | 355624.978 | 6339267.451 |
| 1089 | 355093.975 | 6339348.006 | 1137 | 355641.776 | 6339272.460 |
| 1090 | 355090.928 | 6339347.612 | 1138 | 355665.816 | 6339279.628 |
| 1091 | 355087.945 | 6339347.247 | 1139 | 355663.172 | 6339294.965 |
| 1092 | 355085.046 | 6339346.907 | 1140 | 355681.259 | 6339297.429 |
| 1093 | 355082.203 | 6339346.582 | 1141 | 355742.508 | 6339305.770 |
| 1094 | 355079.407 | 6339346.279 | 1142 | 355762.310 | 6339308.467 |
| 1095 | 355076.657 | 6339345.988 | 1143 | 355765.526 | 6339309.428 |
| 1096 | 355073.934 | 6339345.707 | 1144 | 355764.542 | 6339316.651 |
| 1097 | 355071.231 | 6339345.432 | 1145 | 355761.361 | 6339339.956 |
| 1098 | 355068.536 | 6339345.162 | 1146 | 355778.057 | 6339355.092 |

| Coordinates ¹ | | | Coordinates ¹ | | |
|--------------------------|------------|-------------|--------------------------|------------|-------------|
| Vertex | Easting | Northing | Vertex | Easting | Northing |
| 1147 | 355781.088 | 6339357.840 | 1189 | 355947.704 | 6339548.039 |
| 1148 | 355792.598 | 6339368.211 | 1190 | 355947.965 | 6339548.694 |
| 1149 | 355800.836 | 6339375.636 | 1191 | 355948.198 | 6339549.361 |
| 1150 | 355806.189 | 6339380.467 | 1192 | 355948.394 | 6339550.041 |
| 1151 | 355821.053 | 6339393.871 | 1193 | 355948.561 | 6339550.728 |
| 1152 | 355843.279 | 6339413.904 | 1194 | 355948.681 | 6339551.423 |
| 1153 | 355850.965 | 6339420.836 | 1195 | 355948.764 | 6339552.125 |
| 1154 | 355884.520 | 6339383.555 | 1196 | 355948.819 | 6339552.831 |
| 1155 | 355885.393 | 6339382.592 | 1197 | 355948.837 | 6339553.537 |
| 1156 | 355897.437 | 6339393.442 | 1198 | 355932.958 | 6339571.070 |
| 1157 | 355898.880 | 6339391.848 | 1199 | 355925.763 | 6339624.135 |
| 1158 | 355916.729 | 6339407.919 | 1200 | 355923.302 | 6339642.269 |
| 1159 | 355921.333 | 6339402.810 | 1201 | 355920.590 | 6339662.217 |
| 1160 | 355936.261 | 6339416.278 | 1202 | 355917.879 | 6339682.168 |
| 1161 | 355951.189 | 6339429.749 | 1203 | 355915.157 | 6339702.123 |
| 1162 | 355947.810 | 6339433.509 | 1204 | 355912.436 | 6339722.083 |
| 1163 | 355926.263 | 6339457.429 | 1205 | 355909.706 | 6339742.043 |
| 1164 | 355910.715 | 6339474.699 | 1206 | 355901.412 | 6339803.130 |
| 1165 | 355932.692 | 6339494.515 | 1207 | 355898.784 | 6339822.451 |
| 1166 | 355940.580 | 6339501.630 | 1208 | 355896.093 | 6339842.266 |
| 1167 | 355942.156 | 6339503.049 | 1209 | 355893.475 | 6339861.547 |
| 1168 | 355937.149 | 6339540.083 | 1210 | 355888.721 | 6339896.529 |
| 1169 | 355937.521 | 6339540.138 | 1211 | 355885.360 | 6339921.299 |
| 1170 | 355938.220 | 6339540.270 | 1212 | 355874.564 | 6340000.771 |
| 1171 | 355938.908 | 6339540.439 | 1213 | 355974.222 | 6340014.312 |
| 1172 | 355939.577 | 6339540.644 | 1214 | 356089.192 | 6340029.935 |
| 1173 | 355940.246 | 6339540.883 | 1215 | 356060.937 | 6340102.361 |
| 1174 | 355940.896 | 6339541.158 | 1216 | 355678.579 | 6340204.001 |
| 1175 | 355941.535 | 6339541.466 | 1217 | 355705.062 | 6340481.788 |
| 1176 | 355942.156 | 6339541.808 | 1218 | 355712.114 | 6340526.706 |
| 1177 | 355942.748 | 6339542.180 | 1219 | 355483.378 | 6340566.356 |
| 1178 | 355943.330 | 6339542.582 | 1220 | 355492.821 | 6340625.715 |
| 1179 | 355943.894 | 6339543.016 | 1221 | 355502.256 | 6340685.073 |
| 1180 | 355944.428 | 6339543.479 | 1222 | 355277.225 | 6340723.274 |
| 1181 | 355944.935 | 6339543.968 | 1223 | 355279.994 | 6340740.685 |
| 1182 | 355945.339 | 6339544.397 | 1224 | 355286.602 | 6340781.992 |
| 1183 | 355945.422 | 6339544.484 | 1225 | 355288.970 | 6340796.823 |
| 1184 | 355945.872 | 6339545.023 | 1226 | 355314.438 | 6340956.788 |
| 1185 | 355946.302 | 6339545.587 | 1227 | 354491.441 | 6341991.245 |
| 1186 | 355946.695 | 6339546.172 | 1228 | 354446.385 | 6342047.958 |
| 1187 | 355947.069 | 6339546.776 | 1229 | 354351.202 | 6342167.550 |
| 1188 | 355947.396 | 6339547.399 | | | |

¹ Coordinate reference system is MGA 56

**SCHEDULE E – AREA OF OPERATIONS – NORTH COORANBONG SCHEME - RETAIL
OF DRINKING WATER AND SEWERAGE SERVICES**

| Coordinates ¹ | | | Coordinates ¹ | | |
|--------------------------|------------|-------------|--------------------------|------------|-------------|
| Vertex | Easting | Northing | Vertex | Easting | Northing |
| 1 | 354351.202 | 6342167.550 | 46 | 355959.091 | 6341304.523 |
| 2 | 354514.692 | 6342139.480 | 47 | 355960.599 | 6341304.676 |
| 3 | 354592.036 | 6342126.211 | 48 | 355962.109 | 6341304.822 |
| 4 | 355263.261 | 6342010.852 | 49 | 355963.620 | 6341304.959 |
| 5 | 355299.057 | 6342004.699 | 50 | 355965.130 | 6341305.090 |
| 6 | 355457.953 | 6341977.432 | 51 | 355966.642 | 6341305.211 |
| 7 | 355476.118 | 6341974.262 | 52 | 355968.154 | 6341305.325 |
| 8 | 355928.178 | 6341895.744 | 53 | 355969.667 | 6341305.432 |
| 9 | 355947.934 | 6341892.376 | 54 | 355971.181 | 6341305.530 |
| 10 | 355853.373 | 6341292.557 | 55 | 355972.694 | 6341305.620 |
| 11 | 355889.131 | 6341288.932 | 56 | 355974.208 | 6341305.702 |
| 12 | 355908.528 | 6341294.666 | 57 | 355975.723 | 6341305.776 |
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| 15 | 355912.912 | 6341295.894 | 60 | 355980.267 | 6341305.953 |
| 16 | 355914.377 | 6341296.289 | 61 | 355981.783 | 6341305.996 |
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| 18 | 355917.315 | 6341297.054 | 63 | 355984.816 | 6341306.058 |
| 19 | 355918.785 | 6341297.426 | 64 | 355986.332 | 6341306.076 |
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| 22 | 355923.210 | 6341298.493 | 67 | 355990.880 | 6341306.086 |
| 23 | 355924.690 | 6341298.834 | 68 | 355992.396 | 6341306.074 |
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| 41 | 355951.560 | 6341303.639 | 86 | 356036.864 | 6341263.580 |
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| Coordinates ¹ | | |
|--------------------------|------------|-------------|
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| 112 | 356879.669 | 6340483.987 |
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| 127 | 356392.735 | 6340519.209 |
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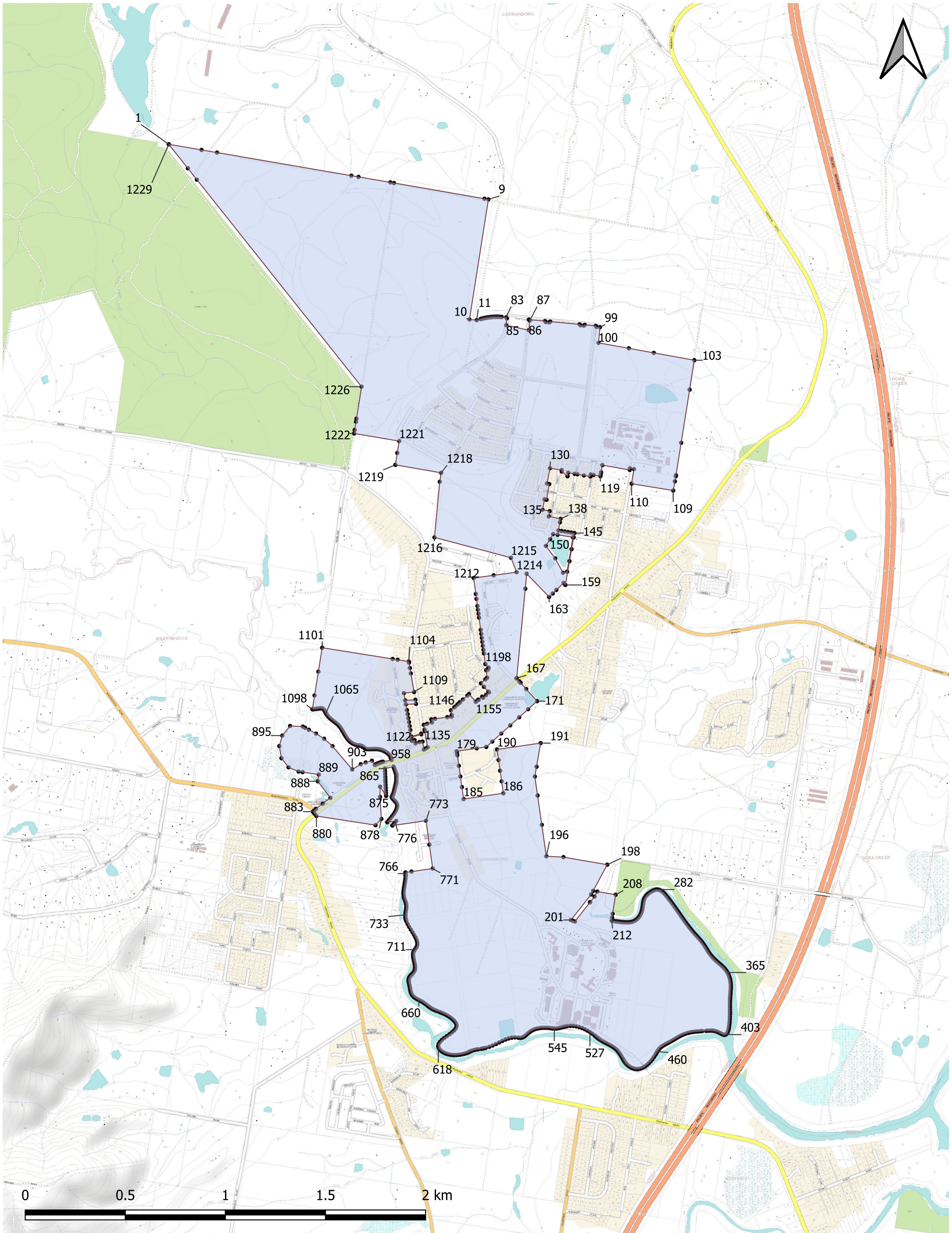
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| 142 | 356297.856 | 6340238.541 |
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| 147 | 356377.774 | 6340225.556 |
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| 161 | 356332.720 | 6339966.200 |
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| 163 | 356287.552 | 6339941.527 |
| 164 | 356269.488 | 6339924.042 |
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| 168 | 356089.208 | 6339500.483 |
| 169 | 356087.789 | 6339499.202 |
| 170 | 356102.181 | 6339485.034 |
| 171 | 356108.883 | 6339477.550 |
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| 173 | 356191.060 | 6339385.868 |
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| 175 | 356101.721 | 6339305.283 |
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| 178 | 356005.942 | 6339425.349 |
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| Coordinates ¹ | | |
|--------------------------|------------|-------------|
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| 195 | 355940.246 | 6339540.883 |
| 196 | 355940.896 | 6339541.158 |
| 197 | 355941.535 | 6339541.466 |
| 198 | 355942.156 | 6339541.808 |
| 199 | 355942.748 | 6339542.180 |
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| 202 | 355944.428 | 6339543.479 |
| 203 | 355944.935 | 6339543.968 |
| 204 | 355945.339 | 6339544.397 |
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| 206 | 355945.872 | 6339545.023 |
| 207 | 355946.302 | 6339545.587 |
| 208 | 355946.695 | 6339546.172 |
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| 226 | 355912.436 | 6339722.083 |
| 227 | 355909.706 | 6339742.043 |
| 228 | 355901.412 | 6339803.130 |
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| 230 | 355896.093 | 6339842.266 |
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| Coordinates ¹ | | |
|--------------------------|------------|-------------|
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| 236 | 356089.192 | 6340029.935 |
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| 239 | 355705.062 | 6340481.788 |
| 240 | 355712.114 | 6340526.706 |
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| 243 | 355502.256 | 6340685.073 |
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| 251 | 354351.202 | 6342167.550 |

1 Coordinate reference system is MGA 56

SCHEDULE F – AREA OF OPERATIONS – MAPS



SCHEDULE F - MAP 1 - FLOW SYSTEMS - Area of Operations (Retail) - Non-potable water services

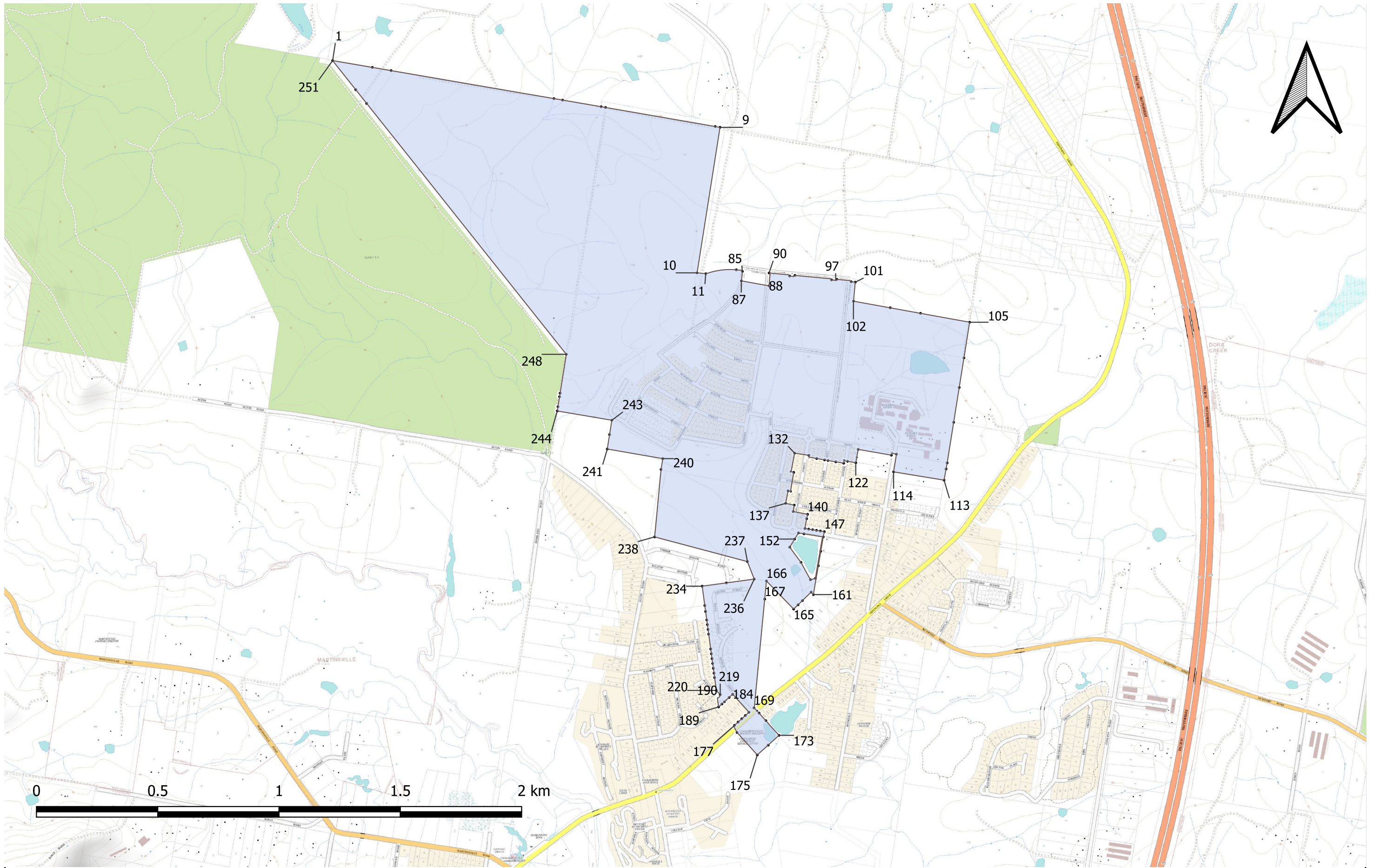
Date created: 4 March 2020
Version: 1.0

LEGEND

- Licensed area
- Non-potable water boundary
- Non-potable water vertices

LICENCE DETAILS:

Licence Number: 13_001R
Licence Type: Retail Supplier's Licence
Licensee: Flow Systems Pty Ltd (ACN 136 272 298)



SCHEDULE F - MAP 2 - FLOW SYSTEMS - Area of Operations (Retail) - Drinking water and sewerage services

Date created: 5 March 2020
Version: 1.0

LEGEND

- Licensed area
- Drinking water & sewerage boundary
- Drinking water & sewerage vertices

LICENCE DETAILS:

Licence Number: 13_001R
Licence Type: Retail Supplier's Licence
Licensee: Flow Systems Pty Ltd (ACN 136 272 298)

SCHEDULE G – INTERPRETATION AND DEFINITIONS

1. Interpretation

1.1. In this Licence, unless the context requires otherwise:

- a) the singular includes the plural and vice versa;
- b) headings are used for convenience only and do not affect the interpretation of this Licence;
- c) a reference to a document includes the document as modified from time to time and any document replacing it;
- d) a reference to a “person” includes a natural person and any body or entity whether incorporated or not;
- e) a reference to a clause is to a clause in this Licence;
- f) a reference to a section is to a section in this Licence;
- g) a reference to a schedule is to a schedule to this Licence;
- h) a reference to a law or statute includes regulations, rules, codes and other instruments under it, and consolidations, amendments, re-enactments or replacements of them; and
- i) explanatory notes do not form part of this Licence, but in the case of uncertainty may be relied on for interpretation purposes.

2. Definitions

2.1. Expressions used in this Licence that are defined in the Act or the Regulation have the meanings set out in the Act or the Regulation.

2.2. In this Licence:

Act means the *Water Industry Competition Act 2006* (NSW).

Area of Operations means the area of operations specified in, as applicable:

- a) section 1, Table 1.4
- b) section 2, Table 2.4, and
- c) section 3, Table 3.4.

| | |
|--|--|
| Audit Guidelines | means the document titled “ <i>Audit Guideline – Water Industry Competition Act 2006</i> ”, which is prepared by IPART and is available on IPART’s website at www.ipart.nsw.gov.au , and any other guidelines issued by IPART in relation to audits under the Act. |
| Authorised Persons | means each person specified in, as applicable: <ul style="list-style-type: none"> a) section 1, Table 1.1 b) section 2, Table 2.1, and c) section 3, Table 3.1. |
| Authorised Purposes | means the authorised purposes specified in, as applicable: <ul style="list-style-type: none"> a) section 1, Table 1.5 b) section 2, Table 2.5, and c) section 3, Table 3.5. |
| Box Hill North Network Operator's Licence | means network operator's licence no. 16_037 granted to Flow Systems Operations Pty Ltd (ACN 603 106 305) (as varied by the Minister from time to time) |
| Central Park Water Network Operator's Licence | means network operator's licence no. 12_022 granted to Central Park Water Factory Pty Ltd (ACN 151 072 838) (as varied by the Minister from time to time). |
| Cooranbong Water Network Operator's Licence | means network operator's licence no. 15_033 granted to Cooranbong Water Pty Ltd (ACN 169 450 453) (as varied by the Minister from time to time). |
| Discovery Point Water Network Operator's Licence | means network operator's licence no. 13_025 granted to Discovery Point Water Factory Pty Ltd (ACN 142 392 541) (as varied by the Minister from time to time). |
| Glossodia Network Operator's Licence | means network operator's licence no. 19_043 granted to Flow Systems Operations Pty Ltd (ACN 603 106 305) (as varied by the Minister from time to time). |
| Green Square Water Network Operator's Licence | means network operator's licence no. 15_031 granted to Green Square Water Pty Ltd (ACN 163 432 906) (as varied by the Minister from time to time). |

| | |
|--|--|
| Huntlee Water Network Operator's Licence | means network operator's licence no. 15_030 granted to Huntlee Water Pty Ltd (ACN 167 418 608) (as varied by the Minister from time to time). |
| Insurance Expert | means an insurance broker which holds an Australian financial services licence under Part 7.6 of the <i>Corporations Act 2001</i> (Cth) that authorises the broker to provide financial product advice for, and deal in, contracts of insurance within the meaning of Chapter 7 of that Act. |
| IPART | means the Independent Pricing and Regulatory Tribunal of New South Wales established under the <i>Independent Pricing and Regulatory Tribunal Act 1992</i> (NSW). |
| Licence | means this retail supplier's licence granted under section 10 of the Act. |
| Licensed Water Industry Infrastructure | means the water industry infrastructure by means of which the non-potable water, drinking water and/or sewerage services (as applicable) under this Licence are supplied. |
| Licensee | means Flow Systems Pty Ltd (ACN 136 272 298). |
| Licensee's Code of Conduct | has the meaning given in Schedule B, clause 7.1. |
| Minister | means the Minister responsible for Part 2 of the Act. |
| NSW Health | means the Water Unit of NSW Ministry of Health and any of the local health districts as defined by the NSW Ministry of Health. |
| Pitt Town Water Network Operator's Licence | means network operator's licence no. 10_014 granted to Pitt Town Water Factory Pty Ltd (ACN 141 705 660) (as varied by the Minister from time to time). |
| Plan | means the retail supply management plan that the Licensee is required to prepare under the Regulation. |

| | |
|--|--|
| Regulation | means the <i>Water Industry Competition (General) Regulation 2008</i> (NSW). |
| Reporting Manual | means the document titled “Retail Supplier’s Reporting Manual”, which is prepared by IPART and is available on IPART’s website at www.ipart.nsw.gov.au . |
| Shepherds Bay Network Operator's Licence | means network operator's licence no. 17_042 granted to Flow Systems Operations Pty Ltd (ACN 603 106 305) (as varied by the Minister from time to time). |
| Small Retail Customer | has the meaning given to that term in the Regulation. |
| Water Industry Infrastructure | means the water industry infrastructure specified in, as applicable: <ul style="list-style-type: none"> a) section 1, Table 1.2 b) section 2, Table 2.2, and c) section 3, Table 3.2. |
| Wyee Water Network Operator's Licence | means network operator's licence no. 14_026 granted to Wyee Water Pty Ltd (ACN 160 953 775) (as varied by the Minister from time to time). |

B Detailed capacity analysis of Cooranbong Water's and Flow Systems' applications

We considered the following as part of our assessment:

Evidence of technical capacity with respect to the Network Operator Licence Application

From our assessment, we consider that Cooranbong Water, with the support of Flow Systems, has the relevant technical capacity to carry out the activities that the varied licence (if granted) would authorise.

- ▼ **Compliance history:** Cooranbong Water holds a network operator's licence under the WIC Act. Cooranbong Water had three insignificant non-compliances identified in its most recent audit report. The non-compliances did not result in a failure of treatment processes but did identify a failure to implement aspects of the management plans and maintaining currency of the plans.
Recent audits of schemes operated by other Flow Systems subsidiaries at Discovery Point, Central Park and Green Square identified several material non-compliances, in regards to full implementation of management plans and safe operation of plant and equipment. While the non-compliances indicate that improvement is required, they did not result in a failure of treatment processes.
- ▼ **Existing reports, plans and procedures that Flow Systems⁵⁵ prepared for the Cooranbong scheme:** These documents demonstrated that Cooranbong Water has a technical understanding of design, operation and maintenance of non-potable water and sewage reticulation and treatment infrastructure.
- ▼ **Process flow diagram⁵⁶ for drinking water and Cooranbong Water's water quality and sewage management plans for drinking water, non-potable water and sewerage:** The diagrams in these plans identify the critical control points for each treatment stage and expected removal efficiencies for key water quality parameters (ie, virus, protozoa and bacteria for non-potable water treatment).
 - This is evidence of Flow Systems' capacity to design an effective multi-barrier treatment system for constructing each stage of the proposed scheme that is consistent with the *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) (2006)* (AGWR).⁵⁷
 - The treatment infrastructure is not part of the proposed licence variation, however, we reviewed this to ensure that the treatment infrastructure is appropriate for the expanded Cooranbong scheme.

⁵⁵ Flow Systems would be undertaking these activities on behalf of Cooranbong Water.

⁵⁶ Cooranbong Water: Potable Water Process Flow Diagram, 3 June 2014.

⁵⁷ WIC Regulation, Sch. 1 cl. 7(1)(b) and 7(3).

- ▼ **Risk assessment⁵⁸ for the non-potable water and sewerage infrastructure:** The assessment demonstrates Cooranbong Water’s technical capacity to identify hazards and risks related to the scheme’s non-potable water and sewerage infrastructure and its business systems, and to develop control measures to manage these risks. Further, the preliminary risk assessment demonstrates Cooranbong Water’s technical capacity to understand and implement the AGWR.
- ▼ **Non-potable water and pressure sewer reticulation masterplans:⁵⁹** These masterplans demonstrate Cooranbong Water’s technical capacity to design staged reticulation networks in accordance with future project demands and staging requirements.⁶⁰
- ▼ **A water balance report⁶¹ that includes forecasts for non-potable water demands and wastewater production at each stage of the development:** The water balance report demonstrates Cooranbong Water’s technical capacity to forecast demand and usage parameters (eg, non-potable water demand, irrigation and top-up volumes), and to consider key information such as weather conditions and system losses.
- ▼ **Flow Systems’ drinking water quality plan:⁶²** The plan describes how the operation and maintenance of infrastructure would be consistent with the ADWG.
- ▼ **Flow Systems’ recycled water quality plan:⁶³** The plan describes how the operation and maintenance of infrastructure would be consistent with the AGWR. The adequacy of the water quality plan in relation to consistency with the AGWR should be audited prior to Cooranbong Water commencing commercial operation of the scheme or when significant changes are made.⁶⁴
- ▼ **Flow Systems’ infrastructure operating plan:⁶⁵** This plan outlines the asset lifecycle planning, system redundancy and condition monitoring for water industry infrastructure, amongst other infrastructure management considerations.
- ▼ **Flow Systems’ sewage management plan:⁶⁶** This plan outlines relevant practices and commitment to responsible management of sewage, including elements such as incident notifications, monitoring and waste disposal.
- ▼ **Cooranbong scheme management plan:⁶⁷** This plan provides a framework and scheme-specific details for the Cooranbong scheme. It also integrates elements from the asset management plan, incident management plan and operations environmental management plan.

⁵⁸ Cooranbong Scheme Risk Register, Flow Systems, 28 May 2019.

⁵⁹ Prepared by Pressure System Solutions for Flow Systems, Cooranbong Water –19 September 2018, and Pressure Sewerage Layout Plan, Rev E, 19 September 2018.

⁶⁰ WIC Regulation, Sch. 1 cl. 6(1) and 13(1).

⁶¹ Prepared by Kinesis for Flow Systems, Version 1.1, 9 February 2016.

⁶² Revision 11, 10 September 2018.

⁶³ Revision 11, 10 September 2018.

⁶⁴ WIC Regulation, Sch. 1 cl. 7

⁶⁵ Revision 11, 10 September 2018.

⁶⁶ Revision 6, 31 July 2018.

⁶⁷ Revision 7, 21 September 2018.

- ▼ **Flow Systems' Non-potable Water Irrigation Management Plan:**⁶⁸ This plan provides an overview of how Flow Systems would manage the irrigation of non-potable water in Designated Irrigation Zones⁶⁹ to maintain its responsibilities in regard to public health and the local environment.

The above statements are not an endorsement of the adequacy or approval of the listed documents and procedures. This assessment only relates to the applicant's demonstration of technical capacity. Many of these documents associated with sewage and non-potable water management will be subject to audits for adequacy prior to commencing commercial operations.

Evidence of technical capacity with respect to the Retail Supplier Licence Application

From our assessment, we consider that Flow Systems has the relevant technical capacity to carry out the activities that the varied licence (if granted) would authorise.

- ▼ **Retail Supply Management Plan (RSMP):** The RSMP describes the retailing activities to supply drinking water and non-potable water and provide sewerage services to greenfield and urban infill schemes.
- ▼ **Code of practice for customer complaints:**⁷⁰ The Code of Practice describes the processes Flow Systems uses to respond to complaints (includes handling, resolution, escalation, compliance and continuous improvement) by customers (including owners, tenants and customers) in relation to the services provided. Flow Systems' code of practice for customer complaints has been developed to be consistent with the Australian Standard AS ISO 10002-2006 and addresses complaints handling, including complaint definition, contact details to make a complaint, tracking of complaints, assessment of complaints, response to complaints and escalation of complaints to the Energy and Water Ombudsman NSW.
- ▼ **Missed Payments Policy:**⁷¹ The policy outlines how Flow Systems responds when customers (eg, tenants or businesses) have missed one or more payments, and outlines Flow Systems' approach to customers who are having difficulty paying or are concerned about not being able to pay on time. In situations of financial hardship, (ie where a customer does not pay its water bill), we understand that Cooranbong Water would continue to provide non-potable water at a reasonable flow for basic health and hygiene purposes. Flow Systems, as the retail supplier, would give reasonable notice to its customers if it intended for Cooranbong Water to restrict supply.
- ▼ **Incident Management Plan:**⁷² The plan addresses continuity of service during interruptions due to incidents or operational problems, including interruptions to sewerage services, non-potable water supply and disruptions to the customer centre.

⁶⁸ Revision 1, 4 June 2018.

⁶⁹ Flow Systems defines Designated Irrigation Zones as those areas it is responsible for, and excludes private property irrigation and common area irrigation where irrigation is the responsibility of Council or other authority.

⁷⁰ Flow Systems, Complaints and Dispute Resolution Policy (FS-ALL-AUS-PO-RET-1249), revision 4, 14 March 2018.

⁷¹ Flow Systems, *Missed Payments Policy*, (FS-WAT-AUS-PO-RET-1286), version 1.

⁷² Flow Systems, *Incident Management Plan* (FS-WAT-AUS-PL-INC-1266), revision 8, 19 December 2018.

- ▼ **Customer contract:**⁷³ The contract provides the standard terms under which Flow Systems would supply water and provide sewerage services and describes Flow Systems' responsibilities and its customers' responsibilities in relation administration of accounts, disputes and levels of service.
- ▼ **Compliance management procedure:**⁷⁴ which describes at a high level the compliance management within Flow Systems' organisation.
- ▼ **Technical performance and previous retail experience** in the Australian water industry in preparing and implementing required retail systems and procedures at existing operational schemes⁷⁵ and the specific personnel nominated in the information provided to us in the application. Flow Systems proposes to use the same systems, procedures and resources to supply its intended customers under a varied licence at the Cooranbong scheme.⁷⁶
- ▼ **Compliance history.** Flow Systems' RSMP was audited in August 2016. The audit report on the RSMP provided to IPART did not find any non-compliances or any opportunities for improvement.⁷⁷

Evidence of financial capacity with respect to the network operators and retail supplier's licence applications

From our assessment, we consider that both Cooranbong Water and Flow Systems have the relevant financial capacity to carry out the activities that the varied licences (if granted) would authorise.

We have reviewed information provided by Flow Systems regarding the changed ownership structure for the Flow Systems group.⁷⁸ We conclude that, on balance, Cooranbong Water (the applicant for the network operator licence) and Flow Systems (the applicant for the retail supply licence) have, and will continue to have, financial capacity to carry out the activities that would be carried out under the respective licences for the Cooranbong scheme through the new ownership structure. We considered:

- ▼ The new owners include large superannuation and sovereign wealth funds who have injected equity into the Flow Systems business and imposed increased financial reporting on Flow Systems.
- ▼ The Flow Systems group has improving levels of solvency (ie, Net Assets) and working capital.

⁷³ Flow Systems, *Customer Contract*, 30 October 2015, see

<http://flowsystems.com.au/governance/CustomerContract.pdf>, accessed on 8 November 2019.

⁷⁴ Flow Systems' Compliance Management Procedure, (FS-ALL-AUS-PR-GOV-1366), revision 3, 29 August 2017.

⁷⁵ Existing operational schemes are Box Hill North, Central Park, Discovery Point, Green Square, Huntlee, North Cooranbong, Pitt Town, and Shepherds Bay schemes.

⁷⁶ The RSMP, codes and compliance procedures are standard documents that apply across all of Flow Systems' schemes.

⁷⁷ Report on the Retail Supply Management Plan Audit of Flow Systems: Retail Supplier's Licence No. 13_001R (Flow Systems), Water Futures, 5 August 2016.

⁷⁸ Information provided includes copies of a Securityholder's Agreement, Subscription Agreement, and a Trust Deed for the applicant's holding company, A Directors' Declaration, replies to our formal requests for information and informal correspondence with the applicant.

- ▼ Flow System's financial forecasts indicate profitability for the Flow Systems group and individual schemes.
- ▼ An agreement facilitating the funding of the day-to-day operations of Cooranbong Water and Flow Systems.
- ▼ A directors' declaration from Flow Systems regarding financial capacity for the applicants for the period up until 30 June 2020.

Further confidential information relating to financial capacity of the licensees is included in the Briefing to the Minister accompanying this report.

Evidence of organisational capacity with respect to the network operators and retail supplier's licence applications

From our assessment, we consider that both Cooranbong Water and Flow Systems have the relevant organisational capacity to carry out the activities that the varied licences (if granted) would authorise.

- ▼ **Organisational structure:**⁷⁹ Flow Systems owns and manages its subsidiaries, including Cooranbong Water. Cooranbong Water and Flow Systems manage third parties to deliver the proposed works based on contractual arrangements and agreements.
- ▼ **Organisational chart:**⁸⁰ key personnel for areas such as business development, project delivery, operations, retail, finance technology, legal, risk and compliance are shared across the subsidiaries as required.⁸¹
- ▼ **An outline of the experience of key personnel:**⁸² namely the Directors, Chief Executive Officer, Executive Manager Project Delivery, Executive Manager Scheme Operations and Executive Manager Risk and Compliance, which match the role descriptions.
- ▼ **Key personnel curricula vitae:**⁸³ which outlines relevant experience in the water industry and specific personnel nominated to the Cooranbong scheme.

Capacity to carry out those activities in a manner that does not present a risk to public health

From our assessment, we consider that both Cooranbong Water and Flow Systems have the capacity to carry out the activities that the varied licences (if granted) would authorise in a manner that does not present a risk to public health.

Drinking water source and quality: Cooranbong Water will continue to source drinking water from Hunter Water. A utility services agreement between Hunter Water and Cooranbong Water is in place and allows the extraction of sufficient volume to supply to the expanded area of operation.

⁷⁹ Flow Systems Operations Ownership Structure, as at 20 May 2019.

⁸⁰ Flow Systems Organisational Chart, May 2019.

⁸¹ We consider the slight changes to organisational chart from the application package that was consulted on does not impact our assessment that Cooranbong Water has organisational capacity.

⁸² Appendix 6.1.3(a) *Position Descriptions (key personnel)* of the application form.

⁸³ Appendix 6.1.3(b) *Short form biographies (key personnel)* of the application form.

Water quality is dependent on Hunter Water's treatment and monitoring. However, Cooranbong Water will monitor turbidity, pH and free chlorine and there will be provision for additional chlorine dosing.

- ▼ **Non-potable water source and quality:** The proposed expansion of the scheme will increase the volume of source water but the source water type and quality characteristics are not expected to change from what was previously assessed and approved for Cooranbong Water's network operator licence. Non-potable water will be produced from sewage sourced from the North Cooranbong Development. It is predominantly residential, and the quality of the source water is not expected to fluctuate. Drinking water top-up for the non-potable water treatment plant will be sourced from Hunter Water. We understand that management of non-potable water would be consistent with the AGWR.
- ▼ **Fit for purpose non-potable water quality:** There are no expected changes to treatment processes or non-potable water quality from the proposed variation. Cooranbong Water has demonstrated its capacity to treat sewage and provide non-potable water to an appropriate quality level for the proposed uses. Cooranbong Water would collect sewage from within the North Cooranbong Development and would top-up the system with drinking water, if required. We consider Cooranbong Water's proposed sewage treatment and non-potable (recycled) water treatment systems to be robust and consistent with the requirements of the AGWR.
- ▼ **Cross connection mitigation measures:** Cooranbong Water has identified appropriate controls to ensure the risks of cross connections are minimised. In addition, Cooranbong Water would conduct quality assurance inspections of non-potable water connections prior to commercial operation and would follow a specific notification protocol in the case of possible cross connection incidents. Cooranbong Water indicated that the dual pipe reticulation systems are designed and constructed in accordance to WSAA Codes⁸⁴ and the Plumbing Code of Australia⁸⁵.
- ▼ **Backflow prevention:** Flow Systems requires all flow meters⁸⁶ to have appropriate backflow prevention.⁸⁷
- ▼ **Non-potable water supply interruption:** Interruption to the provision of non-potable water should pose a limited risk to public health because drinking water top-up for non-potable water is available from Hunter Water. In situations of financial hardship, (ie where a customer does not pay its water bill), we understand that Cooranbong Water would continue to provide non-potable water at a reasonable flow for basic health and hygiene purposes. Flow Systems, as the retail supplier, would give reasonable notice to its customers if it intends to restrict supply.
- ▼ **Sewerage service interruption:** Cooranbong Water has demonstrated its capacity to mitigate this risk through its risk assessment,⁸⁸ sewerage network design and sewerage management plan⁸⁹. Cooranbong Water has indicated that should short term interruption

⁸⁴ Available from <https://www.wsaa.asn.au/shop>

⁸⁵ National Construction Code Volume 3 Plumbing Code of Australia, 2019.

⁸⁶ 20mm and 25mm diameter meters have internal backflow check valves, so there is no need to install separate backflow prevention device. A separate backflow prevention device must be installed for each meter larger than 25mm in diameter.

⁸⁷ Refer to Flow Systems' drawings WAT-1854-FS and FSI-1000-FS, and https://flowsystems.com.au/askus/Generic/Flow_Guide_for_installation_of_Meters.pdf

⁸⁸ Cooranbong Scheme Risk Register, 28 May 2018.

⁸⁹ Revision 6, July 2018.

to sewerage services occur, storage would be available within the flow balance tanks, by having redundancy (duty/standby equipment) within the treatment trains and in the network. For larger interruptions, a tankering company on an emergency callout contract and skilled operators would manage the situation.⁹⁰

- ▼ **Risk management method:** We reviewed Cooranbong Water's preliminary risk assessment⁹¹ and consider that, on balance, notwithstanding the inconsistencies identified with the methodology (discussed in section 4.3.1 above), Cooranbong Water has demonstrated its capacity to identify and manage hazards and risks of the non-potable water and sewage components of the proposed scheme, to acceptable levels of risk, and would have in place reasonable control and mitigation measures. We expect that the risk assessment will be reviewed in consultation with NSW Health prior to commencing commercial operation.

Appropriate arrangements with respect to insurance for the network operator's and retail supplier's licence applications

From our assessment, we consider that both Cooranbong Water and Flow Systems have appropriate insurance arrangements.

- ▼ **Insurance information for Flow Systems and all subsidiaries (including Cooranbong Water) was provided:**
 - Insurance certificates of currency
 - Works and legal liability insurance policy
 - Industrial special risk insurance policy
 - Insurance experts report detailing the following insurances:
 - Workers compensation
 - Contractors pollution liability
 - Industrial special risks
 - Combined public and products liability and professional indemnity
 - Contract works
 - Cyber risk
 - General business
 - Management liability
 - Portable equipment property
- ▼ **Additional insurance information with respect to the Network Operator Licence Application was provided:**
 - Cooranbong Water and Flow Systems are named on each relevant insurance certificate
 - Public and Products liability insurance
 - Workers compensation insurance policy
 - Risk management assessment and control plan.

⁹⁰ Cooranbong Scheme Risk Register, 28 May 2018.

⁹¹ Cooranbong Scheme Risk Register, 28 May 2018.

We note that Flow Systems also holds other insurances including construction insurance, contractors pollution insurance, equipment insurance and cyber enterprise risk management insurance.

▼ **icare review:** As part of its review, icare examined:

- Cooranbong Water's proposal under a varied licence
- The scheme risk assessment
- Insurance coverage details, certificates of currency and product disclosure statements related to professional indemnity, public liability and product liability
- A Deed of Guarantee and Indemnity⁹² between Cooranbong Water and its Guarantor, Water Factory Company Pty Ltd (subsequently changed to Flow Systems)
- Insurance experts report.⁹³

⁹² Dated 5 October 2011.

⁹³ Prepared by Arthur J. Gallagher & Co. (Aus) Limited, dated 30 July 2019.

C Cooranbong Water ownership structure and related licensees

Table C.1 Flow Systems' subsidiaries and their licence schemes

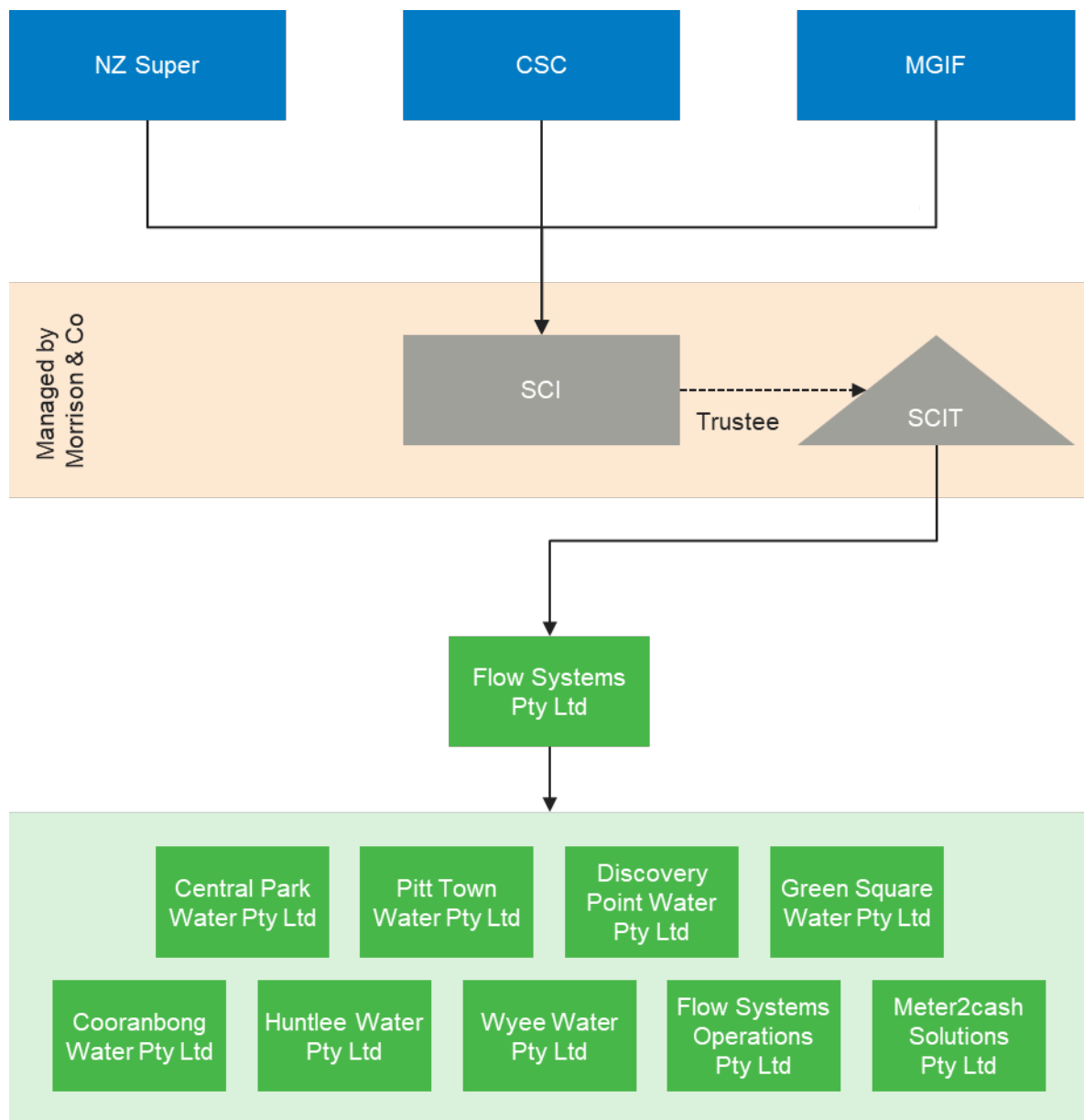
| Subsidiary | Scheme | Network operator's licence | Licensed activities | | |
|------------------------------------|--|----------------------------|---------------------|-----------------|----------------|
| | | | DW ^a | NP ^b | S ^c |
| Pitt Town Water Pty Ltd | Pitt Town scheme, Pitt Town, Sydney | 10_014 | | ✓ | ✓ |
| Central Park Water Factory Pty Ltd | Central Park development, Chippendale, Sydney | 12_022 | ✓ | ✓ | ✓ |
| Discovery Point Water Pty Ltd | Discovery Point development, Wollie Creek, Sydney | 13_025 | ✓ | ✓ | ✓ |
| Wyee Water Pty Ltd | Wyee residential scheme, Wyee, Lake Macquarie | 14_026 | ✓ | ✓ | ✓ |
| Huntlee Water Pty Ltd | Huntlee residential scheme, North Rothbury, Hunter Valley | 15_030 | ✓ | ✓ | ✓ |
| Green Square Water Pty Ltd | Green Square Town Centre, Sydney | 15_031 | | ✓ | |
| Cooranbong Water Pty Ltd | Cooranbong residential development, Cooranbong, Lake Macquarie | 15_033 | ✓ | ✓ | ✓ |
| Flow Systems Operations Pty Ltd | Box Hill North residential development, Hills Shire Council | 16_037 | | ✓ | ✓ |
| Flow Systems Operations Pty Ltd | Shepherds Bay development, Meadowbank, City of Ryde Council | 17_042 | ✓ | ✓ | ✓ |

a Drinking water infrastructure

b Non-potable water infrastructure

c Sewerage infrastructure

Figure C.1 Flow Systems group ownership structure



Legend: NZ Super = New Zealand Superannuation Fund
 CSC = Commonwealth Superannuation Corporation
 MGIF = MGIF SCIT PV Pty Ltd
 SCI = Sustainable Communities Infrastructure Pty Ltd
 SCIT = Sustainable Communities Infrastructure Trust

Note: As Trustee Corporation SCI has direct control over SCIT.
Data source: Letters from Flow Systems to IPART, 6 August 2019 and 28 January 2020.

D Assessment of Cooranbong Water’s Review of Environmental Factors for extension of WICA Network Operator Licence 15_033 Cooranbong (Areas H and I)

3 October 2019

Attention: Jessica Hanna
Independent Pricing and Regulatory Tribunal (IPART)
Level 15, 2-24 Rawson Place, Sydney NSW, 2000

Project Name: Cooranbong Water network operator's licence variation application environmental assessment

Subject: Final review of REF and consideration of suitability for determination

Dear Jessica

As requested in your email of 30 August, Jacobs has undertaken a further review of the revised REF (version E dated 25 September 2019). This review follows on from our updated Second Review and associated Checklist dated 10 September 2019.

RPS Australia East Pty Ltd on behalf of Cooranbong Water Pty Ltd (CW) has addressed all the key issues raised in our previous review, and hence we are of the view that they have addressed all of the environmental risks adequately. The REF (version E) is now suitable to consider the environmental implications of the proposed development and meets the requirements of Sections 5.5 and 5.7 of the NSW Environmental Planning and Assessment Act 1979 and Clause 228 of the NSW Environmental Planning and Assessment Regulation 2000.

Furthermore, as the REF includes suitable safe guides, additional approval conditions (over and above those described in the REF) are not required.

In light of this, we are of the view that the Minister has adequate information to determine the REF as part of the licence variation.

Yours sincerely



Mike Luger
Principal



Review of Environmental Assessment for Application for Extension of NOL 15_033 for Water Services at the Cooranbong North Subdivision

Independent Pricing and Regulatory Tribunal

IPART Review of REF for Areas H & I

2.1

9 September 2019



Review of Environmental Assessment for Application for Extension of NOL 15_033 for Water Services at the Cooranbong North Subdivision

Project No: IA219500
 Document Title: IPART Review of REF for Areas H & I
 Revision: 2.1
 Date: 9 September 2019
 Client Name: Independent Pricing and Regulatory Tribunal
 Project Manager: Mike Luger
 Author: Amna Robinson
 File Name: \\Jacobs.com\ANZ\IE\Projects\04_Eastern\IA219500\22 Technical\Areas H & I REF review 2\IA219500 Cooranbong REF Areas H & I - Review v2.docx

Jacobs Group (Australia) Pty Limited
 ABN 37 001 024 095
 Level 7, 177 Pacific Highway
 North Sydney NSW 2060 Australia
 PO Box 632 North Sydney
 NSW 2059 Australia
 T +61 2 9928 2100
 F +61 2 9928 2444
www.jacobs.com

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Document history and status

| Revision | Date | Description | By | Review |
|----------|------------|---------------------------------|---------------|------------|
| 1.0 | 17/07/2019 | First Draft (First Review) | Amna Robinson | Mike Luger |
| 1.1 | 23/07/2019 | Final Draft (First Review) | Amna Robinson | Mike Luger |
| 1.2 | 26/07/2019 | Final for issue (First Review) | Amna Robinson | Mike Luger |
| 2.0 | 4/09/2019 | Draft (Second Review) | Amna Robinson | Mike Luger |
| 2.1 | 9/09/2019 | Final for issue (Second Review) | Amna Robinson | Mike Luger |

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Appendix A. 1.5 REF Review Checklist

1. Introduction

1.1 Purpose

Cooranbong Water Pty Ltd (CW) has submitted an application under the *Water Licencing Competition Act 2006* (WIC Act) for a variation of their existing network operator's licence (NOL 15_033). The variation (NOLV2) is for the extension of the recycled water reticulation system to Areas H and I associated with the proposed North Cooranbong urban development, near Cooranbong in the City of Lake Macquarie Local Government Area NSW.

RPS Australia East Pty Ltd (RPS), on behalf of CW, has prepared the following environmental assessment (Review of Environmental Factors, REF) for the proposed scheme to satisfy the legal requirements of Part 5 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act) and Regulation 7 of the *Water Industry Competition (General) Regulation 2007*:

- Extension of WICA Network Operator Licence 15_033 Cooranbong Review of Environmental Factors (RPS, 2018).

The proposed works are referred to as 'the project' in this report.

Due to recent changes to the *State Environmental Planning Policy (Infrastructure) 2007*, the Independent Pricing and Regulatory Tribunal (IPART) requires the REF to be assessed against environmental assessment requirements relevant to Part 5 of the *Environmental Planning and Assessment Act 1979*.

On 26 July 2019 we prepared our initial review of the RPS REF which found a number of notable inadequacies against relevant legislation. RPS has updated the report in response to the review addressing certain issues.

This report comprises a second review of the adequacy of the Cooranbong REF in identifying and assessing the potential environmental impacts of the project in order to advise IPART whether adequate consideration has been given to the environment and whether the project should be approved under Part 5 of the EP&A Act.

This review considers whether the content, quality and completeness of the assessment is sufficient to allow IPART to make its determination under Part 5 of the EP&A Act, and therefore considers the compliance and consistency of the REF with the provisions of:

- Sections 5.5 and section 5.7 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act)
- Clause 228 of the *NSW Environmental Planning and Assessment Regulation 2000* (EP&A Regulation)
- Section 7(1)(a) and section 10(4)(e) of the *NSW Water Industry Competition Act 2006* (WIC Act)
- Regulation 7 of the *NSW Water Industry Competition (General) Regulation 2008*
- Various other provisions relating to NSW statute and regulation (such as the *NSW Biodiversity Conservation Act 2016* and the *NSW National Parks and Wildlife Act 1974*)
- Various provisions relating to Australian Government statute and regulation (including the *Environment Protection and Biodiversity Conservation Act 1999*)
- Environmental guidance and good practice relating to construction and operation (such as the *NSW Interim Construction Noise Guidelines 2009*) and
- Water industry guidelines such as the *Australian Guidelines for Water Recycling (2006)* and *Use of Effluent by Irrigation (2004)*.

1.2 Matters for consideration by determining authority

A network operator's licence must not be granted under the WIC Act unless the Minister is satisfied that the proponent has given adequate regard to the protection of public health, the environment and public safety.

Section 5.5 of the EP&A Act specifies that a when considering an activity under Part 5, a determining authority must 'examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity'.

Clause 228 of the *Environmental Planning and Assessment Regulation 2000* defines the factors that must be considered when determining if an activity assessed under Part 5 of the EP&A Act may have a significant impact on the environment.

1.3 Subject Site

The North Cooranbong development will ultimately comprise approximately 2,236 new homes, of which 117 lots (Stages 1A-1D and Jackson, the "Developed Lots") were developed previously and are currently being serviced by Hunter Water. Flow Systems Pty Ltd (Flow Systems) was engaged by the Developer to establish a local water utility, Cooranbong Water Pty Ltd (CW), for the construction and operation of sewerage, recycled water and drinking water infrastructure and delivery of resulting services to end-user residential and retail customers in the North Cooranbong Development (excluding the Developed Lots).

NOL 15_033 was granted to CW by the Minister on 6 August 2015 for the provision of drinking water, recycled water and sewerage services to the entire North Cooranbong Development, excluding the 117 lots that were developed prior to CW's involvement. The licensed area of operations was limited to Precinct 1 (the first 81 lots) that had been granted development consent by Lake Macquarie City Council (LMCC). After LMCC granted development consent for Precinct 2, CW applied in November 2015 to have the NOL area varied (NOLV1) to include the lots incorporating Precinct 2. The licence area was expanded by the Minister to include the additional Precinct 2 area on 18 March 2016.

NOL 15_033 operates on land controlled by Johnson Property Group Pty Ltd (JPG) within the North Cooranbong Urban Release Area located in Cooranbong in the western area of the Lake Macquarie local government area (LGA). As part of the on-going operations associated with NOL 15_033, Cooranbong Water is looking to include additional areas and customers for recycled water use within Cooranbong.

In Area H, CW seeks to include the Avondale College and Town Common Designated Irrigation Zones and pipelines along Freemans Drive and Central Road to convey recycled water to the College. In Area I, CW seeks to include existing lots immediately adjacent to the proposed recycled water main in order to provide opportunity for others to become customers of the recycled water service only. The environmental assessment for Area H & I for NOLV2 has to assess the environmental impacts of recycled water reticulation proposed for the area, as well as the proposed irrigation areas. The proposed activity area is approximately 199.9 hectares (ha) in total land area.

The proposed Recycled Water Reticulation and Irrigation System would affect the lands as summarised in Table 1 of the REF.

2. Findings

2.1 Key Issues

Our second review (conducted in September 2019), identified a number of remaining issues:

- Environmental impacts in relation to non-Aboriginal heritage and Key Fish Habitat, are not adequately assessed or mitigated. As these impacts are not likely to be significant, IPART could request the applicant to address them in another revision of the REF, or IPART could address these in the Approval Conditions.
- Direct (construction) environmental impacts associated with the 25mm property service connections to lots not immediately adjacent to the recycled water pipeline have not been adequately assessed. As there is inadequate information to make an assessment of the impacts, IPART could either request the applicant to provide figure/s showing the property service connections to all lots, together with an assessment of the impacts, or IPART could exclude connections to properties not immediately adjacent to Freemans Road and Central Road in the Approval Conditions.
- Minor reference, inconsistency or data errors. These are not material to the integrity of the report and hence would not affect the validity of the Minister's decision. However, if the applicant revises the REF again, then they should be addressed.

The 1.5 REF Review Checklist has been completed and is provided in Appendix A. Table 1 provides a breakdown of the detailed findings of the review of the REF per section.

3. Assessment of Review of Environmental Factors

3.1 Proposed Recycled Water Reticulation and Irrigation System for Areas H and I

Table 1 identifies the findings of the second review of the Cooranbong REF and provides recommendations for how any identified issues should be addressed.

Table 1: Findings of the second review of the REF for Recycled Water Reticulation and Irrigation System for Areas H and I

| REF Section | First Review Findings | First Review Recommendations | RPS Response | Second Review Finding | Second Review Recommendation |
|---|--|--|--|---|--|
| Section 3.4 (Outline of construction works) | <ul style="list-style-type: none"> Proposed ancillary facilities needed to support the construction of the proposal are not adequately described. Aspects of the proposal that have not yet been fully resolved and may require further refinement and assessment (e.g. utility adjustments, aspects of construction methodology) have not been identified. | <ul style="list-style-type: none"> Describe the location and area of ancillary facilities/construction laydown areas. | Ancillary facilities and construction areas have been provided in Figure 1 and outlined in Section 3.2.1 and 3.4 | The proposed construction laydown area is under private ownership (Coles Group). Approval from the land owner would have to be obtained before this land can be used as a laydown area. | Approval for the vacant lot of land to be used as a construction laydown area to be sought prior to construction. |
| Section 4.4.1 (<i>State Environmental Planning Policy (Infrastructure) 2007</i>) | | | | State Environmental Planning Policy No 14—Coastal Wetlands, State Environmental Planning Policy No 26—Littoral Rainforests have been repealed. | Remove reference to State Environmental Planning Policy No 14—Coastal Wetlands and State Environmental Planning Policy No 26—Littoral Rainforests. |
| Section 4.5.1 (<i>Lake Macquarie LEP 2014</i>) – Local Heritage | | | | Local heritage items are discussed in Section 6.5.1, not Section 6.5.2 as stated. | Update reference to Section 6.5.2 to Section 6.5.1. |

| REF Section | First Review Findings | First Review Recommendations | RPS Response | Second Review Finding | Second Review Recommendation |
|---|---|---|---|--|--|
| Section 4.6.1 (<i>Water Management Act 2000</i>) | | | | This section does not mention that works will also be undertaken within 40 metres of Jigadee Creek. | Mention that works will also be undertaken on waterfront land near Jigadee Creek. |
| Section 4.6.5 (<i>Heritage Act 1977</i>) | This section does not identify all the heritage items near the proposed construction work area (see Section 6.5 below). | Update this section to discuss all heritage items potentially impacted by the proposal (see Section 6.5 below). | No state listed heritage items are in close proximity. Local heritage has been addressed in section 4.5.1 | Impacts on local heritage items identified in the REF are not mentioned under this act. | Summarise impacts on local heritage items identified in REF. |
| Section 4.6.9 (<i>Fisheries Management Act 1994</i>) | The relevance of the following legislation to the proposal has not been discussed: <i>Fisheries Management Act 1994</i> : Dora Creek and Jigadee Creek is mapped as Key Fish Habitat and threatened freshwater fish habitat by the Department of Primary Industries (DPI) Fisheries Spatial Data Portal. Construction activities are proposed on the bridge crossing Dora Creek as well as near Jigadee Creek and could potentially impact water quality in these waterways. | Consider the following legislative instruments in this section: <i>Fisheries Management Act 1994</i> | All legislation and EPIs listed have now been addressed in section 4.6 of the REF | This section states that “ <i>Construction activities will be in accordance with industry standards and by nature will not involve the creation of pollutants that would have an impact water quality in these waterways</i> ”. This statement does not provide sufficient evidence that potential risks to Key Fish Habitat such as impacts to water quality via runoff, spills and leakages during construction, have been adequately considered and that potential impacts would be mitigated. How would the pipes be attached to the side of the bridge? Will scaffolding be placed in the waterway? It is stated that “ <i>At it’s closest the recycled water main will be 45 metres from Jigadee Creek</i> ”. Aerial photography indicates that the nearest distance of the recycled main from the tributary of Jigadee Creek running along the road north of Avondale College would be 22 metres. Water quality impacts on this tributary would also impact on aquatic species and ecosystems in Jigadee Creek. | Outline all potential risks to Key Fish Habitat as well as the safeguards and management measures to avoid and minimise potential impacts in Section 6.6 (Biodiversity) and provide a summary of the findings in this section. Include a description of how the recycled water main pipe would be installed along the bridge crossing Dora Creek. |

| REF Section | First Review Findings | First Review Recommendations | RPS Response | Second Review Finding | Second Review Recommendation |
|--|---|--|---------------------------|--|---|
| | | | | The statement “ <i>At its closest point the route of the pipeline is approximately 80 metres from an identified groundwater dependent ecosystem (GDE)</i> ” is incorrect. The high and moderate potential Terrestrial GDEs (Scribbly Gum/Red Bloodwood/Angophora inopina healthy woodland on lowlands of the Central Coast) mapped along the road leading to the Local Water Centre and along Freemans Drive would be located across the road from the pipeline – approximately 23-25 metres away. | Update the statement “ <i>At its closest point the route of the pipeline is approximately 80 metres from an identified groundwater dependent ecosystem (GDE)</i> ” to accurately reflect the locations of the high potential and moderate potential GDEs. |
| Section 6.3 (Land capability for irrigation) | | | | | The recommendations of the Land Capacity and Recycled Water Irrigation Plan relating to diverting stormwater around the DIZs is not included in the REF. However, as diversion of stormwater can be expected to result in various construction and operational impacts, omitting this from the project and REF is acceptable, but a sentence explaining the rationale should be included in the REF explaining the inconsistency. |
| Section 6.5 (Non-Aboriginal Heritage) | The details for the heritage items in Table 7 are incorrect. None of the items are listed on the State Heritage Inventory. These heritage items are listed in Schedule 5 of the Lake Macquarie LEP. The house ‘Three Bells’ is located directly adjacent to the proposal in Freemans Drive and the cottage at 661 Freemans Drive is located | Update the details of heritage items in Table 7. | Table 7 has been updated. | Table 7 has not been updated. | Update the heritage listing, significance and distance from the proposal for each heritage item. |

| REF Section | First Review Findings | First Review Recommendations | RPS Response | Second Review Finding | Second Review Recommendation |
|----------------------------|---|------------------------------|--|---|---|
| | more than 200 m away from the proposal in Freemans Drive. | | | | |
| Section 6.6 (Biodiversity) | | | | Potential impacts to Key Fish Habitat (Dora Creek and Jigadee Creek) are not mentioned in this section. Aerial photography indicates that the nearest distance of the recycled main from the tributary of Jigadee Creek running along the road north of Avondale College would be 22 metres. Water quality impacts on this tributary would also impact on aquatic species and ecosystems in Jigadee Creek. | <p>Describe potential impacts on Key Fish Habitat (Dora Creek and Jigadee Creek) as well as mitigation and management measures.</p> <p>Include a description of how the recycled water main pipe would be installed along the bridge crossing Dora Creek and an assessment of the impacts and mitigation and management measures.</p> |
| Other | The “property service connections of 25mm diameter from the main to each property along the route” are not clearly enough defined in the REF to allow IPART to consider their environmental acceptability. Also, as these property connections would be for non-irrigation purposes, the recycle water main would then presumably need to be pressurised permanently and additional controls to prevent irrigation during wet periods would need to be developed. | | The property service connections have now been further addressed (with clarified reference to pressurised mains). The environmental impact assessment of property service connections from the proposed recycled water main to each lot is taken to be included in the assessment of | <p>The REF states that “<i>Under boring of the pedestrian pathway along Freemans Drive will occur for the installation of service connectors to private properties</i>” and that “<i>Property service connections of 25mm diameter from the main to each property along the route are not shown however are considered in this environmental assessment</i>”. It also states that “<i>The environmental impact assessment of property service connections from the proposed recycled water main to each lot is taken to be included in the assessment of the impact of the recycled water mains.</i>”.</p> <p>Some of the lots proposed to be serviced by the proposed recycled water main, such as Lot 18 Sec 1 DP 3533 and Lot 26 Sec 2 DP 3533, are located up to 240 – 340 metres away from Central Road. The environmental impacts of the construction and operation of the property services lines not adjacent to Central Road and Freemans Drive are not described or assessed in the REF. For example, Section 6.4</p> | <p>Property service connections proposed to the non-DIZ lots listed in Table 1 should be indicated on a map/s and the environmental impacts of under boring / trenching to these property boundaries should be assessed, including an update of the Aboriginal Heritage Due Diligence Assessment to assess impacts along these construction corridors. Alternatively, the licence variation should include conditions that exclude property connections to properties not directly adjacent to Freemans Road and Central Road.</p> |

| REF Section | First Review Findings | First Review Recommendations | RPS Response | Second Review Finding | Second Review Recommendation |
|--|-----------------------|------------------------------|--|---|--|
| | | | the impact of the recycled water mains. Section 1.1) | (Aboriginal heritage) states that " <i>In the event that the design and installation of the recycled water main changes and requires ground surface disturbance further than three metres from the edge of the existing roadways, a visual inspection will be required and an additional amendment to the Aboriginal Heritage Due Diligence Assessment must be issued prior to the commencement of works</i> ". | |
| Section 7.0 (Summary of mitigation measures) | | | | | Review Section 7 to reflect any amendments made to the REF. |
| Section 8.0 (Conclusions) | | | | | Review Section 8 to reflect any amendments made to the REF |
| Appendix A (Consideration of the clause 228 Factors and Matters of National Significance) | | | | | Review Appendix A to reflect any amendments made to the REF. |

4. Conclusions

The REF for a proposed Recycled Water Reticulation and Irrigation System at the North Cooranbong urban development has been assessed against environmental assessment requirements relevant to Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The review has determined that the REF does not demonstrate that the potential environmental impacts associated with these proposed works have been assessed to the fullest extent possible, and that a number of potential risks to the environment would remain if the REF was approved in its current state.

It is recommended that either:

- the REF is revised in order to satisfactorily address the remaining issues identified within this review to ensure due consideration of the impacts of the proposed development, or
- that IPART accept the REF and include Conditions of Approval to address the remaining issues as described in Section 2.1.

Appendix A. 1.5 REF Review Checklist

Assessment – Work instruction template

| | | | | |
|---|-----------------|-----------------|--|---------------|
| No. | 1.5 | Activity | REF review checklist | |
| Last reviewed | 6 February 2019 | | Next review date | |
| Personnel Responsible for implementing this work instruction | Jessica Hanna | | Personnel Responsible for undertaking this work instruction | Amna Robinson |
| Objectives | | | | |
| This work instruction has been prepared to guide the review of a Review of Environmental Factors (REF) under Part 5 of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) for an application to construct and operate water industry infrastructure under the <i>Water Industry Competition Act 2006</i> (WIC Act) that may impact the environment. | | | | |
| Scope of Works | | | | |
| Following completion of the REF by the proponent, utilising Work Instruction 1.3, the attached review checklist should be used to ensure the REF has appropriately described the proposal and adequately assessed the potential impacts. | | | | |
| Indicative Timeframe | | | | |
| Depending on the scale of the proposed activity and the level of associated impacts assessed in the REF, a review may take anywhere from several hours to several days. | | | | |
| Consultation Requirements | | | | |
| Consultation requirements are described in Work Instruction 1.2. | | | | |
| Relevant Legislation | | | | |
| <i>Environmental Planning and Assessment Act 1979</i> | | | | |

Reference Documents

- Environmental Assessment Services under Part 5: Statutory Considerations Report (SLR Consulting October 2018)
- Environmental Assessment Services under Part 5: High Level Assessment Process (SLR Consulting January 2019)

Review register

| Date | Name | Title | Signature |
|------------|-------------|-----------------------|---|
| 30/08/2019 | A. Robinson | Environmental Planner |  |
| 04/09/2019 | A. Robinson | Environmental Planner |  |

Project Review of Environmental Factors Checklist

| |
|--|
| Project: Second Review of the Environmental Assessment for Application for Extension of NOL 15_033 for Water Services at the Cooranbong North Subdivision (Areas H and I) |
| REF name and version: Extension of WICA Network Operator Licence 15_033 Cooranbong, Version C |
| REF prepared by: RPS Australia East Pty Ltd |

Presentation and communication of the information

| | | |
|--|---|-----------------------------|
| 1. Is the REF in accordance with the REF template? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Is the REF correctly dated and titled? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Is there a document controls page? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Is plain English used throughout with the use of technical terms kept to a minimum? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Are all relevant terms and acronyms included in the Abbreviations and Glossary terms table? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Is the Executive summary a stand-alone document? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Is the REF capable of being understood by a non-specialist? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 9. Is the contents page up to date? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 10. Are the footers and page numbering correct? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 11. Are maps and plans used to assist understanding of the locations of impacts? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 12. Do all maps have a scale, north point and the source acknowledged? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 13. Are all references included and are they in Harvard style? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

Comment (use this section to provide any additional information):

| |
|--|
| |
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Chapter 1. Introduction

| | | |
|---|---|-----------------------------|
| 1. Is a succinct and accurate description of the proposal provided? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Is the strategic and/or operational need for the proposal briefly explained? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Does this chapter identify who has prepared the REF, who it was prepared for, as well as the proponent and determining authority of the proposal? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Is the purpose of the REF clearly defined? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Are key elements of the proposal, including major design and structural features outlined? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Is the location of the proposal identified and mapped as an overlay on an aerial photograph? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Is there a brief description of the region and locality and of any special or defining environmental features and points of interest? (eg land uses, waterways, conservation reserves, heritage or geological features, schools, hospitals)? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Comment (use this section to provide any additional information): | | |

Chapter 2. Need and options considered

| | | |
|--|---|-----------------------------|
| 1. Does Chapter 2 generally explain the objectives of and justification for the proposal? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Is the strategic and/or operational need for the proposal adequately identified? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Does the justification for the proposal show consideration of the principles of ecologically sustainable development? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Are all relevant NSW and local government plans and strategies referenced? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Do the proposal objectives link to the need for the proposal? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Do the proposal objectives include environmental objectives? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Does Chapter 2 describe the alternatives considered for the proposal (either design or location), the method for evaluating options and the reasons for rejecting these alternatives over the preferred option? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Is the methodology and the selection criteria used to assess the alternatives to arrive at the preferred option described adequately? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 9. Are genuine alternatives to the proposal adequately described, including key features and advantages and disadvantages of each alternative? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 10. Is the do nothing or 'base case' option described including the positive and negative consequences of not proceeding? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 11. Is a balanced and convincing comparative analysis of the options against the proposal objectives and other selection criteria presented? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 12. Is the preferred option identified and is it justified when compared to the alternatives? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Comment (use this section to provide any additional information): | | |

Chapter 3. Description of the proposal

| | | | |
|---|---|---|---|
| 1. Does Chapter 3 describe the proposal and associated construction methods in non-technical terms, using figures to assist the reader to visualise the proposal? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Is the site plan provided as an overlay of an aerial photograph in the REF or its appendices, indicating the layout of the proposed activity, access routes, existing structures and infrastructure, environmentally sensitive areas, topographic contours, Lot/DP numbers and boundaries and scale and orientation? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Is the design of a suitable scale to understand the extent of impacts? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Does Chapter 3 fully describe the concept design, including any temporary works or structures or relocations associated with the proposal? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Does the description identify the footprint of all works? Is it flexible where required? | | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 6. Are the major design features appropriately described? (eg intersections, bridges, retaining walls, fences, project specific urban design principles and objectives) | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Are construction activities adequately described, including: | | | |
| a. Work methodology, describing pre-construction, construction and remediation activities | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | b. Construction footprint, earthworks and/or site clearing required (including extent and area of vegetation to be removed) |
| c. Construction methods, materials and equipment | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | d. Any earthworks or site clearing, including extent and area of vegetation to be removed and rehabilitated |
| e. Sustainability measures, including choice of materials (such as recycled content) and water and energy efficiency | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 8. Has the REF identified aspects of the proposal that have not yet been fully resolved and may require further refinement and assessment? (e.g. locations of ancillary facilities, utility adjustments, aspects of construction methodology etc.) | | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes |
| 9. Does Chapter 3 describe the preparation and recommended content of a Construction Environmental Management Plan (CEMP) that will demonstrate how commitments made in the REF will be adhered to? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 10. Are any operational related management requirements, maintenance or inspection activities, future extensions or additions adequately described? | | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes |
| 11. Has the REF provided details of how operational risks to the environment will be managed? | | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes |
| 12. Are you satisfied that the description of the proposal and the construction methodology is sufficient to enable an assessment of all potential direct and indirect impacts of the proposal? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 13. Does the REF clearly state the proposed construction timetable and staging and construction hours? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 14. Does the REF provide information regarding proposed ancillary facilities needed to support the construction of the proposal, if relevant? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Comment (use this section to provide any additional information): | | | |

The proposed construction laydown area is under private ownership (Coles Group). Approval from the land owner would have to be obtained before this land can be used as a laydown area. Mention in this section that approval from the vacant lot of land to be used as a construction laydown area would be sought prior to construction.

Some of the lots proposed to be serviced by the proposed recycled water main, such as Lot 18 Sec 1 DP 3533 and Lot 26 Sec 2 DP 3533, are located up to 240 – 340 metres away from Central Road. The environmental impacts of the construction and operation of the property services lines not adjacent to Central Road and Freemans Drive are not described or assessed in the REF. For example, Section 6.4 (Aboriginal heritage) states that "*In the event that the design and installation of the recycled water main changes and requires ground surface disturbance further than three metres from the edge of the existing roadways, a visual inspection will be required and an additional amendment to the Aboriginal Heritage Due Diligence Assessment must be issued prior to the commencement of works.*"

Property service connections proposed to the non-DIZ lots listed in Table 1 should be indicated on a map and the environmental impacts of underboring / trenching to these property boundaries should be assessed, including a review of the Aboriginal Heritage Due Diligence Assessment to assess impacts along construction corridors proposed for the property service lines. Alternatively, the licence variation should include conditions that exclude property connections to properties not directly adjacent to Freemans Road and Central Road.

Chapter 4. Statutory and planning framework

| | | | |
|--|------------------------------|---|--|
| 1. Are only the SEPPs (and deemed SEPPs) and LEPs relevant to the proposal identified and discussed? | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Does the Sydney Drinking Water Catchment SEPP apply to the proposal? If yes, ensure that a NorBE has been completed. | <input type="checkbox"/> N/A | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 3. Is only relevant legislation identified and discussed? <i>Note legislation should only be included in the REF where relevant to a licence, permit, notification or approval that is required for the proposal. No other environmental legislation should be included.</i> | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Has consideration been given to whether consent from council and concurrence from OEH is required for the proposal due to it being within a coastal management area (i.e. coastal wetland, littoral rainforest area, coastal vulnerability area, coastal environment area or coastal use area)? If consent/concurrence is required provide details: | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Does the proposal affect any Aboriginal Places or heritage items listed on LEPs, State Agency Heritage Registers (s170 registers), the State heritage register, the National heritage list or items subject to an interim heritage order? | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| If yes to the question above, has the approval and/or consultation process required been identified? (eg s60 approval required under the <i>Heritage Act 1977</i> for State listed item or item subject to Interim heritage order, notice to Heritage Branch for transfer of ownership or demolition of s170 register item). If permits/consultation is required provide details: | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Has the relevant zoning(s) for the site, the objectives and how the proposal complies with the LEP requirements been identified? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 7. Does the proposal have the potential to significantly impact on Matters of Environmental Significance or the environment of Commonwealth land, and therefore require a referral to the Australian Government? If yes, provide details of significant impacts. | | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 8. Does Section 4.3 outline how the proposal complies with the principles of ecologically sustainable development as described in Section 6(2) of the <i>Protection of the Environment Administration Act 1991</i> ? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

| | | | |
|--|------------------------------|---|-----------------------------|
| 9. Are details (including timing) of required permits, licences, other approvals and notifications required under other legislation included and discussed in Section 4.4? | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 10. Is the statutory position confirmed as being under Part 5 of the EP&A Act? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 11. Have you reviewed the statutory section and separately formed the opinion that the proposal does not require development consent, is not State significant development or State significant infrastructure and can be assessed under Part 5 of the EP&A Act? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| <p>Comment (use this section to provide any additional information):</p> <p>This section states that “<i>Construction activities will be in accordance with industry standards and by nature will not involve the creation of pollutants that would have an impact water quality in these waterways</i>”. This statement does not provide sufficient evidence that potential risks to Key Fish Habitat such as impacts to water quality via runoff, spills and leakages during construction, have been adequately considered and that potential impacts would be mitigated. How would the pipes be attached to the underside of the bridge? Will scaffolding be placed in the waterway? Runoff from construction activities/stockpiles near Jiggadee Creek could also potentially impact water quality in the creek.</p> <p>It is stated that “<i>At it’s closest the recycled water main will be 45 metres from Jigadee Creek</i>”. Aerial photography indicates that the nearest distance of the recycled main from the tributary of Jigadee Creek running along the road north of Avondale College would be 22 metres. Water quality impacts on this tributary would also impact on aquatic species and ecosystems in Jigadee Creek. Outline all potential risks to Key Fish Habitat as well as the safeguards and management measures to avoid and minimise potential impacts in Section 6.6 (Biodiversity) and provide a summary of the findings in this section. Include a description of how the recycled water main pipe would be attached to the underside of the bridge crossing Dora Creek.</p> <p>Other minor issues in this section include:</p> <ul style="list-style-type: none"> • State Environmental Planning Policy No 14—Coastal Wetlands, State Environmental Planning Policy No 26—Littoral Rainforests have been repealed. Remove reference to this legislation. • Local heritage items are discussed in Section 6.5.1, not Section 6.5.2 as stated. Update reference to Section 6.5.2 to Section 6.5.1. • Section 4.6.1 does not mention that works will also be undertaken within 40 metres of Jigadee Creek. Mention that works will also be undertaken on waterfront land near Jigadee Creek. • Impacts on local heritage items identified in the REF are not mentioned under the Heritage Act. Summarise impacts on local heritage items identified in REF. | | | |

Chapter 5. Consultation

| | | | |
|--|------------------------------|---|-----------------------------|
| 1. If there is a communication strategy, plan or process, has it been adequately summarised? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Do the sections of Chapter 5 describe how stakeholders affected by the proposal were identified? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Do the sections of Chapter 5 describe how stakeholders have been consulted? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Do the sections of Chapter 5 indicate what issues have been raised by the community or agencies and how the REF has been written to meet their needs? | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Where issues raised are identified and considered in the REF, is a reference provided to the correct section of the REF? | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Have unresolved or contentious issues that have been raised by the community or agencies been detailed adequately? | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Aboriginal community consultation | | | |
| 7. Has the process of consulting the Aboriginal community been appropriately described? | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8. Does the REF demonstrate that the Aboriginal community consultation process has been consistent with OEH guidelines? | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Ongoing consultation | | | |

| | | | |
|---|------------------------------|---|-----------------------------|
| 9. If ongoing consultation is proposed, is the purpose, audience and timing described in the REF? | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Comment (use this section to provide any additional information): Consultation undertaken with Aboriginal stakeholders described in Aboriginal Heritage Due Diligence Assessment. | | | |

Chapter 6. Environmental assessment

| | | | |
|---|---|---|---|
| 1. Has the potential for the proposal to impact on all relevant environmental aspects been adequately assessed? | | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 2. These may include (but not be limited to): | | | |
| a. Landforms, geology and soils | <input checked="" type="checkbox"/> Yes | b. Water quality | <input checked="" type="checkbox"/> Yes |
| c. Hydrology and flooding | <input checked="" type="checkbox"/> Yes | d. Air quality | <input checked="" type="checkbox"/> Yes |
| e. Biodiversity | <input type="checkbox"/> Yes | f. Noise and vibration | <input checked="" type="checkbox"/> Yes |
| g. Landscape and visual amenity | <input checked="" type="checkbox"/> Yes | h. Aboriginal cultural heritage | <input checked="" type="checkbox"/> Yes |
| i. Non-Aboriginal heritage | <input checked="" type="checkbox"/> Yes | j. Socio-economic effects | <input checked="" type="checkbox"/> Yes |
| k. Waste management | <input checked="" type="checkbox"/> Yes | l. Contaminated land and hazardous materials | <input checked="" type="checkbox"/> Yes |
| m. Traffic and access | <input checked="" type="checkbox"/> Yes | n. Cumulative impacts | <input checked="" type="checkbox"/> Yes |
| Other (provide details) Land capability for irrigation | <input checked="" type="checkbox"/> Yes | | |
| 3. Have relevant databases been recently searched, search dates provided and results summarised? | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. These may include (but not be limited to): | | | |
| a. Australian Heritage Database | <input type="checkbox"/> Yes | b. National weeds lists and NSW WeedWise | <input type="checkbox"/> Yes |
| c. State Heritage Register and Inventory | <input checked="" type="checkbox"/> Yes | d. NSW EPA list of contaminated sites and Record of notices | <input checked="" type="checkbox"/> Yes |
| e. National Native Title Tribunal | <input checked="" type="checkbox"/> Yes | f. NSW OEH Air quality records | <input type="checkbox"/> Yes |
| g. NSW OEH AHIMS | <input checked="" type="checkbox"/> Yes | h. Acid sulphate soils risk map | <input checked="" type="checkbox"/> Yes |
| i. NSW OEH BioNet Atlas of NSW Wildlife | <input type="checkbox"/> Yes | j. DEE National pollution inventory | <input type="checkbox"/> Yes |
| k. NSW OEH Biobanking public register | <input type="checkbox"/> Yes | l. DEE Protected matters (EPBC Act) database | <input checked="" type="checkbox"/> Yes |

| | | | |
|---|---|----------------------------|--|
| m. NSW DPI Threatened aquatic species records | <input type="checkbox"/> Yes | n. Other (provide details) | |
| 5. Have the appropriate specialist studies been prepared? <i>eg consider the nature and scale of the potential impacts, the sensitivity of the affected environment and the level of existing information.</i> | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| If yes, provide details: Aboriginal Heritage Due Diligence, Land Capability & Recycled Water Irrigation Plan | | | |
| 6. Is the description of the existing environment and the extent of the study area sufficient to assess the potential impacts? | <input type="checkbox"/> Yes | | <input checked="" type="checkbox"/> No |
| 7. Where necessary has the following information been included: | | | |
| • Site history (eg heritage, contaminated land etc) | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| • Policy settings (eg noise, climate change etc) | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| • Criteria (eg noise and vibration, heritage, air quality, water quality etc) | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 8. Are the appropriate standards/procedures followed in assessing impacts or reasons provided for any departure from recognised standards? | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 9. Have the values/receptors that will potentially be impacted been identified? | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 10. Are the potential impacts adequately characterised eg the type, extent, intensity, duration and expected timing of the impacts? | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 11. Is the nature of potential impacts considered? <i>eg consider the level of confidence in the prediction, the resilience of the environment, whether the impacts are reversible, how adequately impacts can be managed or mitigated, compliance with performance criteria, need for additional investigations, public interest.</i> | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 12. Are all the potential impacts of the proposal adequately assessed including direct and indirect impacts, long-term and short-term impacts and impacts during construction and operation? | <input type="checkbox"/> Yes | | <input checked="" type="checkbox"/> No |
| 13. Where negligible environmental impact has been identified, has this been described? | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 14. Are any uncertainties in impact assessment identified with an explanation of how these uncertainties have been managed in the REF? (eg worst case scenario, assess different options, sensitivity analysis) | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 15. Does the assessment discuss how design has been modified to avoid or minimise impacts? | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 16. Have issues raised in the consultation process been appropriately addressed in the assessment section where relevant? | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 17. Has there been an adequate assessment of whether or not any impacts are likely to be significant? | <input type="checkbox"/> Yes | | <input checked="" type="checkbox"/> No |
| 18. Do safeguard and mitigation measures relate directly to the identified potential impacts? | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 19. Are safeguards and mitigation measures aimed at avoiding, minimising or mitigating the identified potential impacts? | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 20. Do the safeguards and mitigation measures identify performance outcomes for the proposal? | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |
| 21. Are safeguards and mitigation measures feasible and reasonable and SMARTA? • Specific • Measurable • Achievable | <input checked="" type="checkbox"/> Yes | | <input type="checkbox"/> No |

| | | |
|--|---|-----------------------------|
| <ul style="list-style-type: none"> • Realistic • Time driven • Auditable | | |
| 22. Where monitoring is proposed are the purpose, criteria, timeframes and responsibilities identified? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| <p>Comment (use this section to provide any additional information):</p> <p>The following potential environmental impacts have not been assessed in the REF:</p> <ul style="list-style-type: none"> • Land capability for irrigation: <ul style="list-style-type: none"> – The Land Capability and Recycled Water Irrigation Plan (LCRWIP) specifies that “<i>The performance of DIZs can be adversely affected if stormwater is allowed to flow overland onto these areas. This water should be diverted around the DIZs through construction of upslope diversion drains or stormwater infrastructure</i>”. This section includes the statement “<i>Any stormwater captured from roofs should be disposed of outside RWI areas</i>”, which does not address stormwater from other sources and how the stormwater will be diverted around the DIZs as recommended in the LCRWIP. However, as diversion of stormwater can be expected to result in various construction and operational impacts, omitting this from the project and REF is acceptable, but a sentence explaining the rationale should be included in the REF explaining the inconsistency. • Heritage: <ul style="list-style-type: none"> – The details for the heritage items in Table 7 are incorrect. None of the items are listed on the State Heritage Inventory. These heritage items are listed in Schedule 5 of the Lake Macquarie LEP. The house ‘Three Bells’ is located directly adjacent to the proposal in Freemans Drive and the cottage at 661 Freemans Drive is located less than 200 m away from the proposal in Freemans Drive. Update the heritage listing, significance and distance from the proposal for each heritage item. • Biodiversity: <ul style="list-style-type: none"> – Describe potential impacts on Key Fish Habitat (Dora Creek and Jigadee Creek) as well as mitigation and management measures in this section. Aerial photography indicates that the nearest distance of the recycled main from the tributary of Jigadee Creek running along the road north of Avondale College would be 22 metres. Water quality impacts on this tributary would also impact on aquatic species and ecosystems in Jigadee Creek. Include a description of how the recycled water main pipe would be attached to the underside of the bridge crossing Dora Creek. <p>The REF states that “<i>Under boring of the pedestrian pathway along Freemans Drive will occur for the installation of service connectors to private properties</i>” and that “<i>Property service connections of 25mm diameter from the main to each property along the route are not shown however are considered in this environmental assessment</i>”. It also states that “<i>The environmental impact assessment of property service connections from the proposed recycled water main to each lot is taken to be included in the assessment of the impact of the recycled water mains.</i>”.</p> <p>Some of the lots proposed to be serviced by the proposed recycled water main, such as Lot 18 Sec 1 DP 3533 and Lot 26 Sec 2 DP 3533, are located up to 240 – 340 metres away from Central Road. The environmental impacts of the construction and operation of the property services lines not adjacent to Central Road and Freemans Drive are not described or assessed in the REF. For example, Section 6.4 (Aboriginal heritage) states that “<i>In the event that the design and installation of the recycled water main changes and requires ground surface disturbance further than three metres from the edge of the existing roadways, a visual inspection will be required and an additional amendment to the Aboriginal Heritage Due Diligence Assessment must be issued prior to the commencement of works</i>”. Property service connections proposed to the non-DIZ lots listed in Table 1 should be indicated on a map and the environmental impacts of under boring / trenching to these property boundaries should be assessed, including a review of the Aboriginal Heritage Due Diligence Assessment to assess impacts along these construction corridors. Alternatively, the licence variation should include conditions that exclude property connections to properties not directly adjacent to Freemans Road and Central Road.</p> | | |

Chapter 7. Consideration of State and Commonwealth Environmental Factors

| | | |
|--|---|-----------------------------|
| 1. Has the Clause 228 table been completed with information supported in the body of the REF? Are the findings in the table consistent with those in the REF and no additional impacts identified? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
|--|---|-----------------------------|

| | | |
|--|---|-----------------------------|
| 2. Has the MNES table been completed with information supported in the body of the REF? Are the findings in the table consistent with those in the REF and no additional impacts identified? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Comment (use this section to provide any additional information): Review Appendix A to reflect any amendments made to the REF. | | |

Chapter 8. Summary of mitigation measures

| | | |
|---|---|--|
| 1. Have future environmental management plans been identified? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Has use of an environmental management system been identified if necessary? | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 3. Have the safeguards and management measures described in the assessment sections of the REF been transcribed accurately? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Comment (use this section to provide any additional information): Review Section 7 to reflect any amendments made to the REF. | | |

Chapter 9. Conclusion

| | | |
|---|---|-----------------------------|
| 1. Does the conclusion section adequately outline the benefits of the proposal compared against the do-nothing option and outline how the proposal meets strategic, operational and/or safety needs? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Does the ecologically sustainable development section demonstrate how the proposal is consistent with, or furthers the aims of, the principles of ESD? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Is the conclusion concise and based only on information already presented in earlier chapters of the REF? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Does the conclusion consider whether beneficial outcomes outweigh adverse outcomes? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Does the conclusion address whether there would be a significant environmental impact with reference to Section 5.7 of the <i>Environmental Planning & Assessment Act 1979</i> and the matters of national environmental significance listed under the <i>Environmental Protection and Biodiversity Conservation Act, 1999</i> ? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Comment (use this section to provide any additional information): Review Section 8 to reflect any amendments made to the REF. | | |

Declaration and appendices

| | | |
|---|---|-----------------------------|
| 1. Has the author declaration been signed? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Are all appendices included and referenced correctly throughout the REF? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Comment (use this section to provide any additional information): | | |

Additional comments provided

| | | | |
|---------------------------|--------------------------|--------------|--------------------------|
| In track changes/comments | <input type="checkbox"/> | In hard copy | <input type="checkbox"/> |
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| | | | |
|-----------------|--------------------------|------------|--------------------------|
| Below | <input type="checkbox"/> | In meeting | <input type="checkbox"/> |
| Comment: | | | |

E Summary of submissions

Table E.1 Summary of stakeholder submissions – Cooranbong Water’s network operator’s application

| Agency | Summary of Submission | Report section reference/ our response |
|------------------------------------|--|--|
| NSW Health | | |
| 1. | NSW Health advised that the risk assessments for drinking water, sewage and non-potable water should be reviewed in consultation with stakeholders. NSW Health noted that the risk assessments were last updated in September 2018 but Hunter New England Health was not consulted during this update to risk assessments. | Flow Systems advised on 18 July 2019 that it has updated its current risk assessments following consultation with Hunter New England Health on 27 May 2019. We note that one action from the meeting was for Hunter New England Health to seek clarification from NSW Health with respect to adjustment of consequence when determining residual risks when compared to uncontrolled risks. Flow Systems is currently reviewing the risk assessments for all its WIC Act schemes. |
| 2. | NSW Health has advised that its submission should not be considered an approval or endorsement of the applicant’s documentation. NSW Health’s review has focused on potential public health issues. NSW Health expects that the audit process will confirm the adequacy of the drinking and non-potable water management plans and compliance with the <i>Australian Drinking Water Guidelines</i> and <i>Australian Guidelines for Water Recycling</i> . | Noted. |
| Lake Macquarie City Council | | |
| 3. | The Council has advised that the development consents issued for Areas A to D are for residential subdivisions. The consents have been issued on the basis that these areas will be provided a reticulated water and sewer service by Cooranbong Water Pty Ltd. The consents do not approve the infrastructure required for the reticulated water and sewer service. It would be normal for the water authority to approve the infrastructure. | On 5 December 2018, IPART decided that the Council had granted consent for the proposed activities within Areas A, B, C and D under Part 4 of the Act, when it granted consent for the development within these areas. |
| 4. | Council has assumed that any excess treated effluent will be disposed of away from the sites in accordance with an approval issued by IPART. | As part of this application, Cooranbong Water is applying for areas that will be used as designated irrigation zones to dispose of excess non-potable water. |
| EPA | | |
| 5. | EPA has confirmed that it has no records of Cooranbong Water or Flow Systems breaching the POEO Act. | Noted. |

| Agency | Summary of Submission | Report section reference/ our response |
|--------|---|---|
| 6. | <p>EPA states that the scheme may require an approval (or licence) under the POEO Act because:</p> <ul style="list-style-type: none"> ▼ The sewage treatment system capacity is above the processing capacity threshold which triggers the need for an Environment Protection Licence (EPL). ▼ The operator proposes irrigation to land using treated effluent. | <p>We consider that Cooranbong Water will need to consult with EPA prior to commercial operations of the Local Water Centre and obtain a definitive answer from EPA on whether an EPL is required, to ensure it is not in breach of the POEO Act. However, this is not a criteria of applications and should not impact the granting of the licence variation.</p> |
| 7. | <p>EPA has noted that land capability assessments have identified soil in the area has sodicity issues and irrigation must be managed to not exceed soils capacity to sustainably assimilate surplus non-potable water.</p> | <p>Noted.</p> |
| 8. | <p>EPA has stated that there are some risks of sewage overflows from infrastructure failure and an ongoing maintenance schedule must be put in place.</p> | <p>Cooranbong Water is required under Schedule 2, part 2 (6) of the <i>Water Industry Competition (General) Regulation 2008</i> to have an infrastructure operating plan that, among other things, details arrangements regarding maintenance of infrastructure that must be implemented.</p> |
| 9. | <p>If licence is granted, the EPA recommends the licence include conditions relating to management practices around irrigation with non-potable water. These include monitoring of surface water and groundwater, soils (moisture and chemical analysis) and offsite impacts.</p> | <p>We do not consider those conditions are required at this stage. The issues are addressed in Flow Systems' Irrigation Management Plan⁹⁴ and the Scheme Management Plan⁹⁵. We recommend the Minister imposes a licence condition to ensure proposed mitigation measures are implemented as detailed in Table 4.1.</p> |
| 10. | <p>EPA recommended that the <i>Environmental Guidelines: Use of Effluent by Irrigation</i>⁹⁶ (Environmental Guidelines) should be followed, in relation to the proposed irrigation of effluent and its potential impacts in soils, and that the operator should ensure ongoing monitoring of treated water.</p> | <p>We are sufficiently satisfied that Cooranbong Water has addressed the recommendations by EPA.</p> <p>Cooranbong Water, in response to our request for information,⁹⁷ stated that the Cooranbong scheme is a full re-use scheme under the Environmental Guidelines and has provided details of Flow Systems commitment, practices and procedures that align with the objectives in the Environmental Guidelines.</p> |
| 11. | <p>EPA has state that the proponent must minimise emission of odours from the premises at all times.</p> | <p>This application to vary the network operator licence is to extend the reticulation network. The sewage treatment/water recycling plant (LWC) has been previously assessed and the related development consent has measures for odour.</p> |

DPE

⁹⁴ FS-WAT-NSW-PI-OPS-1233, Revision 1, 4 June 2018.

⁹⁵ CO-WAT-ANSW-PL-OPS-1720, Revision 8, 18 July 2019.

⁹⁶ *Environmental Guidelines: Use of Effluent by Irrigation*, available at: www.epa.nsw.gov.au/resources/epa/effguide.pdf

⁹⁷ Letter from Flow Systems, Response to IPART's Request for Information from 12 February 2019, 29 March 2019

| Agency | Summary of Submission | Report section reference/ our response |
|-------------------------------------|---|--|
| 12. | DPE confirmed that Council is the appropriate consent authority under Part 4 of the EP&A Act. | Noted. |
| 13. | DPE confirmed that the Applicant's documentation asserts that development consents granted by Lake Macquarie City Council provide consent to utility works in Areas A to D of the application. | Noted. |
| 14. | DPE confirmed that Cooranbong Water and Flow Systems have not been subject to enforcement action under the EP&A Act. | Noted. |
| Minister for Lands and Water | | |
| 15. | The Minister confirmed that a water access licence under the Water Management Act (WMA) is not required with respect to the proposed licence variation. The purchase of potable water from a water utility (Hunter Water) does not require a licence. | Noted. |
| 16. | A water supply approval under the WMA is not required with respect to the proposed licence variation. Pursuant to s37 (1) (b) of the <i>Water Management (General) Regulation (NSW) 2018</i> , a water supply work is exempt from requiring approval where the construction of a water pipe is solely for conveying water from one place to another. | Noted. |
| 17. | <p>Pursuant to s43 of the <i>Water Management (General) Regulation (NSW) 2018</i>, network operator is exempt from requiring a controlled activity approval for an activity that is carried out in, on or under waterfront land relating to a river, estuary or lake, if:</p> <ul style="list-style-type: none"> ▼ The activity does not cause any change in the course of the river and ▼ The operator or licensee, after considering s5.5 of the <i>Environmental Planning and Assessment Act (NSW) 1979</i>, is satisfied that the activity is not likely to affect the environment significantly. | Noted. |

Table E.2 Summary of stakeholder submissions – Flow Systems’ retail supplier’s application

| Agency | Summary of submission | Our response |
|---|---|--|
| NSW Health | | |
| 1. | <p>NSW Health requested that all new end-uses are subject to a risk assessment to make sure that risks are appropriately managed. NSW Health noted that “an exposure assessment is necessary” to determine log reduction values for end-uses that are not considered in the AGWR.</p> <p>NSW Health also noted that Flow Systems’ should update its risk methodology prior to conducting new risk workshops related to the scheme. The updates should address NSW Health and IPART feedback on previous risk assessments.</p> | <p>We understand that Flow Systems is currently liaising with NSW Health in the development of its amended risk assessment for the scheme.</p> |
| 2. | <p>NSW Health recommended that Flow Systems’ customers and other end users of non-potable water are made aware of, and agree to, any requirements to manage the risk.</p> | <p>Under Schedule 2, clause 9 of the WIC Regulation, Flow Systems must inform customers of the authorised purposes of non-potable water and must not supply non-potable water for any other purpose.</p> <p>If the Minister grants the licence variation, we propose to write to Flow Systems, reminding them of this requirement. We would include this clause in the next operational audit scope for Flow Systems’ retail supplier’s licence.</p> |
| 3. | <p>NSW Health requested that Flow Systems review the risk assessments in consultation with NSW Health and IPART. NSW Health expects an invitation to attend risk assessments.</p> | <p>We consider that this relates to the corresponding Cooranbong Water network operator’s application. Our response is in item 1, in Table E.1.</p> |
| 4. | <p>NSW Health considers that IPART’s audit process would confirm adequacy and compliance of the:</p> <ul style="list-style-type: none"> ▼ Drinking water management plan against the <i>Australian Drinking Water Guidelines</i>, and ▼ Non-potable water management plan against the <i>Australian Guidelines for Water Recycling</i>. | <p>Noted. We consider this relates to the corresponding Cooranbong Water network operator’s application, which will be subject to further audits prior to commencing commercial operations.</p> |
| 5. | <p>NSW Health noted that a licence under the WIC Act does not automatically exempt Cooranbong Water from the requirement to develop and adhere to a drinking water management system under the <i>Public Health Act 2010</i> and <i>Public Health Regulation 2012</i>.</p> | <p>Noted.</p> |
| Environment Protection Authority | | |

| Agency | Summary of submission | Our response |
|---|--|--------------|
| 6. | EPA is not aware of any breaches of the <i>Protection of Environment Operations Act 1997 (POEO Act)</i> . | Noted. |
| 7. | Flow Systems does not require an environmental protection licence (EPL) under the POEO Act despite the increase in wastewater treatment capacity to 1300 kL/day. | Noted. |
| 8. | EPA does not recommend adding any licence conditions to Flow Systems' retail supplier's licence in relation to the protection of the environment. | Noted. |
| Department of Planning, Industry & Environment | | |
| 9. | DPE confirmed that Flow Systems has not been subject to enforcement action under the EP&A Act. | Noted. |
| 10. | DPE does not consider that the proposal would result in unacceptable risks to the environment. | Noted. |

